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Wayne Gilbey

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Dr. John Deaton, Committee Member, Psychology Faculty
Dr. Patti Barrows, University Reviewer, Psychology Faculty

Chief Academic Officer
Eric Riedel, Ph.D.

Walden University
2014

Abstract

Effects of Religious Motivation on the Relationship between Religion and Well-Being

by

Wayne Gilbey

M.S., University of Wisconsin-Superior, 1992

B.S., University of Maryland – College Park, 1975

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

General Psychology

Walden University

May 2014

Abstract

The purpose of this study was to examine whether intrinsic, extrinsic, and quest religious motivations mediate the relationship between the religious philosophy and perceived well-being of believers. The intrinsic-extrinsic-quest paradigm has been the dominant measure of religious motivation for more than 3 decades. However, the different effects of intrinsic, extrinsic, and quest motivation on the well-being of believers has not been tested on a stratified, purposeful sample of the major world religions. A quantitative, quasi-experimental research design was used with an online, self-report questionnaire and mediation analysis to examine the effects of religious motivation on the relationship between religious philosophy and well-being. A stratified, purposeful sample of 763 members of the major world religions completed assessments of religion and well-being. Linear regressions revealed that intrinsic, extrinsic, and quest religious motivations were three distinct constructs, that they do exist across the world religions, and that they mediated the relationship between different religions and well-being, depending on which predictor and outcome variables were being examined in the mediation triangle. Positive social change is possible for counselors, therapists, psychologists of religion, religious leaders, and laypersons at the individual and societal level through knowing which religious beliefs, motivations, and practices are associated with positive affect, satisfaction with life, the fulfilment of basic human needs, eudaimonic well-being, and better physical health. Individuals come to religion mainly during times of personal crises as a way of coping, expecting urgent results, and these findings illuminate the effectiveness of their chosen coping strategy.

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Dedication

Dedicated to my late wife, Diane F. Gilbey, who passed away unexpectedly due to complications from Lupus during my studies at Walden University.

Acknowledgments

I wish to thank Dr. Stephen Rice and Dr. John E. Deaton for their expertise and guidance in directing the focus to the research question and adding precision, clarity, and the voice of authority to this research project.

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Chapter 1: Introduction to the Study

Introduction

Allport (1963) proposed two types of motivation as moderators between religion and the desired goals of believers. *Intrinsic motivation* is elicited by the desire to perform a behavior for its own sake, as an end in itself. *Extrinsic motivation* is elicited by the desire to gain tangible rewards or avoid negative consequences. To test this theory, Allport and Ross (1967) developed the Religious Orientation Scales (ROS). Allport's (1963) claim that there are intrinsically and extrinsically motivated Christians, Jews, and Muslims has been partially verified by using the ROS on mixed samples of participants from some of the world's major religions in various combinations with mixed results. Batson and Ventis (1982) saw deficiencies in Allport's two-factor solution for religious motivation and developed a third factor, which they called Quest. However, based on a review of the literature, the ROS and Quest scales have not been tested on a stratified, purposeful sample of the major world religions in a single study. The research question of interest was as follows: Do religious motivations mediate the relationship between religious identification and well-being across the major world religions? This study fills a gap in the literature by examining, in a single study, whether intrinsic, extrinsic, and quest motivations exist across the major world religions.

Even though Allport and Ross (1967) concluded that religious orientation was a third factor, a mediating variable, researchers have misused the scales as a measure of the

independent variable rather than a mediating variable, as intended by Allport (1963). This study fills a second gap in the literature by examining in a single study the direct and indirect effects of religious motivation as a mediating variable on the relationship between religion and well-being across a stratified, purposeful sample of participants from the major religions.

Allport (1963) predicted that mental health varies according to religious motivation; but, based on a review of the literature, the ROS and Quest have not been used with a stratified, purposeful sample of members of the world religions to examine the effects of religious motivation on eudaimonic well-being, affect, needs satisfaction, satisfaction with life, meaning in life, and physical health. Steger and colleagues (2010) found that existential seeking was associated with different levels of well-being among Protestants and Catholics and wondered whether the results would generalize to Buddhists, Muslims, Hindus, and other religious people. Steger and Frazier (2005) found that meaning in life was a primary mediator through which religion is associated with well-being, but acknowledged that their study was limited by not including demographics and other variables as potentially important mediators of religion's relationship with well-being. Rosmarin, Pargament, and Flannelly (2009) identified spiritual struggles as a significant risk factor for poorer physical and mental health among Jews and suggested that spiritual struggles are a potential risk factor for other theists, including Christians,

Muslims, and Hindus. This study makes an important contribution to understanding how religious and secular variables mediate the relationship between religion and well-being.

Some individuals use religion extrinsically for personal, political, social, or religious gain. For example, in a sample of only three religions, Stankov and colleagues (2010) found that some members of some religions endorse violence in the name of God and religion for positive social change more readily than members of other religions. Moreover, although various religions purport to be the necessary and sufficient pathway to a meaningful, purposeful life, certain religious beliefs, motivations, and practices may have a positive correlation with low self-esteem, death anxiety, depression, and poor health (e.g., Abdel-Khalek, 2006, 2007; Krause & Wulff, 2004; Lavrič & Flere, 2008; Morris & McAdie, 2009; Musick, 2000; Rosmarin, Pargament, & Flannelly, 2009). Positive social change is possible through knowing which religious beliefs, motivations, and practices are associated with positive affect, satisfaction with life, fulfilment of basic human needs, eudaimonic well-being, and better physical health.

In this chapter, I present a brief background of the problem, state the research problem, describe the purpose of the study, and state the research question and hypotheses. I describe the nature of the study along with definitions, assumptions, scope, delimitations, limitations, and significance of this study. I conclude by summarizing the main points of the chapter.

Background

Allport (1963) argued that some individuals are intrinsically motivated to pursue religion for its own sake, as an end in itself, in which religion is lived as the master motive of life. From a behaviorist perspective, religion for the sake of religion is counterintuitive and counterfactual to the exhortations found in religious texts. Aristotle (*Ethics,* Thomson, trans. 1955) argued that all behavior is purposeful, aimed at some other end or goal, and that one such aim is happiness. Therefore, religion is a purposeful activity aimed at some other end or goal (Grubbs, Exline, & Campbell, 2013; Hayward & Krause, 2013; Pargament 2013; Schafer, 2013; Schnitker & Emmons, 2013), and that one such aim of religion is happiness. Maslow (1943) argued that spiritual or ecstatic experiences and well-being are possible only after individuals have met their basic human needs. It is unknown which religions, motivations, beliefs, or practices have a direct or indirect effect on satisfying the needs of believers and helping believers achieve happiness or eudaimonic well-being. This study fills a gap in the literature by examining the direct and indirect effects of religious affiliation, motivation, beliefs, and practices on satisfying the needs of believers and helping believers achieve happiness or eudaimonic well-being. This study was needed to help clarify which religious beliefs, motivations, and practices help believers achieve basic human needs, satisfaction with life, positive affect, meaningful lives, and well-being as opposed to those religious beliefs,

motivations, and practices that lead to violence, personal religious conflict, cognitive dissonance, negative affect, dissatisfaction, and poor physical health.

Problem Statement

Whether religious motivation enhances or exasperates the relationship between religious affiliation and well-being remains an open question. It is unknown exactly what the intrinsic, extrinsic, and quest motivation scales measure and whether these motivations are significant mediators in the relationship between religion and well-being. Intrinsic religion is associated with a strong belief in God, Scriptures, and the efficacy of religion with an aim to connect with God (e.g., Gorsuch, 1984; Hood, 2013; Kirkpatrick, 2005; Kirkpatrick & Hood, 1990; Paloutzian & Park, 2005; Pargament, 2013). Extrinsic religion is associated with moderate belief in God, Scriptures, and the efficacy of religion with a desire to get something in return (Allport & Ross, 1967, Grubbs, Exline, & Campbell, 2013; Hayward & Krause, 2013; Pargament 2013; Schafer, 2013; Schnitker & Emmons, 2013). Quest is associated with uncertainty and doubts concerning God, Scriptures, and the efficacy of religion accompanied by a search for answers (Batson & Schoenrade, 1991; Batson, Schoenrade, & Ventis, 1982; Batson & Venis, 1982). Based on a review of the literature, the intrinsic, extrinsic, and quest constructs appear to measure a continuum of belief in, and reliance on, religion as a means to an end.

The intrinsic, extrinsic, and quest constructs have had theoretical, conceptual, and psychometric difficulties since they were introduced (Allport & Ross, 1967, Batson &

Schroder, 1991; Burris, 1994; Donahue, 1985; Genia, 1993, 1996; Gorsuch, 1984; Kirkpatrick & Hood, 1990). The intrinsic construct measures religious commitment and correlates with little more than other measures of religiousness (Donahue, 1985b). Extrinsic religion measures attitudes towards religion in which religion is used as a source of comfort and support (Allport & Ross, 1967; Genia, 1993, 1996, 1997). Quest measures religious skepticism and correlates with anxiety (e.g., Batson et al, 1989; Lavrič & Flere, 2008). Measuring religious motivation continues to be the major obstacle in the psychology of religion (Edwards, Hall, Slater, & Hill, 2011; Granqvist, 2012; Hall, Meador, & Koenig, 2008; Hill et al., 2000; Hood, 2013; Kapuscinski & Masters, 2010; McIntosh & Newton, 2013). If measuring religious motivation has been a problem in the psychology of religion, then correlating questionable measures of religious motivations with measures of well-being has been no less problematic and has tended to produce inconsistent findings.

Whereas Allport (1963) argued that different religious motivations have different mediating effects on beliefs, behaviors, and well-being, research results using the ROS and Quest scales have often been inconsistent and even contradictory (e.g., Flere, Edwards, & Klanjsek, 2008; Flere & Lavrič, 2008; Francis, Jewell, & Robbins, 2010; Francis, Robbins, & Murray, 2010; Lavrič & Flere, 2008; Lavrič & Flere, 2010; Mavor & Gallois, 2008; Neyrinck, Lens, Vansteenkiste, & Soenens, 2010; Pirutinsky et al., 2011; Ross & Francis, 2010). Among a diverse sample of religious philosophies, using

path coefficients to examine the direct effects of religion and the mediating effects of religious motivation on satisfaction with life, satisfaction of basic needs, meaning in life, positive and negative affect, physical health, and eudaimonic well-being addresses a meaningful gap in the current research literature.

Purpose of the Study

This quantitative, quasi-experimental research design used a self-report questionnaire to examine the direct and indirect effects of religious identification, motivation, beliefs, and practices on the perception of well-being. The predictor variable, religion, is self-designated religious affiliation as defined by each participant indicating his or her philosophical view as being (a) atheist, (b) agnostic, (c) spiritual-but-not-religious, (d) Christian, (e) Buddhist, (f) Hindu, (g) Jew, (h) Muslim, (i) Confucian, (j) Shinto, (k) Taoist, or (l) other. Although there are many other religions in the world and many different sects within the world religions (Brandon, 1970), the number of categories was limited to make data collection and analysis manageable and interpretation meaningful. The categories used in this study represent the major categories and include a majority of the adherents of the world religions (Brandon, 1970; Central Intelligence Agency, 2013; Pew Research Center, 2012). The mediating variable is religious motivation, defined as intrinsic spirituality (religion for its own sake), extrinsic religiosity (religion for an ulterior motivation), and quest (religious uncertainty and seeking answers). The outcome variable is well-being as measured by hedonic and eudaimonic

well-being, satisfaction with life, affect, satisfaction of basic needs, meaning in life, and physical health.

Research Question and Hypotheses

This study was governed by the following research question: Does religious motivation, defined as intrinsic spirituality, extrinsic religiosity, and quest, influence the direction, or magnitude, or both the direction and magnitude, of the relationship between religious identity and well-being? The hypothesis and null hypothesis are as follows:

H_a: Religious motivation will mediate the effect of religious philosophy on well-being.

H_o: Religious motivation will NOT mediate the effect of religious philosophy on well-being.

The predictor variable, religion identification, means self-designated religious affiliation as defined by each participant categorizing his or her philosophical view as atheist, agnostic, spiritual-but-not-religious, Christian, Buddhist, Hindu, Jew, Muslim, Confucian, Shinto, Taoist, or other. The mediating variables, extrinsic religiosity, intrinsic spirituality, and quest, were measured on Likert-like scales consisting of the Religious Orientation Scale (ROS, Allport & Ross, 1967) and the Quest scale (Batson & Schoenrade, 1991). Other potential mediating or predictor variables included the Spiritual Experience Index –Revised (SEI-R, Genia, 1997), the Religious Background and Behaviors (RBB; Connors, Tonigan, & Miller, 1996), the Behavioral and Faith Scale

(Nielsen, 1995), the Militant Extremist Mind-Set questionnaire (MEM, Stankov, Saucier, & Knežević, 2010), the Belief in Afterlife Scale (Oscarchuk & Tatz, 1973), Beliefs about God scale (Leondari & Gialamas, 2009), and the Spiritual Struggles Measure (SSM, Rosmarin, Pargament, & Flannelly, 2009). The outcome variable, well-being, was conceptualized and measured on Likert-like scales consisting of the Beliefs about Well-Being Scale (BWBS; McMahan & Estes, 2010), the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985), the Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988), the Needs Satisfaction Inventory (NSI; Lester, 1990), the Meaning in Life Questionnaire (MLQ; Steger, Frazier, Oishi, & Kaler, 2006), and the Physical Health Questionnaire (PHQ; Schat, Kelloway, & Desmarais, 2005).

Theoretical Framework for the Study

Aristotle (*Ethics,* Book 1) argued that all behavior is purposeful, a means to something else, and that that end may be happiness because we always choose happiness for itself, and never for another reason. Aristotle (*Ethics*) further argued that there are two approaches to happiness and well-being. Pursuing pleasant experiences and avoiding pain lead to temporary happiness and hedonic well-being. Pursuing self-development and contributing to the common good of others and the community produces eudaimonic well-being. While Aristotle argued that selfless activities lead to well-being, Maslow (1943) argued that humans are motivated by basic needs and that well-being is possible

only when those needs are met. Frankl (1966, 1972) argued that finding meaning and purpose in life is necessary for well-being. In contrast to Aristotle, who argued that all behavior is directed towards some other end, such as happiness; Maslow, who argued that fulfilling needs lead to well-being; and Frankl, who argued that meaning in life leads to well-being; Allport (1963) argued that some individuals are intrinsically religiously motivated by religion for religion's sake, as an end in itself, which serves as the master motive of life; but religion for religion's sake is circular (Kirkpatrick & Hood, 1990). In other words, Allport seemed to believe that intrinsically religious people practiced religion just to practice religion without any goal, such as closeness to God, pleasing God, fulfilling basic needs, or finding meaning in life. Allport (1963, p. 193) theorized "extrinsic religion is less therapeutic or less preventive than intrinsic religion." Testing the explanatory power of competing theories and explanations, such as those of Aristotle, Maslow, Frankl, and Allport, typically requires, according to Creswell (2009), postpositivist knowledge claims, formulating hypotheses relating two or more variables, using experiments or employing questionnaires with closed-ended questions as strategies of inquiry to collect numerical data for statistical analyses, and ensuring the accuracy of findings through standards of validity and reliability. I elaborate on the research design and rationale in Chapter 3.

The logic of scientific discovery entails providing explanations of possible causal relationships among a set of variables (Popper, 1935/1992; Rosenberg, 2000). Causal

modeling techniques, such as linear regression and structural equation modeling, examine whether a pattern of inter-correlations among variables fits the researcher's underlying theory of which variables may be causing other variables (Edwards & Lambert, 2007; Mertler & Vannatta, 2010). Because Allport (1963) first proposed that intrinsic and extrinsic religious motivation have different effects on the well-being of believers, causal modeling techniques are appropriate for testing this hypothesis. Although researchers attempt to draw causal inferences from correlational data, correlations cannot prove causality and the degree of confidence in the validity of causal inferences from correlational data is much weaker than inferences drawn from longitudinal and true experimental studies (Hayes, 2013; Jose, 2013; Mertler & Vannatta, 2010). Nevertheless, causal modeling using path analysis can establish plausible cause-and-effect relationships among three or more variables (Hayes, 2013; Jose, 2013). Ordinary least squares (OLS) regression has a distinct advantage in that OLS regression analysis can estimate the direct, indirect, and total effects of one variable on another variable (Hayes, 2013; Jose, 2013; Mertler & Vannatta, 2010).

Religious motivation and well-being are examples of latent or unobserved variables that can be estimated only by imperfect questionnaires (Aron, Aron, & Coup, 2008; Hayes, 2013; Jose, 2013). Because of the vagueness and inconsistency of many theories and operational definitions used in social science research, the potentially unlimited number of causal determinants of religious motivation and well-being

suggested in the literature, and the complexity of religious motivation and well-being described in the literature (e.g., Allport, 1963; Crosby, 2013; Edwards, Hall, Slater, & Hill, 2011; Granqvist, 2012; Hall, Meador, & Koenig, 2008; Hill et al., 2000; Hood, 2013; Johnson, Li, Cohen, & Okun, 2013; Kapuscinski & Masters, 2010; McIntosh & Newton, 2013; Pargament, 2013; Peterman, LaBelle, & Steinberg, 2014), using multiple measures of the mediator and outcome variable helped increase the accuracy of the mediation model. All of the following authors claim to measure determinants of religious motivation and are therefore appropriate to this study of religious motivation as a latent variable: the authors of the ROS (Allport & Ross, 1967), Quest scale (Batson & Schoenrade, 1991), Spiritual Experience Index –Revised (SEI-R, Genia, 1997), Religious Background and Behaviors (RBB; Connors, Tonigan, & Miller, 1996), Behavioral and Faith Scale (Nielsen, 1995), Militant Extremist Mind-Set questionnaire (MEM; Stankov, Saucier, & Knežević, 2010), Belief in Afterlife Scale (Oscarchuk & Tatz, 1973), Beliefs about God scale (Leondari & Gialamas, 2009), and Spiritual Struggles Measure (SSM, Rosmarin, Pargament, & Flannelly, 2009). Likewise, various authors consider the following scales to yield important indicators of the latent variable, well-being: the Beliefs about Well-Being Scale (BWBS; McMahan & Estes, 2010), the Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985), the Positive and Negative Affect Scale (PANAS; Watson, Clark, & Tellegen, 1988), the Needs Satisfaction Inventory (NSI; Lester, 1990), the Meaning in Life Questionnaire (MLQ; Steger, Frazier,

Oishi, & Kaler, 2006), and the Physical Health Questionnaire (PHQ; Schat, Kelloway, & Desmarais, 2005). Each measure contains some measurement error and therefore accounts for only part of the variance in the relationship between religious identification, religious motivation, and well-being.

Nature of the Study

Because this study examined the competing theories of Aristotle, Maslow, Frankl, and Allport, it was appropriate to use a quantitative approach using postpositivist knowledge claims and assumptions employing a questionnaire strategy with closed-ended questions to gather numerical data for statistical analysis in order to confirm or reject a hypothesis. The predictor variable was affiliation with one of the world religions. The moderator variable was religious motivation, defined as intrinsic spirituality, extrinsic religiosity, and quest. Religious covariates that may have served as potential mediators included militant extremism, belief in afterlife, beliefs about God, and spiritual struggles. The outcome variable of well-being was operationally defined and measured by eudaimonic and hedonic well-being, satisfaction with life, positive and negative affect, fulfillment of needs, meaning in life, and physical health scales. Covariates or demographic information included age, gender, mother's religious affiliation, father's religious affiliation, ethnicity, birthplace, form of government, income, education, employment status, marital status, and family structure. I made a concerted effort to obtain up to 40 participants per category of religious affiliation, and because the number

of Shinto participants remained low, the survey was kept open longer until 763 participants completed the survey. The large sample size increased reliability and validity. Because three or more variables are involved, one or more variables may be a mediator (Baron & Kenny, 1986; Hayes, 2013; James, & Brett, 1984; Jose, 2013; Kenny, 2011). Therefore, the data were analyzed using linear regression and the classic mediational triangle.

Definitions

Each participant clicked on a radio button (a dot within a circle) to indicate his or her religious preference to designate the predictor variable religion self-identification. No operational definition of religion was given because each person within each religious group constructs his or her own religious paradigm (Bandura & McDonald, 1963; Davis, Moriarty, & Mauch, 2013; Gergen, 2011; Gorsuch, 2013; Grubbs, Exline, & Campbell, 2013; Harrison, 2006; Johnson, Li, Cohen, & Okun, 2013; Hood, 2013; McIntosh & Newton, 2013; Pargament, 2013; Peet, 2005; Sharp, 2013; Spilka & Ladd, 2013; Schwab, 2013; Usman, 2007; Van Tongeren, Hook, & Davis, 2013). People who are religious for religion's sake (Allport & Ross, 1967) characterize intrinsic motivation. People who use religion to gain rewards and avoid punishment in this life and an afterlife (Allport & Ross, 1967) characterize extrinsic motivation. People who have a skeptical, open-minded quest for religious truths concerning meaning and purpose in life (Batson & Schoenrade, 1991; Batson, Schoenrade, & Ventis, 1982; Batson & Venis, 1982) characterize quest

orientation. Although individual religious orientations may sometimes overlap and may vary from time to time depending on individual situations, variations of the intrinsic, extrinsic, and quest motivations are virtually the only categories of religious motivation described in the literature.

Hedonic well-being was defined as the pursuit of pleasure and avoidance of pain (Aristotle, *Ethics*).

Eudaimonic well-being was operationalized as a state of happiness inherent in pursuing one's highest human potential and contributing to the well-being of others (Aristotle, *Ethics*).

Well-being has also been defined in the literature as satisfaction with life, finding meaning and purpose in life, fulfilling basic human needs, maintaining a balance of positive and negative affect, or being healthy (Diener, Emmons, Larsen, & Griffin, 1985; Frankl, 1966, 1972; Maslow, 1943; Ryff & Keyes, 1995; Steger & Frazier, 2005; Watson, Clark, & Tellegan, 1988).

Assumptions

It was assumed that participants would give honest responses on the questionnaire, especially since participants who volunteered to participate in the e-Rewards Market Research panel *agreed* to give truthful answers. However, there is a tendency among some individuals to give the same response as they gave to the previous item (Springer, Hauser, & Freese, 2006). There is also a tendency for some participants to

answer all religious questions positively, thus creating a pro-religion bias (Allport & Ross, 1967). Some people tend to answer items stated positively with a positive response and items worded negatively with a negative response (Ryff & Singer, 2006). The assumption that most participants gave honest responses on the questionnaire is necessary for conducting research using self-reports. However, as an extra precaution, Qualtrics Labs, which hosted the online survey, included two quality assurance questions that tested whether participants carefully read and answered the questions. Qualtrics Labs eliminated from the final report all participants who answered one of the quality assurance items incorrectly.

Scope and Delimitations

This study addressed the question of whether intrinsic, extrinsic, and quest orientations are identifiable across world religions and whether different motivations mediate the relationship between religion and well-being. The effects of religious motivation on well-being was chosen because Allport and Ross (1967) and Batson and colleagues (e.g., Batson & Gray, 1981; Batson & Flory, 1990; Batson et al., 1989) claimed that different religious orientations produce different effects. The conceptualization and measurement of intrinsic, extrinsic, and quest motivation laid the foundation of the modern psychology of religion and shaped its development for decades (Cosby, 2013; Hood, 2013; Kirkpatrick & Hood, 1990; McIntosh & Newton, 2013). Demographic variables are necessary for making inferences from samples to populations

and demographic variables influence well-being; therefore, certain demographic variables were included in the study. I chose happiness, or well-being, as the outcome measure of religion and religious motivation because, as Aristotle (*Ethics*) argued, happiness is perfect and self-sufficient, being the end to which we direct our activities.

The participants were limited to adult consumers and business decision-makers who had a computer, Internet access, volunteered to participate in e-Rewards Market Research panels for e-Rewards Currency, and agreed to give truthful answers to a questionnaire. Individuals under the age of 18 were excluded as well as e-Rewards Market Research volunteers who had completed five questionnaires during the past year. Also excluded were members of the world religions who were not members of the e-Rewards Market Research opinion panels.

While the findings are generalizable to individuals of similar age range, socioeconomic status, and religious affiliation, they may not generalize to poorer people who do not have the luxury of computers and Internet service.

Limitations

This study was limited by the exclusive reliance on cross-sectional data drawn from self-reports. The study relied solely on online sampling techniques and completed questionnaires on measures of religion and well-being. The instruments chosen emphasize behaviors because recalling and recording what one has or has not done is more objective and reliable than recalling thoughts, feelings, and judgments when past

actions were performed; nevertheless, behavioral self-reports are still relative and subjective. Religious motivation may be related to personality differences (Francis, Robbins, & Murray, 2010; Grubbs, Exline, & Campbell, 2013; Himle, Chatters, Taylor, & Nguyen, 2013; McMahan & Renken, 2011) that were not included as potential mediators in this study. Each measure of religion and well-being used in this study has some measurement error in that each instrument measures only a proportion of the variance, and therefore other potential mediating variables may have gone unmeasured. Mediation analysis attempts to establish causality, but mediation analysis still relies on correlations and cannot prove causality (Hayes, 2013; Jose, 2013). Future researchers could address these limitations by using longitudinal and observational studies of participant behaviors, informant reports, or experience-based sampling methods.

The limitations of any one instrument were mitigated by using six scales measuring the outcome variable of well-being. Oversampling in the measurement of well-being increased the validity and reliability of this study. Using best efforts to obtain a sample size of up to 40 participants per religious category was intended to increase the power to detect a medium effect of religion and religious motivation on well-being.

The specification of a mediational triangle was based on the research literature, formal and informal theories, and the researcher's hypothesized link between the variables of interest. With any three concurrent variables, six different mediational triangles were possible (Jose, 2013). Therefore, the results of the mediation analysis were

limited by the researcher's perceived accuracy of the model specification and by the limitation of drawing causal inferences from correlational data.

The aim of both religion and science is to explain and predict, but empirical science is inherently biased against unscientific explanations and claims unsupported by evidence (Copi & Cohen, 1998; McIntosh & Newton, 2013). God, a higher power, or karma either exists or do not exist. Deciding whether God, a higher power, or karma exists should simply be a matter of weighing the evidence. If something exists, then it exists in some amount (Thorndike, 1918). If something exists in some amount, then it is capable of being measured (McCall, 1922). Therefore, the direct and indirect effects of an omniscient, omnipotent, and omnipresent God, higher power, or karma should be detectable in the relationship between religion and well-being. Life may seem unfair and unjust perhaps because there is no god, higher power, karma, or other regulatory mechanism to ensure fairness, equality, and justice. These biases are guarded against in the discussion by not inferring or generalizing beyond the research question, variables, sample characteristics, and findings.

Significance

This study is expected to contribute to the field of the psychology of religion by examining the relationship between some of the numerous variables influencing religious affiliation, religious motivation, and well-being. A potential contribution that advances practice in the psychology of religion may be drawing attention to Maslow's hierarchy of

basic needs as a mediator between religion and well-being. A second potential contribution of this study may be a shift in focus to evidence-based religion by comparing and contrasting the efficacy of religious beliefs and practices to the promises made to believers in the texts of the world religions to satisfy basic human needs. A third potential contribution to the psychology of religion may be drawing attention away from Allport's (1963) construct of intrinsic religion, especially since some researchers (e.g., Kirkpatrick & Hood, 1990) have recommended abandoning the intrinsic, extrinsic, and quest paradigm.

The world religions attract believers by promising rewards in this life and promising an eternal afterlife for qualifying believers. Although these promises are written in the texts of the world religions, there is little or no empirical evidence concerning which religious beliefs and practices are most effective at delivering on the promise of intrinsic and extrinsic rewards in this life. A potential contribution of this study to the psychology of religion is the practice of examining the cost-benefits of religious beliefs and practices to individuals, communities, and cultures. Individual believers and nonbelievers may become better informed concerning which religions, motivations, beliefs, and practices are more effective at ensuring the conditions favorable for eudaimonic well-being, positive affect, satisfaction with life, satisfaction of basic needs, meaning in life, and physical health. Moreover, believers and nonbelievers may become better informed about which religious beliefs, motivations, and behaviors foster

dissatisfaction with life, negative affect, lack of meaning in life, and poor physical health. The results of this study support positive social change by broadening our understanding of beliefs and behaviors that influence the happiness and well-being of individuals. Helping individuals understand the link between religion, religious motivation, and well-being may have individual as well as societal benefits.

Summary

In this chapter, I described a quantitative approach based on postpositivist knowledge claims using an online questionnaire with closed-ended questions that was administered to a stratified, purposeful sample of members of the world religions. Because three or more variables were used to examine competing theories, the regression analysis method by Baron and Kenny (1986) was used to examine the mediating effects of religious motivation on the relationship between religious affiliation and well-being. In Chapter 2, I review the literature on the development, validation, and use of the assessment instruments introduced in this chapter.

Chapter 2: Literature Review

Introduction

My research question of interest is does religious motivation have a mediating effect on the relationship between religious philosophy and well-being? This literature review highlights a gap in the research literature on whether (a) religious motivation differs among atheists, agnostics, Buddhists, Christians, Confucians, Hindus, Jews, Muslims, Shintoists, Taoists, and individuals who consider themselves spiritual-but-not-religious, and (b) whether the different motivations affect well-being. More specifically, Does religious motivation, defined as intrinsic spirituality, extrinsic religiosity, and quest, serve as a mediating variable that changes the direction or magnitude, or both the direction and magnitude, of the relationship between religious philosophy (defined as atheist, agnostic, spiritual-but-not-religious, Christian, Confucian, Buddhist, Hindu, Jew, Muslim, Shintoist, or Taoist) and well-being?

Aristotle (*Ethics*) argued that all behavior is purposeful, aimed at some other end or goal, and that one such aim is happiness (eudaimonic well-being). Maslow (1943) argued that psychological health and well-being were possible only when basic human needs are met. However, Allport (1963) proposed two types of achievement motivation as mediators between religion and the well-being of believers. Intrinsic motivation is elicited by the desire to perform a behavior for its own sake. Extrinsic motivation is elicited by the desire to gain external rewards or avoid negative consequences. However,

Allport's claim of intrinsic religious motivation seems to conflict with Aristotle's claim that all behavior is a means to something else; Maslow's claim that motivation is driven by a hierarchy of basic human needs, and the canonical texts of the world religions that all exhort believers to believe and behave as a means to something else. Allport's conceptualization and measurement of intrinsic and extrinsic religious motivation as a mediator has had theoretical, conceptual, and psychometric problems ever since it was published. This study examines why people believe what they believe and do what they do in the name of religion, and whether those reasons have different effects on well-being.

Because the psychology of religion is the scientific study of religion, I examined the problem of defining religion as a foundation of scientific study. I then examined various measures of the mediating variable, religious motivation, and reviewed 10 measures of religious beliefs and practices along with various studies using those measures. Next, I reviewed the major religions and their views of well-being. In the final part of this literature review, I describe various conceptualizations of well-being, highlight six measures that operationally define well-being, and summarize the results of some studies using those measures.

Literature Search Strategy

The literature search included the mediating variables religious motivation, religion, spirituality, intrinsic, extrinsic, and quest. To understand and appreciate what

has and has not been studied in the scientific study of religion, I searched the following databases: Academic Search Complete, ProQuest Central, Science Direct, and Thoreau multidisciplinary databases. Although there are over 125 measures of religiosity (Kapuscinski & Masters, 2010) in these psychology databases, time and space allowed for only a review of the measures of religious motivation most applicable to this study.

The literature on the outcome variable, well-being, is abundant and goes back in Western culture at least as far as the ancient Greeks. Aristotle (*Ethics*) argued that developing a virtuous character was a prerequisite to attaining well-being (eudaimonia). By contrast, psychological hedonism says that avoiding our own pain and increasing our own pleasure is hereditary and is the only ultimate motive people have (Harman, 2000; Lemos, 2004; Mees & Schmitt, 2008; Overskeid, 2002; Sober, 1992). Between the extremes of psychological hedonism and eudaimonism is egoism, or altruistic hedonism, which is the doctrine that we also consider other people's well-being when deciding what is best for ourselves (Riley, 2008; Sprigge, 1999; Timmermann, 2005; Waggle, 2007). How a researcher operationally defines and measures well-being will produce different results. Descriptors for the dependent variable included *psychological well-being, emotional well-being, physical well-being, physiological well-being, hedonic well-being,* and *eudaimonic well-being.* Important referenced articles not found in the Walden library were downloaded as PDF files from either Google Scholar or the Duluth Public Library

website using the Minitex Electronic Document Delivery (MEDD, <http://medd.minitex.umn.edu>).

Since the scientific study of the effects of religion on health and well-being goes back at least to Galton (1872), no parameters were set on the years searched. To capture the essence of a researchable idea often requires going back to seminal articles, such as Maslow's (1943) theory of human motivation, Skinner's (1948, 1950, 1963, 1984, 1998) principles of behaviorism, and Allport's (1963) theory of religious motivation. Nevertheless, the bulk of the literature focused on the last 5 years of research because ideas have evolved over time and current peer-reviewed professional literature has helped refine and update these ideas.

Theoretical Framework

Each of the world religions and their many different sects necessarily claim to have unique and true knowledge with benefits in this life and in an alleged afterlife. However, there are no guarantees in the world religions. The world religions exemplify the warning *caveat emptor*, or "Buyer beware!" because hearsay evidence, anecdotal stories, emotional responses, folklore, and myths are all accepted without tangible proof (Copi & Cohen, 1998; Frazer, 1890/1981). The differences between scientific and unscientific beliefs are evidence, replication, and verification. Whereas science relies on evidence, verification, and replication to explain facts and make predictions, religion relies on the socially constructed phenomenon of divine revelation and largely dismisses

evidence, replication, and verification (Copi & Cohen, 1998). As far back as the Greek philosopher Xenophanes, who argued that humans create gods in their own image, and Socrates, who argued that prayers and sacrifices are intended to bribe and cajole the gods, philosophers and scientists have been attempting to apply logical reasoning and empiricism to religion. The psychology of religion is a relatively recent attempt to apply the principles of science to the beliefs and practices of religion (Hood, Hill, & Spilka, 2009; Piedmont, 2013).

Although the world religions rely on revelations and rationalism for claims of knowledge, I used the positivist and postpositivist view in this study. The postpositivist worldview, also known as the scientific research method, is a deterministic philosophy that seeks to determine the relationship between variables and, in some cases, a causal relationship between variables (Creswell, 2009). Galton (1872) used the scientific research method and statistical analyses to investigate the effects of prayer on health and well-being. Within the broader postpositivist worldview, behaviorism and the social learning theory complement each other in explanatory and predictive power. The goal of science and research is to explain and predict phenomena based on objective measurement and statistical analysis (Copi & Cohen, 1998).

From a theoretic perspective for studying the similarities and differences among the world religions, behaviorism and social learning theories are best suited to explain the cause of beliefs and behaviors that operationally define religion and spirituality.

According to behaviorism, certain stimuli in the environment elicit specific behaviors, behaviors that are operant conditioned through reinforcement by the consequences that follow the behavior (Skinner, 1990). Religion may be operant conditioned by priests, parents, peers, and other environmental influences through response-reinforcement contingencies (Skinner, 1990). Any behavior rewarded or reinforced is likely to occur again (Skinner, 1998). On the other hand, if unorthodox behaviors are punished by parents, priests, peers, or other members of society, or are believed to be punished by the gods, then the behaviors are likely to fade. Thus, operant conditioning can explain the existence of religious and cultural beliefs and behaviors with fewer assumptions, inconsistencies, and contradictions than the hypotheses of theism and divine revelation.

Bandura (1977) argued that although environmental influences partly determine what people perceive, think, and do, individuals can adapt to the environment, change the environment, or move to a new environment. The more individuals change themselves or their environment, the more likely they are to survive in that environment. Humans use observational learning to acquire knowledge, beliefs, behaviors, attitudes, and values that help them fit into a given society and increase their chances of survival. The social learning theory (Bandura, 1969, 1977, 2001, 2002, 2003, 2006; Bandura & McDonald, 1963) explains the great diversity of religions, cultures, ethnicities, ethics, and mores in the different geographic locations of the world with fewer assumptions than the claims of the world religions.

Within the broader logical positivist and empirical worldview, psychological hedonism, egoism, behaviorism (Skinner, 1990), the social learning theory (Bandura, 1977), social constructivism, and terror management theory (Jonas & Fischer, 2006; Vail, Rothschild, Weise, Solomon, Pyszczynski, & Greenberg, 2010; Van Tongeren, Mcintosh, Raad, & Pae, 2008) complement each other in explanatory and predictive power concerning religion. Each theory helps explain and predict certain religious beliefs and behaviors with its own theoretical lens, but it can be argued that survival or self-preservation is the true "master motive" (Allport & Ross, 1967, p. 434) of religion.

From a behaviorist perspective, intrinsic religion for its own sake is counterintuitive. All behavior is purposeful (Aristotle, *Ethics*), extrinsically motivated towards some other goal. From a behaviorist perspective, what a person believes or claims to believe is irrelevant unless and until that person acts upon the belief, and then it becomes a matter of behavioral psychology and sociology. Religion is socially constructed by individuals and communities (Bandura, 1997, 2001, 2006; Davis et al., 2013; Gergen, 1985, 2001, 2002, 2011; Gorsuch, 2013; Schnitker & Emmons, 2013; Schwab, 2013; Spilka & Ladd, 2013), learned through operant conditioning (Skinner, 1963, 1984, 1990, 1998), used as a coping mechanism to meet basic human needs, especially managing the debilitating fear of death (Jonas & Fischer, 2006; Vail, et al., 2010; Van Tongeren et al., 2008), and is passed on to the next generation through social learning and operant conditioning (Bandura & McDonald, 1963; Bandura, 1969, 2002,

2003). However, without the *quid pro quo* promise of this-worldly goods, longevity, or life everlasting, religion is just another philosophy.

The search for religious motivation led to the terror management theory (Jonas & Fischer, 2006; Vail et al., 2010; Van Tongeren et al., 2008), which postulates that managing the terror of inevitable death is the prime motivation of religion. Because death is universal and because death is antithetical to the evolutionary drive of self-survival; therefore, religion serves as an antidote to death. The theory that religion is a terror management defense mechanism is simpler and more elegant, has greater compatibility with previously well-established theories of human motivation, is more relevant to the observable realities of life, is more testable, and has both greater explanatory and predictive power (Copi & Cohen, 1998) than intrinsic religion for its own sake in explaining the "mysterious primacy" (Allport, 1963, p. 191) of religion.

The positivist, postpositivist worldview is a deterministic philosophy in which causes are viewed as possible determinants of effects or outcomes (Creswell, 2009). I used linear regression to determine the possible direct, indirect, and total effects of religious philosophy and religious motivation on well-being. The positivist, postpositivist worldview is reductionistic in that the intent of the researcher is to determine the fewest number of variables that describe a causal relationship. I used bivariate correlations, exploratory factor analysis, and linear regression to determine inter-correlations and the fewest number of items that influence the mediating and outcome variables. The

positivist, postpositivist assumptions concerning the need for empirical observations and measurement as a basis for probable knowledge are best supported by the quantitative approach of numerical data collection, data analysis, and interpretation of the findings. I used a non-experimental qualitative approach of collecting numerical data through a closed-question questionnaire and the statistical procedures of linear regression to determine the path coefficients between religious philosophy, religious motivation, demographic variables, and well-being variables. The positivists, postpositivist worldview and non-experimental quantitative strategy of inquiry were used to collect and analyze data to support or refute the hypothesis that religious motivation mediates the relationship between religious philosophy and well-being.

Conceptual Framework

Defining Religion

Religious affiliation, religious identification, or religious philosophy served as the predictor variable in this study and the terms are used interchangeably. Before a discipline can leave the field of philosophy and emerge as an independent discipline, it must first be defined in observable, measureable terms. Religion is a social construct like science and psychology, and attempts to define an academic construct soon becomes problematic to scientists (Alatas, 1977; Edwards v. Aguillard, 1987; Fusch, 2001; Shermer, 1991), psychologists (Henriques, 2004; McIntosh & Newton, 2013; Skinner, 1990), and religionists (Brandner, 1999; Brown, 2011, Conroy, 2010; Contreras-Véjar,

2006; Eisgruber & Sager, 2009; Harrison, 2006; Peet, 2005; Rossano, 2007; Usman, 2007). The construct of spirituality seems to further confuse the definition of religion (McIntosh & Newton, 2013). How something is defined depends largely upon who is doing the defining.

No definition of religion satisfies all stakeholders (Atlas, 1977; Brown, 2011, Conroy, 2010; Gorsuch, 2013; Harrison, 2006; Hood, 2013; McIntosh & Newton, 2013; Pargament, 2013; Peet, 2005; Rossano, 2007; Schnitker & Emmons, 2013; Taylor, 2004; Usman, 2007). Because psychologists of religion can neither define their object of study nor agree on distinctive methods or strategies of investigation and interpretation (McIntosh & Newton, 2013; Taylor, 2004), theology and religion still linger within the field of philosophy as immature ideologies.

The problem of defining religion has been a vexing problem for thinkers ever since Socrates first asked, "What is piety"? (Plato, *Euthyphro*). Twenty-four centuries later, philosophers, psychologists, and theologians are no closer to answering the questions, What is piety? What is religion? What is spirituality? Some scientists have defined religion as an illusion (Freud, 1950/2009) while others have defined religion as a delusion (Dawkins, 2006). Still other scientists believe that religion is reducible to biology, psychology, or other disciplines of science (Saler, 2009; Wilson, 1998).

Aristotle (*Ethics*) considered religious sects as social clubs that fall under the category of political associations because the advantages of religion and politics extend

beyond the moment to span a lifetime. Members of religious guilds honor the gods, celebrate events, form friendships, and enjoy themselves in pleasant relaxations as part of a political community. Religion and politics are pursued for the sake of advantages (Aristotle, *Ethics*), and therefore both religion and politics are need-driven social constructs used as coping mechanisms to meet physiological, psychological, and social needs. According to Aristotle's concept of religion, religion is just another social construct that requires no special attention to metaphysical and sacralized concepts by philosophers.

Because religion is a socially constructed philosophy (Allport, 1950; 1963), researchers have struggled to conceptualize and measure religion and religious phenomena and then compare this picture of religion with reality (Wittgenstein, 1922/2003). For example, Usman (2007) spent 100 pages trying to define religion and concluded that the philosophical question of what is religion is a question without an answer.

Pargament (2002, p. 240) defined religion as the "search for significance in ways related to the sacred." However, this is simply defining a social construct using a social construct. Defining "the sacred" further entails defining other social constructs—God, blessedness, holiness, omnipresence, revelation, transcendence, and so forth (Pargament, 2002)--without operationally defining the construct in terms of observable, measurable reality. In order to discover whether a social construct as a picture of religion is true or

false we must compare it with observable, measureable reality (Wittgenstein, 1922/2003). Each of the world religions defines the sacred differently. Pargament (2002, 2013) and other psychologists of religion have failed to answer Socrates's (*Euthyphro*) basic question of whether the sacred is loved by the priests and their followers because it is sacred, or is something sacred merely because the priests and their followers love it. Religionists may be committing the logical fallacy of false causation when they attribute sanctity to persons, places, and objects.

King (1967) suggested nine dimensions of religion. Then King and Hunt (1969) used factor and cluster analysis to discover 11 dimensions of individual religious beliefs and practices. Other researchers found social and personal dimensions (e.g., Genia, 1991, 1997; Gorsuch and Miller, 1998). Essentialism refers to the defining characteristics deemed necessary and sufficient to be a member of a category (Toosi & Ambady, 2011). However, leaders of the world religions cannot agree on the essential characteristics deemed necessary and sufficient to define membership in their sect, obtain the good life on earth, or guarantee life everlasting, and therefore there exist thousands of divergent sects and cults with conflicting beliefs and practices within the field of religion.

Even the followers of the world religions cannot agree on a common, shared definition of religion. Muslims have three different constructs for religion: (a) *din* is used for religion as it relates to Allah; (b) *millah* is religion as it relates to the Judeo-Islamic and Christian prophets, and (c) *mazhab* is religion as it relates to the religious scholars

(Hughes, 1885/1994). Buddhism is a nontheistic religion and yet Buddhists venerate transcendental buddhas and the Holy Immortals, engage in private and public religious services, build temples, make pilgrimages, and have canonical Buddhist scriptures. Whether or not Confucianism is a religion is debatable because it evolved as a secular philosophy with no church, no priesthood, and no obligatory creeds (Brandon, 1970). Taoism is essentially a secular philosophy of life in which followers are encouraged to ignore the impotent and disinterested gods. The Shinto philosophy has resulted in thousands of shrines in public places and private homes with specific rituals, and yet most Japanese did not acknowledge Shintoism as a religion (Brandon, 1970; Pilcher, 1985; Roemer, 2010; Shimazono, 2005). Each of the world religions and their many sects have constructed a worldview, a theoretical lens, that rightly or wrongly influences one's perception of, interpretation of, and response to their environment. Religion is in the eye of the believer. As such, behaviorism succinctly explains religion as a conditioned response to the environment in general and to individual needs in particular.

For the purposes of this study, I define religion and theology as a philosophy, a sociocultural view of life that varies across time, cultures, and contexts. Defining the world religions as philosophies, or different ways of perceiving and responding to reality, makes the phenomenon of religion easily definable, qualifiable, and quantifiable. From a behaviorist perspective, only behaviors are important, directly observable, and objectively measureable. Thus, from a behaviorist perspective, the frequency, intensity,

and duration of behaviors are the necessary and sufficient conditions that define and distinguish the world religions and sects. In fact, most religions demand behavioral participation in lieu of empirical proof and epistemic justification (Allport, 1963; Armajani, 1970). The study of the intensity, frequency, and duration of religious antecedents, behaviors, and consequences is a more parsimonious fit for the scientific study of religion than Allport's (1963) personality and motivational theories.

The predictor variable in this study is religious identification compared on twelve levels: (1) atheism, (2) agnosticism, (3) spiritual-but-not-religious, (4) Buddhism, (5) Christianity, (6) Confucianism, (7) Hindu, (8) Jewish, (9) Muslim, (10) Shintoism, (11) Taoism, and (12) other. Because religious identity and affiliation are multidimensional, relative-subjective phenomenon, participants were asked to designate their religion in the demographic section of the questionnaire. There was no criterion-related test of religious identity or affiliation because each individual constructs their own religious sentiment (Allport, 1963) and interpretation of reality (Bandura, 1977, 2001, 2002; Gergen, 2001, 2002; Wittgenstein, 1922/2003).

The I/E and Q Scales

The conceptualization of religion as need-driven by other researchers led Allport (1963) to apply the motivation theory (Petri, 1996, as cited in Coon, 1998) to religion. Researchers use the concept of motivation to explain the dynamics of behavior: the mechanisms by which needs (internal deficiencies) cause drives (cognitive-emotive

arousal) that elicit a response (behavior) intended to attain a goal (need reduction) with incentive value (the appeal of a goal beyond satisfying a basic need). Allport (1963) conceptualized religious motivation as polar opposites in which religion was either extrinsically motivated by hedonic principles and *used* for ulterior ends, such as food, clothing, shelter, social belonging, or personal security, or religion was intrinsically motivated as an end in itself and *lived* as the master motive in life (Allport & Ross, 1967). However, the results of the ROS (Allport & Ross, 1967) do not support this dichotomy. First, religion for its own sake, purely for its intrinsic value, conflicts with Maslow's (1943) theory of human motivation, psychological hedonism (Mees & Schmitt, 2008; Overskeid, 2002), ethical hedonism (Mueller, 1986; Riley, 2008; Sprigge, 1999; Timmermann, 2005), and behaviorism (Skinner, 1963, 1984). An individual could intrinsically *live* their religion, strictly adhering to doctrines, commandments, rituals, and creeds in their daily life for some other end, as for example, because doing so alleviates fear of death and is valued by God. Secondly, socioreligious constructs are relative-subjective and therefore the intrinsic and extrinsic scales tend to overlap because overtly extrinsically motivated religious people want to believe they are spiritually motivated while intrinsically motivated individuals want to believe religion has some benefit, which produces a pro-religious bias (Allport & Ross, 1967). Thirdly, contrary to what Allport and Ross (1967) believed, intrinsic religion is not an end in itself, "the master motive" (p. 434), not even for the gods. The payoff from Maslow's (1943) perspective may be food

(Exodus 16:8), clothing (Genesis 28:20), shelter (2 Samuel 7:5-8), protection (Exodus 14:14, 15:3), sense of belonging (Exodus 19:6), love and loving (Deuteronomy 6:5; Luke 10:27; Matthew 22:37; John 21:15-17), esteem and self-esteem (Exodus 10:2; 11:9, 15:13-16, 18:11), or self-actualization (Matthew 19:21). All behavior, including religious behavior, is purposeful (Aristotle, *Ethics*), that is to say, pursued for some other end. Ironically, Allport (1963) may have hinted of the true "master motive" of religion and the "mysterious primacy" (p. 191) of religion when he argued that "religion … defends against anxiety" (p. 194). This analysis of religion agrees with the terror management theory (Jonas & Fischer, 2006; Vail et al., 2010; Van Tongeren et al., 2008) and Freud's (1950) conceptualization of religion. Contrary to Allport's argument, the literature suggests that all religion is extrinsically motivated towards some other end and that intrinsic religion for its own sake, as an end in itself, is meaningless.

Even though Allport and Ross (1967) concluded that religious orientation was a third factor, a mediating variable, that influenced the relationship between church attendance and racial attitudes, the intrinsic-extrinsic paradigm became the dominant measure of independent variables in the psychology of religion. Researchers have misused the scales as a measure of the predictor variable rather than as a measure of a mediating variable as intended by Allport and Ross (1967).

Batson and Ventis (1982) saw deficiencies in Allport's two-factor solution to religious motivation and discovered a third factor, which they called Quest. Batson and

Ventis (1982) conceptualized the Quest factor as a measure of a skeptical, open-minded quest for religious truths. The six-item Quest scale (Batson & Venis, 1982) raised concerns about validity (Batson & Schoenrade, 1991a) and reliability (Batson & Schoenrade, 1991b). Therefore, Batson and Schoenrade (1991a) revised the six-item scale by adding new items to produce a new 12-item Quest scale.

The Quest scale presumes that doubt is beneficial and leads to truer faith. However, the question of doubt may open the dark side of religion (Krause & Wulff, 2004) because religious doubt can have an extremely detrimental effect on mental health (Galek, Krause, Ellison, Kudler, & Flannelly, 2007; Rosmarin et al., 2009). The Quest scale may not measure the true level of doubt experienced by devout, orthodox religionists who may believe that doubt is a sin (Romans 14:23; Hunsberger, McKenzie, Pratt, & Prancer, 1993). Religious doubt may itself be a mediating variable that influences psychological well-being and varies with both age (Krause, Ingersoll-Dayton, Ellison, & Wulff, 1999; Peterman et al., 2014) and education (Krause, 2006). Moreover, because the Quest scale involves existential questions concerning life's meaning and inevitable death, the Quest scale may confound dependent variables related to well-being. Because both the ROS (Allport & Ross, 1967) and the Quest scale (Batson & Schoenrade, 1991; Cosby, 2013) have conceptual and psychometric problems, therefore other measures of religion should be included with the ROS and Quest scales (Genia, 1997; Gorsuch, 1984).

Literature Review Related to Other Key Variables and Concepts

Because measures of social constructions are subjective and relativistic self-reports, the American Educational Research Association, American Psychological Association, and National Council on Measurement in Education (AERA, APA, & NCME, 2004) argued that including several different measures of a construct could increase validity and reliability while increasing an understanding of the construct's meaning. The investigation of one scale should include several other standard scales (Gorsuch, 1984; Kapuscinski & Masters, 2010) and those scales should provide a strong link to previous research on the variables (Genia, 1997).

Religious practices are an integral part of religion. In fact, Jews and Muslims have codified religious practices into canonical law and both Jewish and Islamic doctrines emphasize specific behaviors over beliefs and faith (e.g., Rosmarin et al., 2009; Armajani, 1970). Behaviors are a more objective measure of religion and spirituality than statements of subjective beliefs and feelings. Therefore, seven additional measures--the Spiritual Experience Index - Revised Genia (1997), the Religious Background and Behaviors Questionnaire (Connors et al., 1996), Behavioral and Faith Scale (Nielson, 1995), Militant Extremist Mind Set (Stankov, Saucier, & Knežević, 2010), Belief in Afterlife Scale (Osarchuk & Tatz, 1973), Beliefs about God (Leondari & Gialamas, 2009), and Spiritual Struggles Measure (Rosmarin et al., 2009)--were used to measure other religious beliefs and behaviors as potential mediators or predictors of well-being.

The Spiritual Experience Index –Revised

Genia and Shaw (1991) used the intrinsic-extrinsic paradigm to predict depression. Then Genia (1991) developed the Spiritual Experience Index as a measure of spiritual maturity and used the intrinsic-extrinsic-quest paradigm as predictors of psychological and spiritual well-being (Genia 1996). Genia (1997) then revised, reformulated, and republished the Spiritual Experience Index to remove any sectarian bias.

Genia (1997) developed the Spiritual Experience Index –Revised (SEI-R) to reduce the Western Christian bias in the measurement of spirituality. The aim of the SEI-R is to distinguish a spiritually mature faith from less evolved forms of spirituality, that is to say, faith and spirituality that transcend the idiosyncratic beliefs rooted in Western Christian ideology (Genia, 1997).

The SEI-R factored into two subscales, a *Spiritual Support* (SS) scale and a *Spiritual Openness* (SO) scale. However, the SS and SO subscales of the SEI-R are weak and often insignificant predictors of existential well-being, esteem, and depression. This is unfortunate because existential well-being, self-esteem, and depression are common measures in the health care field used to measure well-being (Genia, 1997). The inconsistency in Genia's results may be due to the sample characteristics because largely middle-class, urban, young college students with three years of college education already completed should logically be high in self-esteem and low in depression.

Genia (1997) developed the SEI-R to test the relationship between faith and mental health and therefore it is relevant to testing and explaining the relationship between religion and well-being, in spite of the restriction in predictive power with college students. Genia conceded that further research with more diverse populations is necessary, a sentiment that echoed McNemar's (1946) concern with the college sophomore problem. I mitigated the college sophomore problem (McNemar, 1946; Gordon, Slade, & Schmitt, 1986; Peterson, 2001) by using a more diverse stratified purposeful sample of adults.

The Religious Background and Behaviors Questionnaire

While it has been argued that religion has intrinsic value (e.g., Pargament 2002, 2013), it is the extrinsic and utilitarian potential of religion that led to the development of the Religious Background and Behaviors questionnaire (RBB; Connors et al., 1996) as a tool for mediating and shaping behavior to facilitate recovery from substance abuse and addiction. The reliance on a higher power or spirituality as a cognitive, emotive, and behavioral aid in the 12-step model of addiction treatment is one example. The 12-step model of recovery replaces a dependency on drugs and alcohol with an increasing reliance on God or a higher power and the positive benefits of religion (Connors et al., 1996). Connors et al. (1996) developed the RBB as a pretest-posttest measure of past year and lifetime religious behaviors as the dependent variable in treatment studies. The assumption is that if the 12-step program of spiritual awakening is succeeding, then there

should be a corresponding increase in religious behaviors. Because the RBB measures behaviors, it is more compatible with behaviorist theories.

The two-factor components (God Consciousness and Formal Practices) of the RBB measure the cognitive (thinking) and reactive (doing) dimensions of religion respectively, and are a more parsimonious conceptualization of religion than the intrinsic-extrinsic paradigm of Allport and Ross (1967). I included the RBB in the current study as a measure of a potential mediator or predictor of well-being.

Behavioral and Faith Scale

The Behavioral and Faith Scale (Nielsen, 1995) used 23 response items to operationally define and measure religious beliefs and behaviors associated with traditionally faith and existential questions concerning suffering and the purpose of life. The Behavioral and Faith Scale is based on the premise that there are two types of churchgoers: the first group experience doubt and uncertainty and then find answers to their existential questions while the second group experience doubt and uncertainty, but do not find definitive answers to their existential questions (Nielsen, 1995). There are also two personal approaches to addressing these existential questions. One is based on the belief that God, Scriptures, and faith provide a direct, dogmatic solution to skepticism and existential questions while the other approach holds that God, Scriptures, and faith only serve as heuristic guides to relevant answers to life's questions. Thus, one conceptualization is that religion provides absolute truth that serves as an iron rod that

will pull up to heaven the faithful who hold steadfast to God, Scriptures, and faith, symbolized as an iron rod. The contrasting conceptualization views religion as merely pointing the way to heaven, like a compass, while individuals still experience doubt and seek answers to theological questions. The symbolism of iron rod and compass are grounded in the Book of Mormon and Mormon theology.

The iron-rod scale and compass scale were able to differentiate between those who believe religion provides definitive answers to existential questions and those who believe essential questions go unanswered (Nielsen, 1995). Whether or not a particular religion provides definitive answers to existential questions should predict religious doubt and anxiety or meaning, purpose, and well-being.

The Behavioral and Faith Scale (Nielsen, 1995) operationalizes and measures religious beliefs and behaviors in layperson's terms rather than using the ambiguous constructs of intrinsic spirituality and extrinsic religiosity. I used the Belief and Faith Scale factors in my research as measures of religious beliefs and behaviors. Most of the items in the Behavior and Faith Scale could be reworded to "I read …" "I pray …" I attend …" without altering the intent or meaning of the response-item and would be more parsimonious with a behavioral orientation towards religion. The active voice would also add clarity and preciseness to the scale. However, rewording items may change participants' responses, making comparison and contrasts to Nielson's findings difficult. Therefore, I retained the original wording for the sake of comparison and contrast.

The history of religion has often been marred by violence within and between sects and religions (e.g., Flamini, 2013; Garraty & Gray, 1972). The socioreligious identity of combatants has been a major factor in most wars (Argyle, 2000; Garraty & Gay, 1972; Hopkins, 1923; Wilson, 1978). Therefore, it seems ethical and logical to ask whether particular religions in which beliefs are held as absolute and final with intolerance for opposing views (Copi & Cohen, 1998) may be more prone to violence than other religions. The next measure of religion examines the potential violence factor in the world religions.

Militant Extremist Mind-Set

Religion is a sociocultural tool, and like other tools, religious people can use religion for good or evil. The bane of measurement in the psychology of religion (Gorsuch, 1984; Kirkpatric & Hood, 1990; McIntosh & Newton, 2013) has been that so many researchers in the psychology of religion have followed the intrinsic-extrinsic-quest paradigm and seldom examined alternative functions of religion. The function of the Militant Extremist Mind-Set questionnaire (Stankov, Saucier, & Knežević, 2010) is to determine if there are significant differences in the levels of endorsement of religiopolitical violence across cultures, countries, or religions. Items chosen for the Militant Extremist Mind-Set questionnaire were grounded in the literature of different militant extremist groups, both political and religious.

Using a convenient sample of college students living in nine countries, Stankov and colleagues (2010) found three factors: Proviolence, Vile World, and Divine Power. The Proviolence factor contained items that affirm armed struggle, killing, and viewing war as a means to salvation while rejecting nonviolence, negotiations, and avoiding the killing of people, thus rationalizing violence as the first resort. The Vile World factor contained items decrying the decline of the human race, the illegitimacy of amoral governments, the evil of multinational corporations, the destruction of the world, the injustices again the respondent's group, and the vileness of the present-day world--rhetoric used to justify violence against people and institutions. The Divine Power factor contained items mentioning divine help, beautiful rewards, life after death, martyrdom, and eternal pleasures--clearly hedonic expectations of religion. In sharp contrast to many measures developed in the psychology of religion that measure vague constructs, Stankov et al. (2010) seem to have tapped a primordial motive for religion, the survival of the individual and group in a seemingly hostile world.

The findings produced some interesting results. The findings indicated that a militant mind-set does exist. This cognitive paradigm consists of three factors: (a) a belief that violence is not only an option, but an option that has immediate, tangible value; (b) that disenfranchised groups need a scapegoat other than themselves, their own religious leaders, and their own culture to blame for their lack of well-being; and (c) they need

divine sanction from a higher power to morally justify engaging in acts of terrorism against those who presumably hinder the achievement of their personal and social goals.

The research also produced some surprising results. The sample of mostly female (63.6%) college students in nine countries largely disagreed with the use of violence for positive social change. If gender had been balanced, or if there were almost twice as many men as women in the sample, the results would probably have been very different.

Another interesting result of testing the Militant Extremist Mind-Set scale is the finding that students from the two Confucian nations (China and Korea) more strongly endorsed violence than students from other countries. The Serbians and Croatians, members of the former Yugoslavia, experienced an ethno-religious war involving "ethnic cleaning," and genocide, considered crimes against humanity, and yet Serbians were more antiviolence than the Confucian Chinese and Korean students were. Malaysian college students, a country with 80% Muslim population, scored high in Proviolence with the Confucian Chinese and Korean students. Catholic Chileans scored lowest in their willingness to use violence for positive social change.

Stankov et al. (2010) inferred that many ordinary people unaffiliated with any terrorist group would nevertheless endorse some statements that reflect an extremist ideology. The authors concluded that those who commit acts of terrorism do not fit a particular psychological profile, but that the extremist mind-set of terrorists merely endorses extreme positions on views that are held by normal individuals in the

population. The Militant Extremist Mind-Set assessment is a sufficiently psychometrically sound instrument to examine the issue of whether or not there are significant differences in the level of endorsement of violence between atheists, agnostics, spiritual-but-not-religious individuals, Christians, Confucians, Buddhists, Hindus, Jews, Muslims, Shintoists, and Taoists. A militant extreme mind-set consisting of a belief in violence and a view that the world is a vile place is antithetical to spiritual well-being, satisfaction in life, and psychological heath. If individuals believe the current world is a vile place, then the belief in a blissful afterlife, fighting for a divine cause, and martyrdom may serve as an escape-avoidance mechanism for obtaining a better life.

Belief in Afterlife

Terror management theory (Jonas & Fischer, 2006; Vail et al., 2010; Van Tongeren et al., 2008) conceptualizes religion as a psychological self-defense mechanism that serves to manage the debilitating fear of death. There is an underlying level of doubt among religious people that suggests the existence of a general “doubt syndrome” (Hunsberger et al., 1993, p. 47). Religious doubt can have a detrimental effect on psychological, emotional, and physical health (Galek et al., 2007). By contrast, a belief in immortality or life everlasting should serve as a mediating variable in the relationship between a religious philosophy of life and well-being. It may be difficult to measure a concept that is subconsciously hidden and dealt with symbolically. Nevertheless, the Belief in Afterlife Scale-Form A (Oscarchuk & Tatz, 1973) is a 10-item Likert-like scale

used to measure one's belief or disbelief in an afterlife. If a belief in an afterlife serves to mediate the fear of death, then there should be a significant difference in both the level of belief in an afterlife and well-being between atheists and theists.

To test the hypothesis that belief in an afterlife mediates a fear of death, the authors first administered the Belief in Afterlife Scale as a screening tool, randomly assigning Form A or Form B to a convenient sample of introductory psychology students. Based on the results, Oscarchuk and Tatz (1973) assigned students to one of two groups: high or low belief in an afterlife. Oscarchuk and Tatz (1973) then randomly assigned members of the two groups to one of three experimental conditions--death threat, shock threat, and control; thus creating a 2 x 3 factorial design.

The participants with a high belief in afterlife in the death threat condition recorded the highest increase in treatment-induced belief in afterlife scores (Oscarchuk & Tatz, 1973). Participants with a low belief in afterlife in the shock treatment condition scored the second highest increase in belief in afterlife scores. The authors concluded that the results supported their hypothesis that an imminent fear of death increased a belief in an afterlife. The behavioral sequence of events envisions the fear of death eliciting an increased belief in an afterlife, which is incompatible with the epiphenomenal belief that consciousness ceases with death, and thus the sting of death is defeated (1 Corinthians 15:54-56). Behaviorally speaking, if focusing on the belief in an afterlife is followed by a reduction in anxiety, then a belief in an afterlife is reinforced and likely to continue.

These findings confirm Allport's (1963) contention that religion is *used* by some people for some other end, in this case alleviating the fear of death. The findings of Oscarchuk and Tatz (1973) also support the terror management theory that religion is used for extrinsic ends to manage the terror of death. Moreover, these findings are supported by Biblical writings indicating that even a god (e.g., Jesus) will *use* religion to alleviate the fear and anxiety associated with impending suffering and death (Matthew 26:39).

The findings of Oscarchuk and Tatz (1973) argue against Allport's contention that religion is engaged in for its intrinsic value. Like other psychological defense mechanisms that work subconsciously, the beneficiary may be unaware of the mechanism by which belief in an afterlife protects the mental health of the believer and is reinforced by the anxiety-reducing effect of religion. It can be argued that even the intrinsically motived individual who sincerely believes he or she is practicing religion for its intrinsic value may be unaware of the extrinsic fear-reducing value of religion (Psalm 23:4). In fact, virtually every book of the Bible contains the phrase "fear not" at least once (e.g., Genesis 15:1, 21:17, 26:24, 46:3; Revelation 1:17). Likewise, the words "fear not" appear 16 times in 15 verses in the Quran (5:44; 6:80, 81; 11:70; 20:21, 46, 68; 27:10; 28:7, 31; 38:22; 41:30, 51:28; 71:13; 74:53).

Beliefs about God

Based on a review of the literature, Leondari and Gialamas (2009) concluded that the concept of God might influence mental and physical health. Leondari and Gialamas

(2009) used a single-item measure referring to beliefs about God as one of four measures of religiosity to investigate the relationship between religiosity and psychological well-being. Respondents were asked to indicate which one of three concepts of God most closely represented their personal belief: (a) God is a living, personal being who is actively involved in the participant's life; (b) God is an abstract, impersonal force; or (c) does not believe in God. Leondari and Gialamas (2009) did not find a significant relationship between personal beliefs about God and the psychological measures of depression, anxiety, loneliness, or general life satisfaction. However, the population sample of university students and teachers may have had a restricted range of beliefs about God and presence of anxiety, depression, and loneliness. I rectified this problem of a homogeneous sample by using the Beliefs about God scale with six measures of well-being and a more diverse sample.

Spiritual Struggles Measure

Because the propositions concerning metaphysical beliefs are not empirically verifiable, many individuals have doubts about their faith and religious doctrines. Religious struggles may involve getting angry at God, arguing with God, questioning God's willingness or ability to intervene in mortal affairs, and questions concerning the veracity, reliability, and validity of religious beliefs and behaviors (Rosmarin et al., 2009). Throughout the Old Testament, the patriarchs are depicted as arguing with God. In Genesis Chapter 18, Abraham and God emulate the famous Mytilenean debate found in

Book III of Thucydides' *History of the Peloponnesian War* (427 BCE): Should a whole community be held responsible for the actions of a few men? In the Book of Job, God and Satan decide to test the faith of Job, resulting in a Socratic style dialogue about divine justice. Jesus is pictured as praying fervently to his Heavenly Father to reconsider his predetermined suffering, crucifixion, and death (Luke 22:42). Jesus experienced doubt and spiritual struggles on the cross when he asked, "My God, My God, why have you forsaken me?" (Matthew 27:46). Thus arguing with God and about God, as well as questioning religious tenets, is a normative part of the Judeo-Christian tradition (Rosmarin et al., 2009).

Rosmarin et al. (2009) developed the Spiritual Struggles Measure to assess the effects of spiritual struggles of Jews on physical and mental health. Common measures of religiousness, such as Orthodoxy, frequency of synagogue attendance, and importance of religion, were all unrelated to physical or mental health. Only spiritual struggles were a significant predictor of poorer physical and mental health (Rosmarin et al., 2009).

Because religious struggles were a significant predictor of poor mental and physical health functioning, religious struggles may be a significant mediator in the relationship between religion and well-being. I used the Spiritual Struggles Measure to test the effects of spiritual struggles as a potential mediator in the relationship between religion and well-being.

Religious philosophies have long competed with secular philosophies as a necessary and sufficient path to the good life and well-being. Hindu, Buddhist, Confucian, Taoist, Jewish, Christianity, and Islamic religious leaders all claim to have true knowledge and a unique path to the good life. Each of the world religions are social constructs, the product of human evolution (Hopkins, 1923), that reflect the time, place, and conditions of their origins; and therefore each of the world religions reflect different concepts of religion and well-being.

Religion, Canonical Texts, and Well-Being

Confucianism

The study of wellness goes back at least as far as Socrates in the west and Confucius in the east. The Socratic and Confucian teachings on wellness are remarkably similar, and yet culturally different. Both Socrates and Confucius are intellectual giants in their respective countries, and both have had a profound influence on the development of Western and Eastern life and thought, respectively.

Both Socrates and Confucius were more or less secularists who shied away from the idea that happiness, virtue, or good character was the result of divine intervention. Thus, from the perspective of the Socratic and Confucian traditions, religion is not necessarily a path to happiness, virtue, or good character. Both the Socratic and Confucian traditions emphasize self-development as a means to well-being and happiness. Both the Socratic and Confucian traditions sought pragmatic and utilitarian

solutions to the problems facing individuals and society based on reason and experience. In essence, secular, logical empiricism goes back to Socrates in the west and Confucius in the east, although neither used the phrase.

Whereas both the Confucian and Socratic traditions emphasized that knowledge was the path to well-being and that true knowledge was gained through reasoning and practical experience, Socrates, in contrast to Confucius, continually challenged existing cultural beliefs and practices. Socrates (*Apology*) argued that because he knows that he does not know anything and willingly admits to his ignorance, he is actually wiser than those who think they know something when they really do not know anything. This acknowledgement of ignorance is the first step in Platonic education and the path to well-being.

For both the Socratic and Confucian traditions, happiness and the good life come through action, not contemplation, meditation, introspection, or religious speculation. Aristotle begins the *Nicomachean Ethics* by arguing that every action and pursuit is purposeful, and that the highest good is pursuing noble ends, and this good is called eudaimonia. Eudaimonia is a way of life that aims at human excellence in oneself and others (Whitt, Owenz, Winakur, & Fowers, 2009). For Socrates, Plato, and Aristotle, the good life (eudaimonia) is achieved through action. Aristotle (*Ethics*) envisioned happiness as a result of engaging in virtuous activities, not a goal of these activities, but something intangible that accompanies certain activities. Eudaimonic well-being for each

individual is achieving the highest good that is possible for her or him to achieve (Aristotle, *Ethics*).

Classic Confucianism values education and learning as paths to the good life, which correlated with well-being (Zhang & Veenhoven, 2008). However, by education Confucians refer largely to learning the ancient Chinese classics. Confucians values familial relationships, civic duty, and proper behavior, which should correlate with well-being. Confucians advocate self-improvement, arguing that individuals can control the quality of their own lives, which accords with the idea of achieving eudaimonic well-being through realizing one's highest human potentialities. Confucians also recommend that followers focus on the present rather than an afterlife and merely accept death when it does come, which should reduce death anxiety.

In contrast to Western democratic societies, Confucian philosophy evolved in a collectivist, hierarchical society that valued subordination to authority and duty, which is antithetical to individualism, free will, democratic principles, the right of individuals to choose their own lifestyle, and the right of people to pursue their highest human potentialities, which are considered paths to eudaimonic well-being (Zhang & Veenhoven, 2008). Although Confucian practices vary from country to country, Confucian countries are often the least democratic in the world (Inoguchi & Shin, 2009). Ironically, Confucians constructed a culture of propriety and submissiveness to end the prolonged feudal wars that once plagued ancient China, and yet, based on the Militant

Mind-Set Scale (Stankov et al., 2010), the Confucian countries of China and Korea endorse violence more strongly than other nations.

Taoist (Daoism)

A terse summary of the philosophy of Taoism is found in the *Tao Tê Ching* (The Way and its Virtue); a small book of about 5,250 English words (Brandon, 1970). Taoism embodies a quietist philosophy of striving for ataraxia, a state of mind characterized by imperturbable serenity resulting from freedom from worry and preoccupation, the only true happiness possible for a person. Quietude arises from suspending judgment on dogmatic beliefs, eschewing faith in an afterlife, not fearing the disinterested and impotent gods, avoiding politics, and becoming one with nature. The Epicureans, Pyrrhonists, Stoics, and early Christians practiced variations of the quietest philosophy in the West. However, the Taoist philosophy does not teach people how to solve problems as science does; it merely teaches people to avoid situations that may create problems and to ignore problems when they do arise. Returning to nature, resorting to no action, employing submissiveness and weakness, and holding steadfast to the way of antiquity actually makes people more vulnerable to nature and to people who do not adhere to the philosophy of quietism.

The Taoist philosophy evolved as an antithesis to collectivism, propriety, and obligation to duties central to Confucian philosophy. Confucian philosophers value social relationships, civic duty, propriety, the rule of law, meritocracy, cultivation of traditional

values, and subordination of individual will for the social good as the pathways to the good life. By contrast, Tao philosophers reject many Confucian values, arguing instead for individualism, avoiding involvement in social life, seeking harmony with nature, and avoiding knowledge of the realities of life and the truth of the human condition (Wayist, 2012; Zhang & Veenhoven, 2008). Taoists venerate Tao, a hypothetical social construct conceptualized as the first and all-embracing principle; the first cause that produced everything; the essential essence of all things; the life-giving principle; and although nameless, is nevertheless named Tao (Lao Tzŭ, *Tao Tê Ching*). Obtaining union with Tao is the necessary and sufficient condition for living the Taoist good life. However, because Tao is so elusive, it is forever just out of reach of Taoists. The Taoist search for Tao represents the Socratic dilemma of trying to learn what one has not experienced and therefore does not know what to look for. Taoists cannot search for what they do not know because they do not know what they are looking for and even if they should find Tao, they would not know with absolute certainty that this Tao is the thing they did not know.

Taoism discourages involvement is social life, but active involvement in social life and civic duties has a strong positive correlation with global well-being. Taoism makes the argument that if there were no laws, then robbery, pilfering, looting, and quarreling would cease (Lao Tzŭ, *Tao Tê Ching*). This argument is refuted by the many examples of when centralized government, law, and order collapse, resulting in rioting,

looting, and revolutions. Taoist philosophy argues against the trend "to endow with law, order, and the conditions favorable to the arts and sciences" (Lexicon Publications, 1990, p. 180), which is the definition of civilize. In direct contrast to its mother religion of Confucianism, Taoists argue against education and the development of oneself, preferring to abandon knowledge and cast out the learned (Lao Tzŭ, *Tao Tê Ching*), but higher education correlates positively with eudaimonic well-being. The Taoist path to well-being is to give up all things, and therein lays happiness.

Taoism is a very pessimistic and negativistic philosophy (Zhang & Veenhoven, 2008), which correlates with learned helplessness, depression, and poor physical health. Taoism is an escape-avoidance coping technique because a peace of mind comes from avoiding desires and escaping from social responsibility (Lao Tzŭ, *Tao Tê Ching*).

Taoism uses enigmas, contradictions, and *non sequiturs* to confuse and confound readers. This is sophism, "plausible but false reasoning intended either to deceive or to display intellectual virtuosity" (Lexicon Publications, 1990, p. 947), and sciolism, "a pretension to scholarship supported only by superficial knowledge" (Lexicon Publications, 1990, p. 895), for which the sophists of Socrates's time became famous. For example, "Great truths seems contradictory" (Lao Tzŭ, *Tao Tê Ching*, Verse 45). It may be the case that Taoists merely make contradictions seem like great truths that are in fact uninteresting rhetoric to true logicians. Individuals can become absorbed for hours in the intrinsic study of the meaning of the *Tao Tê Ching*, and therein may lie the value of

Taoism, because becoming absorbed in an activity, even a jigsaw puzzle, may lead some people to a sense of self-satisfaction and happiness.

Hinduism

Hinduism, based on Allport's (1963) intrinsic-extrinsic motivation theory, is extrinsically motivated. For example, the *Katha Upanishad* begins "Om. May Brahman protect us, May He guide us, May He give us strength and right understanding" (Ashram, 2011, the *Upanishads*, the Swami Prabhavananda and Frederick Manchester translation). The Hindu philosophy is essentially egocentric as exemplified by a passage from the *Taittiriya Upanishad*, "May I be a glory among men. May I be richer than the richest? May I enter into thee, O Lord; and mayest thou reveal thyself unto me. Purified am I by thy touch, O Lord of manifold forms" (Ashram, 2011, the *Upanishads*, the Swami Prabhavananda and Frederick Manchester translation). Hindu men and women use their religion to achieve personal and social objectives, such as social support and social gain (Tyler & Sinha, 1988). From behaviorist and hedonistic lens, Hinduism is motivated by escape-avoidance from rebirth and suffering, as exemplified by a passage from the *Shvetashvatara Upanishad*:

> This vast universe is a wheel. Upon it are all creatures that are subject to birth, death, and rebirth. Round and round it turns, and never stops. It is the wheel of Brahma. As long as the individual self thinks it is separate from Brahma, it revolves upon the wheel in bondage to the laws of birth, death, and rebirth.

> However, when through the grace of Brahma it realizes its identity with him, it revolves upon the wheel no longer. It achieves immortality (Ashram, 2011).

The terror management theory (Vail et al., 2010; Van Tongeren et al., 2008) argues that religion is motivated by a fear of death as exemplified by the *Brihadaranyaka Upanishad*, "Lead me from death to immortality" (Ashram, 2011). Behaviorism, hedonism, terror management theory, and extrinsic religiosity have greater explanatory power for the Hindu religion and philosophy than does Allport's claim of intrinsic religion for its own sake or the Brahmanic claim of divine revelation and causation.

The philosophy of Hinduism centers on the doctrines of karma, reincarnation, and spiritual liberation from the cycle of rebirth. The adherents of Hinduism are extrinsically motived by the desire to achieve oneness with the Supreme Being (Brahma) and thus escape or avoid the cycle of rebirth. Tarakeshwar, Pargament, and Mahoney (2003) used a mixed methods research design to find four statistically significant Hindu pathways to well-being: path of devotion, path of ethical action, path of knowledge and rituals, and path of self-restraint in the desire for physiological needs. The path of devotional behaviors, such as daily prayers, attending temple worship services, and performing religious ceremonies, is extrinsically motivated by the egocentric desire to become one with the god and attain spiritual liberation (Tarakeshwar et al., 2003). The path of ethical action, such as performing work without attachment, is extrinsically motivated by the egocentric desire to purify the worshiper's mind and attain a sense of god-vision

(Tarakeshwar et al., 2003). The path of religious knowledge consists largely of indoctrination into the social construct of Hinduism and includes behaviors such as reading the ancient tales of the *Ramayana* and *Mahabharat*, studying the *Vedas* and *Upanishads*, reading about specific Hindu gods and goddesses, and attending meetings to discuss Hindu philosophy, which is also extrinsically motivated by the egocentric desire to free the self from the bondage of ignorance and obtain spiritual liberation (Tarakeshwar et al., 2003). Like other religions, the Hindu education system indoctrinates each generation and passes unquestioned beliefs and practices on to the next generation of potential believers through operant conditioning, thus creating a self-perpetuating paradigm. The path of mental concentration includes psychological and physiological restraints, such as adhering to a vegetarian diet, refraining from smoking cigarettes, avoiding alcoholic beverages, meditating, and practicing yoga, and is also extrinsically motivated by the egoistic desire to purify the self so the Divine self within can attain spiritual liberation (Tarakeshwar et al., 2003). The Hindu construct prescribes 16 religious ceremonies associated with lifespan development (e.g., giving birth, naming a child, eating solid food for the first time, getting the first haircut) that claim to produce well-being. There are additional daily religious duties (e.g., rising before sunrise, saying the morning prayer, cleaning the household idols) that are purported pathways to well-being. The Hindu gods and canonical literature argue, without proof, that if individuals do not perform their religious duties or if the duties are mingled with anger, lust, or

greed, then the individual may be at risk of poor mental health. Likewise, recovery from mental health problems requires certain expiatory rites, such as fasting, or propitiatory rites, such as giving gifts to the Brahmin priests (Tarakeshwar et al., 2003). However, the causal mechanism by which failure to perform developmental and daily rites cause mental health problems is not clearly and concisely specified in Hindu scriptures (ISTA, 2011, Hinduism).

Although Tarakeshwar et al. (2003) found four distinct and nonredundant pathways to the Hindu goal of spiritual liberation, only the path of ethical action had a positive significant correlation with life satisfaction, but that correlation was small. Hindu pilgrims on a month-long pilgrimage on the banks of the Sangarm and the holy city of Prayag experienced satisfaction with life and happiness during a heightened sense of religiosity (Sharma & Talwar, 2004). The association between the Hindu path of ethical action, happiness, and life satisfaction supports the claims of Aristotle (*Nicomachean Ethics*) and Confucius (*The Analects*) that ethical action leads to perfection, happiness, and well-being (Sharma & Talwar, 2004).

The practice of yoga was associated with greater physical health. However, diet and exercise without religious overtones have long been associated with psychological, emotional, and physical health (Masley, Weaver, Peri, & Phillips, 2008; Owens, 2010; Pischke, Scherwitz, Weidner, & Ornish, 2008). Even the social construct hardiness has

greater predictive power for mental health than religion and spirituality (Maddi, Brow, Khoshaba, & Vaitkus, 2006; Maddi, & Khoshaba, 1994).

Hinduism, like other religions, has its dark side (Bauer-Wu, Barrett, & Yeager, 2007; Gearing & Lizardi, 2009; Krause & Wulff, 2004; Tarakeshwar et al., 2003). Dowry, sati, and child marriage, although outlawed, are still practiced in remote areas of India (Gearing & Lizardi, 2009; Gorney, 2011; Kumar, 2003; Swain, 2009), and these traditions are major barriers to females' psychological, emotional, and physical well-being.

The religious rituals associated with palliative care and death, such as propitious cremation rites, the celebratory feast, and scattering the ashes of the deceased at a sacred site may help promote a good death (Bauer-Wu et al, 2007), but no amount of rituals can prevent physical death and death anxiety because no one knows with absolute certainty that an afterlife truly exists (Bauer-Wu et al., 2007). In fact, the whole phenomenon of faith is a substitute for empirical knowledge, for if something is known empirically to be true, then faith is unnecessary, but if something is empirically true, and then faith in the contrary is of no avail. Therefore, faith is either unnecessary or of no avail.

The path of increased devotion correlates with greater depression and the path of yoga correlates negatively with marital satisfaction. As individuals grow older and nearer to death, many turn to religion for solstice and support (Argyle, 2000; James, 1902/1997; Paloutzian & Park, 2005), but Hinduism seems to have an adverse effect of increasing

death anxiety, depression, and marital dissatisfaction (Tarakeshwar et al., 2003). The belief that karma is the cause of illness and suffering may cause Hindus to endure suffering as a method of cleaning the soul of bad karma, enduring suffering needlessly, and avoiding professional medical care (Tarakeshwar et al., 2003). Positive social change through education (Keita, 2008) may help the plight of the undereducated, underprivileged, and disenfranchised Hindus. However, if education is limited to Hindu beliefs and practices, then education will continue to perpetuate Hindu stereotyping, prejudice, and discrimination based on color, career, and caste that serve as barriers to positive social change and self-development.

Buddhism

The Buddhist philosophy rests on four assumptions, called the Four Noble Truths, as the foundation of Buddhist beliefs and behaviors. According to the *Mahâ Parinibbâna Suttanta* (BuddhaNet, 2011; ISTA, 2011; The Dhamma, 2011; Vipassana Fellowship, 2011) they are: the noble truth about the existence of illness, sorrow, and suffering; the noble truth about the cause of illness, sorrow, and suffering; the noble truth about the cessation of illness, sorrow, and suffering; and the noble truth about the Eightfold Path that leads to the cessation of illness, sorrow, and suffering. When these holy truths are known, the craving for rebirth is rooted out, the karma causing renewed existence is destroyed, and then there are no more reincarnations. By the elimination of desire, lust, hatred, and delusion, the bodhisattva (Buddha want-to-be) and arahant (one who has

reached the final stage of spiritual enlightenment) becomes a sakadâgâmin, one who will be reborn at most once and who on his next return to this world will make an end of sorrow. This chain of assumptions is not founded upon logical reasoning or empirical evidence. As the *Mahâ Parinibbâna Suttanta* (ISTA, 2011) says of the teachings of the Hindu Rishis, this is blind and foolish talk. A search of the Pali literature reveals no mechanism establishing a causal relationship between the independent variable destroying the desires that allegedly bind people to this world and the dependent variable of inheriting the highest heavens of Nibbāna. The philosophical assumptions of Buddhism challenge the empirical basis of Western psychology, behaviorism, social learning theory, logical empiricism, realism, and objectivism (e.g., Radu, 2011; Sugamura, Haruki, & Koshikawa, 2007; Wiist et al., 2010). The Four Noble Truths and Eightfold Path of Buddhism are logical fallacies of relevance (*non sequitur*, Copi & Cohen, 1998; Hausman, Kahane, Tidman, 2007; Moore & Parker, 2007) lacking logical coherence and compelling empirical evidence (Pyysiäinen, 2003). Socrates and Plato (*Apology*) disliked this sort of sciolism and sophism of the Greek sophists because the elimination of this ignorance in those who believe they know something when they do not is the first step of education. By admitting his ignorance, Socrates is wiser in that he does not think he knows what he does not know.

Buddhists claim to be able to cross the river of death into perfect union with Brahmâ in a deathless state of Nibbâna (Nirvâna) using the Four Noble Truths and

Eightfold Path. The first noble assumption states all life is suffering. However, people report being happy and satisfied with life (Pavot & Diener, 1993, 2004, 2008). The second assumption asserts that desire causes karma, rebirth, suffering, and death. However, will, wanting, and desire are mental states with no causal nexus that justifies this inference (Hume, 1739-1740, 1748; Wittgenstein, 1995/2003). The third assumption is the cessation of suffering through renunciation of familial responsibilities, household cares, vocation, sensuality, and individuality that bind Buddhists to this world (*Mahā-Parinibbana, Sutta Mahâ-Sudassana Sutta, Tevigga Suttanta*, ISTA, 2011). However, renouncing one's familial, communal, and vocational responsibilities to become a beggar-monk (bhikkhu), living on the food provided by working people (*Tevigga Suttanta*), to seek one's own salvation, as Gotama allegedly did, is the epitome of selfishness and irresponsibility (Aristotle, *Ethics*). The fourth assumption is that enlightenment and union with Brahmâ in a state of deathlessness--which they have never seen and therefore do not know (*Tevigga Suttanta*)--must be accomplished through the Eightfold Path of right understanding, right thought, right speech, right bodily action, right livelihood, right effort, right mindfulness, and right concentration (*Mahā-Parinibbana,* ISTA, 2011).

The Eightfold Path-- right understanding, right thought, right speech, right bodily action, right livelihood, right effort, right mindfulness, and right concentration; although operationally defined differently in different studies, have been positively associated with

emotional, psychological, and physical well-being. Education (right understanding, thought, and speech), ethical practices (right action), job satisfaction (right livelihood), and becoming deeply involved in an activity (right effort, mindfulness, and concentration) correlate positively with well-being (e.g., Cohen & Hall, 2009; Rosmarin et al., 2009; Veenhoven, 1999, 2003).

By contrast and comparison to the Eightfold Path, Aristotle (*Ethics*) published his fivefold path of right thoughts, feelings, and actions in the fourth century before the Common Era, at least two centuries before Buddhism entered the literary world, and Aristotles's path of right thoughts, feelings, and actions are based on logical reasoning, practical wisdom, empirical evidence, and inference from known facts as opposed to theistic rationalism. Moreover, Aristotle explained his fivefold path repeatedly in specific detail with numerous examples of right thoughts, feeling, and actions compared to the Buddhist canon's late and superficial treatment of the Eightfold Path. For example, Aristotle says the mark of virtue is to have the right feelings in the right way at the right time towards the right person on the right grounds for the right motive. Aristotle's fivefold path of virtuous thoughts, feeling, and behaviors is remarkably uncontroversial in Western societies, but by contrast, Buddhist scriptures are individually and socially constructed in divergent ways and Buddhists have fragmented into 18 schools of philosophy (Brandon, 1970).

According to Buddhist scripture (*Dhamma-kakka-ppavattana-sutta*, ISTA, 2011), the Buddha divinely decreed the middle path, avoiding the two extremes. There is only a cursory mention of the middle way or middle path in the Buddhist scriptures, and disagreement over the interpretation of the mean or middle degree of strictness of Buddhist monastic practice lead to the first major division in Buddhist schools of thought (Brandon, 1970). However, renouncing selfhood, familial ties, vocation, and society to become a beggar-monk is extreme by both definition and practice in most cultures.

The golden mean is ancient and common in secular and sacred literature, including, but not limited to, the *Analects* (Confucianism), the Socratic Dialogues (e.g., *The Philebus*), *The Republic* (Plato), *the Laws* (Aristotle), and *Ethics* (Aristotle). Aristotle (*Ethics*) defines the golden mean as the desirable middle between two kinds of vice, one of excess and the other of deficiency. Aristotle's cardinal rule is that right conduct is incompatible with excess or deficiency. He gives numerous examples by applying the doctrine of the golden mean to moral virtues, moral responsibility, dispositions, desires, and behaviors. Aristotle (*Ethics*, Book 3) argued that deficiency in respect to pleasure, as practiced by Hindu ascetics and Buddhist monks, reflects insensibility and is sub-human. The temperate or virtuous person follows the mean in pleasure, desiring pleasant things in moderation, and not more than is right at the time, place, and occasion. The denial of pleasure by Buddhist monks is not virtuous by Aristotle's standards because it is not done

for its intrinsic value or the right motive but merely to escape from rebirth and the potential for future suffering as an animal or Untouchable.

The authors of *Anguttara Nikaya* (Dharmma, 2011) and *Kalama Sutta* (Kinnes, 2007) implore readers to not believe blindly what Gotama or anyone else has to say. The authors further urge readers not to believe something because others convince you with their words or with quotes attributed to Gotama. The anonymous authors of the Buddhist scriptures have put pseudepigraphic words into the mouth of Gotama urging readers to not believe anything they read or hear based on tradition, authority, religious texts, or religious teachers. Readers are further urged to find out for themselves what is true and virtuous. However, Buddhists do in fact believe many things merely because they have been passed along and retold for many generations; because old beliefs and practices have become traditions; because they are well-known within the Buddhist culture; because they are found in suttas attributed to Gotama; because they accord with an individual's philosophy; because Buddhist constructs eventually seem like common sense; because they do like the ideas; because they are led to believe by preconceived notions; because the Buddha and other revered Buddhist authorities seem trustworthy; and because people are not always aware of where their beliefs come from (Bandura, 2003; Burton, 2005; Pyysiäinen, 2003). Psychologists of religion now know, with reasonable certainty, why believers believe what they believe (e.g., Gorsuch, 2013; Hood, 2013; Hayward & Krause, 2013; Johnson et al., 2013; Pargament, 2013; Schafer, 2013;

Schnitker & Emmons, 2013; Schwab, 2013; Sharp, 2013; Spilka & Ladd, 2013). The authors of the Buddhist scriptures may have believed they were encouraging skepticism and open-mindedness, but this simply is not the case. Buddhist religious leaders promote dogmatism and discourage critical thinking skills, the antitheses of scientific thinking. In defense of the Buddhists, most Buddhists are probably unaware of the true origin of their beliefs and practices and why they believe them to be true (Hume, 1748, 1777/1956; Pyysiäinen, 2003).

Buddhism and Confucianism have had a profound influence on the evolution of the religious philosophy and practices of the Japanese Shintoists, fusing with the indigenous nature worship to produce a smorgasbord of religion--animism, nature worship, emperor worship, Buddhism, Confucianism, Christianity, and more than 300 new religions--in which believers are encouraged to take an eclectic approach to meeting their psychological, emotional, and physiological needs.

Shintoism

The Shinto religion, like many other religions, began as an indigenous form of animism and nature worship (Hopkins, 1923) to which aspects of Confucianism, Buddhism, Christianity, emperor-worship, and the new religions were acculturated and syncretized. Shintoism began as a local form of polytheistic animism and nature worship that gradually evolved into a distinct form of anthropomorphism. Animism is the belief that an immaterial animating principle or spirit inhabits nearly all natural phenomena,

such as rocks, trees, rivers, the air, earth, sun, moon, and storms, which need to be propitiated (Brandon, 1970). Nature worship, likewise, takes the form of worshiping the spirits that dwell within natural objects and govern the forces of nature (Brandon, 1970). Individuals perceive these social constructs as either benevolent or malevolent. The degree of veneration of spirits and gods reflect individual and cultural fears and basic human needs (Brandon, 1970).

Animism and nature worship in the Shinto religion takes the form of a myriad of Shinto spirits (*kami*) that occupy mountains, rocks, waterfalls, and trees (Pilcher, 1985). Chief among the nature spirits is Amaterasu, the Sun Goddess (Pilcher, 1985; Roemer, 2010). The Japanese believe themselves progeny of the Sun Goddess and the Japanese believed that the Emperor of Japan was the manifested spirit of Amaterasu (Pilcher, 1985).

Most Japanese do not consider themselves religious and do not consider the Shinto philosophy a religion (Pfeiffer, 2010; Shimazono, 2005), in spite of the fact that there are Shinto and Buddhist alters in most households, there are Shinto and Buddhist temples and shrines throughout the country, Shinto festivals and rituals are integral to the Japanese culture, and the Japanese take immense pride in their divine heritage from the Shinto Sun Goddess Amaterasu (Roemer, 2010c). The Japanese merely consider Shinto beliefs and practices a part of their cultural heritage, which is true in the sense that religion is merely another cultural construct like language, ethnic foods, and folklore.

From the fifth century of the Common Era onwards, Confucianism became assimilated and acculturated into the social and psychic constructs of the Japanese. The Japanese do not consider Confucianism a religion but merely another sociopolitical philosophy (Pilcher, 1985). The Confucian secular values of social morality, filial piety, and sense of duty had a profound influence on Japanese cultural development and identity (Brandon, 1970; Pilcher, 1985).

Buddhism, the first transcendental religion introduced to Japan, was assimilated and acculturated to fit the metaphysical and spiritual needs of the Japanese (Pilcher, 1985). Buddhism provides an antidote to death in the form of a deathless existence in a postmortem Nirvâna that nature-worship lacks. Buddhism also offers the Japanese another deity to worship in the form of the Buddha and a whole set of new rituals with the expectation of tangible results.

Christianity entered Japan in the mid-1500s and was acculturated by its Japanese followers (Pilcher, 1985). Although Christianity gained some followers, mainly among the more educated Samurai, Christianity remained a minor religion in Japan because missionaries required converts to abandon Shinto and Buddhist beliefs and practices.

Shinto, Buddhism, and Confucianism have had a profound influence on the civic structures and psyche of the Japanese (Pilcher, 1985). Most Japanese households have both a Shinto shrine, at which offerings are made to tutelary deities, and a Buddhist alter, at which offerings are made to deceased family members (Pilcher, 1985). Because most

Japanese practice several different religions based on ancestral affiliation, the desire to be buried within one's family plot, place of birth, one's upbringing, social obligations, and transient personal needs, therefore quantifying religious affiliation may produce contradictory and impossible results. For example, Japanese government statistics and religious institution reports indicate that the number of religious adherents in Japan is greater than the total population (Roemer, 2009) even though only about 10% of the Japanese claim any religious affiliation (Roemer, 2010b).

The Japanese are openly extrinsically motivated to believe and practice religion because they are more concerned about the practical benefits of beliefs and behaviors than the ideologies and rhetorical arguments of particular faiths (Pfeiffer, 2010). The Japanese take an eclectic approach to religion, drawing on different religious beliefs and practices at different times and situations depending upon individual needs. The Japanese turn to Buddhism, Buddhist priests, and chanting Buddhist sutras in times of sickness and death (Pilcher, 1985; Roemer, 2009), and they expect tangible results. Christian-style weddings are popular among many Japanese. Even nonreligious Japanese celebrate Christmas without religious significance and symbolism attached to Christmas trees, gift giving, mistletoes, Nativity scenes, and the Japanese version of Santa Claus (Pfeiffer, 2010). Some Japanese Christians have acculturated Christianity by adopting the belief that Jesus escaped death on the cross, immigrated to Japan, married, begot children, died, and was buried in Northern Japan (Pfeiffer, 2010). By reinterpreting the Christian social

construct anew (Pfeiffer, 2010), the Japanese exemplify the origin and development of religion through assimilation and acculturation to fulfill individual and cultural needs.

Religious beliefs and practices are need-driven, extrinsically motivated, and intended to have practical results (e.g., Grubbs et al., 2013; Lavrič & Flere, 2008; Roemer, 2006, 2009; Schafer, 2013; Schnitker & Emmons, 2013). The Japanese are openly encouraged to seek aid from a variety of religions, gods, rituals, and amulets in times of distress (Roemer, 2006; Traphagan, 2005). Ancestor-worship is extrinsically motivated by the desire to establish a *quid pro quo* relationship between the living and the deceased: the living construct ancestral alters (butsudan) in their homes, perform rituals, and make offerings to keep the memories of the dead alive while the dead in turn are presumed to protect the living.

The Japanese use nature-worship to appease supernatural beings or kami (epidemic gods and pernicious nature spirits) to ward off evil. The main Shinto festival began as an attempt to end a curse by the spirits of five members of the emperor's cabinet wrongly accused of a crime (Roemer, 2010c). Because the Japanese are more concerned about the practical application of religion and expect empirical results (Pfeiffer, 2010), religion in Japan appears to be need-driven and extrinsically motived rather than intrinsically motivated.

The religion-health paradigm used in causal studies of religion and health or well-being may be misspecified. Maslow's (1943) hierarchy of human needs appears to be the

"mysterious primacy" of religion (Allport, 1963, p. 191) rather than an unconditional love of the gods, saints, spirits, or buddhas. Like Freud's defense mechanisms, religion serves as a coping mechanism that alleviates stress related to living and existential anxiety related to dying (Batson, 1976; Batson et al., 1989; Batson & Raynor-Prince, 1983; Pargament, 2002; Roemer, 2006, 2010; Ventis, 1995). Amulets are purchased from shrines or temples to improve someone's health or test scores in this life (Roemer, 2006). Businessmen and elders who participate in religious rituals, parades, and other events personally benefit from feelings of national pride, personal pride, social support, positive self-identity, and positive well-being (Roemer, 2010c). Ritual practitioners make offerings at home ancestral altars (butsudan), visit Shinto shrines and Buddhist temples, and buy amulets in times of need for the hedonic goal of personal and familial well-being. Based on a review of the literature, religion is motivated by the basic human needs for physiological necessities, safety and security, love and belonging, esteem and self-esteem, and self-actualization (Maslow, 1943). The mediating mechanism in the religion-health relationship may be a combination of secular forces such as increased social support, sense of belonging, psychological coping mechanisms, increased self-esteem, sense of self-worth, and meaning in life (Miller, 1992b; Pargament, 2002; Roemer, 2006). The paradigm should be specified as basic human needs (antecedents) elicit religious rituals (behaviors) that produce a subjective sense of well-being (consequence).

Glock and Stark (1965, as cited in Miller, 1992a) proposed the classic deprivation theory that explains religions and religious organizations as service industries that meet basic human needs and desires. Thus, the form religion takes and the level of devoutness to religious beliefs and practices correspond to specific individual and communal needs and desires. Miller (1992a) found support for the deprivation theory using data collected by the Institute of Statistical Mathematics in Tokyo. An increase in age was significantly correlated with an increased belief in kami (Shinto spirits and gods), belief in buddhas, belief in ancestral spirits, belief in an afterlife, and belief in reincarnation. Chronic illness was a significant predictor of a belief in reincarnation and a postmortem life. However, the classic deprivation theory is reducible to Maslow's (1943) hierarchy of human needs for well-being. The older and frailer individuals become, the more they imagine they need gods, spirits, saints, and buddhas.

Researchers have studied the hypothesis that religion is need-driven. Allport's (1963) intrinsic-extrinsic religious motivation paradigm was predicated on meeting needs. Hood, Hill, and Spilka (2009) argued that the need to know and control, along with the need for meaning and esteem, elicit religious motivation. Hood et al. (2009) took the theoretical position that a lack of environmental control, unclear meanings, and challenges to self-esteem elicit predictable responses from religious individuals with a bias towards seeking religious answers to life's problems. Wilson (1978) suggested that religious beliefs are a survival mechanism. Brown and Cullen (2006) went a step further

arguing that religious beliefs and behaviors are not only enabling mechanisms for survival but for well-being as well. If religious beliefs and behaviors serve as enabling mechanisms for survival and well-being, then the desire for survival and well-being would account for the universality of religion across time and cultures. To test their conjecture, Brown and Cullen (2006) developed and tested the psychometric properties of the Motivation for Religious Behaviour Questionnaire. To test the hypothesis that Maslow's hierarchy of needs may be the motivational drive for religious beliefs and behavior, Brown and Cullen (2006) administered the Motivation for Religious Behavior Questionnaire to a diverse sample of Jews, Protestants, Catholics, and Muslims. Because the median scores for this sample did not conform to the ranked order of Maslow's hierarchy of needs as operationalized and measured by the Motivation for Religious Behavior Questionnaire, the authors concluded that individuals who practice religion do not seek to achieve their needs according to Maslow's hierarchy. The research has at least three flaws.

The writing of response items was flawed. Many of the statements merely asked the participants whether specific statements agree or disagree with elements of Maslow's hierarchy of needs. This was not the research question and responses may have confounded the results. Other statements are gratuitous response items, such as "Children need to know that they are loved by their parents" and "Children should be taught that they are loved by God" (Brown & Cullen, 2006, Appendix 1), which virtually all parents

would agree with, and the results probably increased the median for Maslow's category of the need for Love and Belonging. Other statements asked participants to rank divinely fulfilled needs as equal to, as or more important than, humanly fulfilled needs, which were loaded questions. Very few questions got to the heart of religious motivation and human needs. Only a few response items specifically mentioned praying for personal safety, such as in a home-changing situation, a job-changing situation, or when emigrating; but those instances were not life-threatening situations. As constructed, the Motivation for Religious Behavior Questionnaire was too course, too vague, and too generalized to serve as an assessment of personal religious motivation. I rectified this problem by using the Needs Satisfaction Inventory (Lester, 1990).

The sampling technique used by Brown and Cullen (2006) was flawed. The range of needs of participants was restricted. Brown and Cullen (2006) were puzzled by the fact that the basic human need for survival was ranked in the middle rather than as the top need. The authors concluded that because Safety and Survival were ranked in the middle, the participants were not practicing religion for personal needs. Brown and Cullen (2006) missed a major premise of Maslow's theory; the hypothesized hierarchy develops only when all needs are deprived. Had Brown and Cullen (2006) sampled soldiers in foxholes, families caught in the religio-cultural war in Bosnia, families caught in the genocide in Rwanda, or famished Outcasts living India, the results would likely have been very different. Maslow (1943) argued that as people meet their physiological and safety needs,

these needs become a lower priority, which was actually supported by the findings of Brown and Cullen (2006).

Brown and Cullen (2006) were also confused by the fact that the need for Love and Self-Actualization ranked as top needs of religious practitioners. Again, unfulfilled needs assume a higher priority. I would argue that, based on the findings, religion does not fully satisfy the needs of religious people for Self-Fulfillment and Love, and therefore those unmet needs remain high priorities.

Brown and Cullen (2006) overgeneralized their findings by arguing that wider sampling of different religious faiths in different cultures and countries would confirm their findings that religion is not used to meet basic human needs. The very words of the sacred texts of the world religions refute this conclusion. Jacob prayed for food, clothing, and safety (Genesis 28: 20). Hezekiah prayed for safety and security (Isaiah 38:2-8). Daniel (9:4-19) prayed for forgiveness, safety, and security. In a state of emotional and psychological distress, Jesus prayed for his own safety and security rather than the suffering and death he was about to experience for the sake of all humankind (Matthew 26: 36-44), and Jesus prayed for his own glorification (John 17). Jesus taught his followers to pray for their daily bread, forgiveness of debt, freedom from divine temptation, and deliverance from the evil one (Matthew 6:9-15). Even the classic children's prayer from the 18th century ("I pray the Lord my soul to keep") is a prayer for self-survival of consciousness and personality.

Muslims pray that Allah not break his promise to forgive their evil and admit them into Paradise (Koran 3:193-194). Muslims also pray for mercy (Koran 7:155), protection on the day of deliverance (Koran 2:201, 14:41), and whatever good the god may send a needy supplicant (Koran 28:24). The Muslim's idyllic Paradise (Hughes, 1885/1994), with 70 dark-eyed perpetual virgins for each martyr, is based on physiological wants and the desire for the believer's consciousness and personality to survive death. Contrary to the findings of Brown and Cullen (2006), Muslims are need-driven by the innate desire for self-survival and hedonism.

Hindus desire to achieve well-being by escaping from the suffering caused by physical existence and rebirth. Buddhists desire to achieve well-being by avoiding illness, suffering, death, and rebirth. Taoists desire to achieve well-being through emptiness (*wu)* and no doing (*wu -wei*). Shintoists seek to achieve well-being by avoiding the wrath of angry gods and nature spirits by gaining protection from ancestors. Maslow's (1943) hierarch of needs as an antecedent for religious beliefs and behaviors should be revisited because when a religion fails to meet the basic needs of worshippers, the worshipers may choose to withhold their devotion and even change religions.

Because most Japanese are unfamiliar with and rarely discuss the dogma and doctrines of Shintoism, Confucianism, Buddhism, or Christianity (Roemer, 2006), it is unlikely that these religious beliefs have a direct causal relationship with happiness, health, subjective well-being, or satisfaction with life. Because Shinto and Buddhist

rituals are performed out of a sense of social obligation--a duty to family and community--and because rituals are performed for extrinsic gain, the Japanese religious experience does not seem to support Allport's (1963) claim of intrinsic religion for its own sake as an end in itself. If intrinsic religion exists as an end in itself for its own sake without the prospect of personal or communal gain, it is not evident in the literature on the character of the Japanese religions.

Roemer (2006) found that ritual devoutness, ranked highest in importance by religious practitioners in Japan, correlated highest and most significantly with both global life satisfaction and happiness because a sense of social support and belonging positively affect life satisfaction and happiness (Genia, 1991, 1993, 1996; Genia & Cooke, 1998). Religious beliefs, ranked second in importance by most Japanese, were less significantly associated with global life satisfaction and happiness. Affiliation with a particular religion, ranked lowest in importance by most Japanese, was the least significantly related to global life satisfaction and happiness. Thus, the more devoted individuals are to their ritual behaviors and intended consequences, the more likely they are to benefit in satisfaction and happiness from religion as a coping mechanism (Roemer, 2006).

Roemer (2010a) found that religion has a stress-buffering or mediating effect on stress. Religious devotion also buffered the negative effects of unemployment and low socioeconomic status. These findings support the claim that religion is a need-driven, coping mechanism (Pargament, 2002, 2013).

Roemer (2010b) found that most Japanese faithfully perform their ritual duties to their gods, buddhas, and ancestors but do not consider themselves religious. This ritualistic-but-not-spiritual category of religious identity is a reversal of the spiritual-but-not-religious category often used in the study of Western religions. The ritualistic-but-not-spiritual approach to religion by most Japanese argues against Allport's (1963) claim of intrinsically motivated religion. The data confirmed the view that religion is a coping strategy because religion was believed to provide comfort and peace; that praying was purificatory; and the kami (Shinto gods and spirits) and the hotoke (ancestral spirits and buddhas) provided help and support, gave aid, protected worshippers, and cursed other people. Roemer (2010b) found a significant positive relationship between religious coping and psychological distress. The belief that ancestors needed to be worshiped was positively associated with psychological distress. Moreover, the Japanese belief in the existence of kami (Shinto gods and spirits) and hotoke (ancestral spirits and buddhas) was also positively associated with psychological distress. Causal relationships cannot be inferred from correlational, cross-sectional data; therefore, it is unknown whether turning to certain religious beliefs and practices cause distress or whether psychological distress causes individuals to turn to religion as a coping mechanism for symptom relief. Nevertheless, the fact that religious coping; owning a household Shinto alter; believing that gods, spirits, and buddhas exist; and believing that ancestors should be respected all predicted psychological distress (Roemer, 2010b) and reflect the dark side of religion

(Allport, 1963; Krause & Wulff, 2004). Religion, like some medicines, may have adverse effects and unintended consequences.

Few researchers have focused on the relationship between religion and anxiety and those that have examined the relationship between religion and anxiety have produced inconsistent and contradictory results (Lavrič & Flere, 2008). From the inconsistencies and contradictions found in the literature, Lavrič and Flere (2008) argued that it seemed obvious that the lack of research on the relationship between religion, culture, and well-being presented a gap in the literature. They examined the relationship between different measures of religiosity and a measure of anxiety among university students in five different cultures. Their hypothesis was that culture would prove to be an important mediator in the relationship between religiosity and psychological well-being.

The sample population consisted of undergraduate university students representing five predominant religions in five different cultures. The sample consisted of volunteers from Maribor, Slovenia, where Catholics represented 94% of the religiously affiliated; Sarajevo, Bosnia, and Herzegovina, where Muslims represented 94% of the religiously affiliated; Niš, Serbia, where Serbian Orthodox Christians represented 98% of the religiously affiliated; Auburn, Alabama, USA, where Protestants represented 72% of the religiously affiliated; and Sendai, Japan, where Buddhists represented 60% of the religiously affiliated.

The findings indicated that religious motivation produced different mediating effects among different religions in different cultures. In the Japanese sample, the only significant relationship was a positive relationship between quest and negative affect. The Japanese are predominantly non-religious, or ritualistic-but-not-spiritual, non-dogmatic, and unaffiliated, and in this sample of Japanese university students, the relationships between intrinsic spirituality, extrinsic religiosity, and psychological well-being were not significant.

One consistent relationship between religious motivation and psychological well-being across religions and cultures was a consistent significant correlation between quest and negative affect. Because researchers cannot draw causal inferences from regression analysis using correlational data drawn from a cross-sectional sample, it cannot be determined whether a quest orientation and a search for answers caused doubt, anxiety, and negative affect, or whether doubt, anxiety, and negative affect led to a quest for valid and reliable answers.

A second consistent correlation between religion and well-being found by Lavrič and Flere (2008) was among the predominantly Orthodox Christian Serbian sample. Every measure of religion, including personal prayer and religious attendance, significantly correlated with negative effect. This was explained by the fact that religion is individually and culturally constructed as a culture artifact. Lavrič and Flere (2008) explained that the Eastern Orthodox doctrine magnifies the sinfulness of man in which

man is a fallen, depraved creature with no possible path or method of regaining Godliness. Church attendance, Church teachings, and public prayer reinforced this individually and culturally constructed paradigm of hopelessness and helplessness. The individually and culturally constructed religious view that humans are fallen, depraved creatures with no hope of regaining Godliness reflects the dark side of religion (Krause & Wulff, 2004; Lavrič & Flere, 2008; Musick, 2000) and correlates negatively with well-being.

Lavrič and Flere (2008) concluded that culture clearly mediated the relationship between religious motivation and psychological well-being. The conclusion by Lavrič and Flere (2008) that religious motivation and the effects of religion are influenced by culture is supported by the findings of other researchers. Indeed, Hopkins (1923) argued that the social environment conditions every religion.

Judaism

The Hellenized, Rabbinic Judaism that evolved following the destruction of the sacrificial temple of Jerusalem in 70 CE is very different from that of the Levitical priesthood depicted in the Old Testament. Because each person creates their own reality, their own world (Wittgenstein, 1922/2003), the Jewish people are philosophically diverse groups of Orthodox, Reform, Reconstructionist, Renewal, and Conservative Jews (Cohen & Hall, 2009; Goldberg & O'Brien, 2005). The Jewish people are also divided by ethnicity, culture, and nationality into Ashkenazi, Sephardic, and Mazarchi Jews (Cohen

& Hall, 2009; Goldberg & O'Brien, 2005). As Hopkins (1923) argued, all religions are socially conditioned. Because the Jewish people are diverse in their beliefs and behaviors, research using a non-representative sample limits the generalizability of any findings.

Jewish beliefs in life after death vary widely within and between the Jewish communities. In a survey of Catholics, Protestants, and Jews, using the Form A of Belief in Afterlife Scale (Osarchuk & Tatz, 1973), the mean differences in belief in afterlife was statistically significant (Cohen & Hall, 2009). Jewish participants reported less belief in life after death than Catholics and Protestants. By contrast, mean differences in fear of God were also significant between groups, with greater fear among Catholics and Protestants than Jews. The mean differences in death anxiety were also significant, apparently influenced by both a belief in afterlife and fear of God. Jews reported higher death anxiety than Catholics and Protestants

In a study of daily spiritual experiences and well-being in which older Jewish adults in a Hebrew nursing home for the aged were compared with a diverse internet sample, Kalkstein and Tower (2009) detected significantly fewer daily spiritual experiences among elderly Jews. The participants in the Hebrew Home for the Aged were more depressed, had fewer close relationships, and reported significantly worse health than the younger at large sample of community participants.

This study is remarkable in a number of ways. The study is remarkable for its flawed research design. Individuals are in a nursing home precisely because they have

diminished emotional, psychological, and physical health, and it does not take an extensive research project to discover the obvious. Moreover, institutionalization is likely to be a mediating variable that influenced both spirituality and well-being. It is also remarkable that the administrators of the Hebrew Home for the Aged would allow their residents to be used for this study. Kalkstein and Tower (2009) made no mention of any compensation to the nursing home residents, or how the findings would be used to benefit society in general or elderly Jewish people living in nursing homes in particular.

Females have been minimized and marginalized by the paternalistic, patriarchal, and patrimonial nature of the Josephan faiths. Jewish women belong to two marginalized groups, women and Jews (Altman, 2010). Goldberg and O'Brien (2005) studied the effects of familial attachment, separation from parents, Jewish religious identity, and Jewish ethnic identity on well-being among a convenient sample of undergraduate Jewish females. Both Jewish religious identity and Jewish ethnic identity correlated negatively with psychological distress. However, psychological distress correlated positively, modestly with separation from mother and father. Familial ties are integral to Jewish identity, religion, and culture. The conflict between close family ties and separation from parents in an individualistic America culture and a large university setting may predict psychological distress among college Jewish females (Goldberg & O'Brien, 2005). Besides the conflict between family ties and eventual separation from parents, Jewish females may be exposed to gender bias and anti-Semitism (Altman, 2010).

Altman (2010) examined the mediating variables in the relationship between Jewish identity, perceived discrimination, and well-being. Orthodox Jews, who lived in all Jewish communities, constantly affirmed their Jewish identity, and ranked themselves highest in religious and ethnic observances, reported the least amount of discrimination. By contrast, the Conservative and Reform Jews, who ranked themselves lower on indices of religious and ethnic observance and Jewish identity, but who were more assimilated into mainstream American culture and interacted with more non-Jews, reported more incidents of anti-Semitism (Altman, 2010).

Christianity

The books of the Gospel contain numerous ethical injunctions that, if followed to the letter and spirit of the text, should predict emotional, psychological, and physical well-being. The Golden Rule, or ethic of reciprocity, attributed in various forms to Plato-Socrates (*Crito*, paragraph 49c), Confucius (*Analects*, Book XV, Chapter 23), Hinduism (*Mahabharata*, Book 13), Lao Tzŭ (*Tao Tê Ching*, Chapter 49), Moses (Leviticus 19:18, 34) and Jesus (Luke 6:31; Matthew 7:12), should predict amicable social relationships along with emotional, psychological, and physical well-being. Good works--healing the sick, raising the dead, cleansing lepers, expelling demons (Matthew 10:8); feeding the hungry, giving drink to the thirsty, and clothing the naked (Matthew 25: 34-46)—should predict eudaimonic well-being according to Aristotle (Steger, Kashdan, & Oishi, 2008).

In a study of Greek Orthodox Christians, Leondari and Gialamas (2009) used a sample of undergraduate university students and professional full-time teachers affiliated with the Greek Orthodox religion and found that church attendance correlated positively with life satisfaction. Belief in God also correlated positively with life satisfaction. However, belief in God was not related to psychological well-being as measured by anxiety, depression, or loneliness. The frequency of prayer, as first demonstrated by Galton (1872), was not related to mental health as measured by depression or loneliness. However, the frequency of prayer showed a significant positive association with higher anxiety (Leondari & Gialamas, 2009). Because this was a correlational study, it is unknown whether frequent prayers caused high anxiety or whether high anxiety caused frequent praying.

Religiosity, as measured by church attendance, frequency of prayer, and self-report of the importance of religion, was related to gender differences (Leondari & Gialamas, 2009). Women took their religion more seriously than men. They reported that they attended church services more frequently than men reported, prayed more frequently than men reported, and reported that religion was more important to them than men reported. Based on this sample and this research design (Leondari & Gialamas, 2009), more Greek Orthodox Christians believed God was an abstract construct or impersonal force in the universe (51.1%) compared to those Orthodox Christians who believed in an anthropomorphic God who was involved in the lives of humans (46.1%) or did not

believe in God (2.8%). This study indicated belief in God varied among Greek Orthodox Christians and that belief in God varied by gender, employment status, age, region, and other variables (Leondari & Gialamas, 2009). Although most participants reported that religion was either important or very important to them (78%), most of them (59.7%) attended church services only a few times during the year. Among Greek Orthodox Christians in this sample, there was a large gap between beliefs and behaviors.

Islam

According to Islamic tradition, Muhammad was the last and final prophet of the Judeo-Arabic and Christian prophets (Armajani, 1970). Regardless of the questions of date and authorship, the Koran may inspire eudaimonic well-being. The Koran says, "To you your religion, and to me my religion" (Surah 109:5), which, if followed to the letter and spirit of the surah, should predict emotional, psychological, and physical well-being; but this is contradicted by the numerous passages that call for holy war (*jihad*) against non-believers (e.g., Surahs 2:212; 4:76; 8:65; 9: 5,29). The Koran says, "There is no compulsion in religion" (Surah 2:256), which, if followed to the letter and spirit of the surah, should predict emotional, psychological, and physical well-being; but this is contradicted by all the Koranic passages and Hadīth (Traditions) that call all Muslims to fight until the one and only religion is Islam, for Allah must have no rivals (e.g., Koran 8:39; Ishaq:324; al-Bukhāri: Volume 4, Book 53, Number 386; al-Muslim: Numbers 29, 33; Tabari 6:139, 9:69). The Koran also says, "Leave alone those who take their religion

for a sport and a diversion, and whom the present life has deluded" (Surah 6:69), which, if followed to the letter and spirit of the surah, should predict well-being; but this is contradicted by the fact that apostasy is punishable by death for male Muslims and imprisonment with floggings for women, punishments expressly prescribed by Allah (Brandon, 1970; Coulson, 1964; Schacht, 1964).

There are also numerous Koranic passages and Hadīth that would presumably predict poor spiritual, psychological, emotional, and physical well-being. The Koran sanctions polygamy by divine decree and men may marry two, three, four, or more women (Koran 4:3). Women are considered tillage for men and men are implored to go into their tillage as they wish (Koran 2:223). Wives may be banished to their couches and beaten into submission if they do not obey their husband (Koran 4:38). Divorce is a unilateral right of males (Coulson, 1964; Schacht, 1964). Women are forbidden to marry non-Muslims because it is considered apostasy (Brandon, 1970). A women must cast a veil over her bosom (Koran 24:31) which has led to black veils covering everything except women's eyes during hot summer months. Women are considered inferior to male Muslims, their testimony in court counts as half of that of males, and women have few rights of inheritance (Coulson, 1964; Schacht, 1964). Islamic women who violate the mores of Islamic culture may be killed in what is euphuistically called "honor killing".

It has been argued that religion is extrinsically motivated to manage or suppress the innate terror of death (Jonas & Fischer, 2006; Vail et al., 2010; Van Tongeren et al.,

2008). Abdel-Khalek, Lester, Maltby, and Tomas-Sabado (2009) found significantly higher mean death anxiety among Middle East Arabs, except for the Lebanese men, than their Western Arab counterparts in Spain, the United Kingdom, and the United States. Abdel-Khalek and Al-Kandari (2007) found that death anxiety correlated with age. Death anxiety was greater among Kuwaiti Arab-Muslim college women than their male counterparts. Erdoğdu (2008) found lower death anxiety among Syrian Muslims than Yazidi (members of the Kurdish religion) in Syria, but higher than the Druze Syrians. In spite of the relatively high level of death anxiety among Arab-Muslims, Abdel-Khalek (2011) found a positive significant correlation between religiosity and satisfaction with life among Egyptian Muslim college students. Nevertheless, Abdel-Khalek (2006) found that female Muslims were more religious than males, and yet women Muslims were less happy than their male counterparts were. Abdel-Khalek (2007) found that Kuwaiti girls were more religious than boys were, but Muslim girls rated themselves less happy than boys. Muslim girls rated their mental health and physical health lower than boys did. The adolescent Muslim girls rated their level of anxiety and depression higher than boys did. The literature supports the conclusion that gender within Islam is a significant predictor of poor emotional, psychological, and physical well-beings of Arab-Muslim females. The teachings of the Koran appear to have a significant adverse effect on the emotional, psychological, and physical well-being of female Muslims.

Ayyash-Abdo and Alamuddin (2007) studied predictors of subjective well-being in Middle Eastern culture using undergraduate students in Lebanon's 10 major universities. The Lebanese government officially recognizes 18 religious sects (Ayyash-Abdo & Alamuddin, 2007). Remarkably, each sect has its own courts, cultural traditions, social organizations, and financial institutions (Ayyash-Abdo & Alamuddin, 2007) as they did under the Ghassanids and Umayyads before the rise of Islam. Gender was again a significant predictor of subjective well-being. Although males reported higher positive affect than females, both males and females reported similar levels of negative affect. Socioeconomic status was a significant predictor of self-esteem, optimism, and subjective well-being. Individuals living in collectivist cultures, such as those individuals living in the Arab-Islamic culture of Lebanon, experience lower subjective well-being than their cohorts in democratic, individualistic societies (Ayyash-Abdo & Alamuddin, 2007).

Abu-Rayya and Abu-Rayya (2009) examined the relationships between ethnic identification, religious identity, and psychological well-being between Muslim and Christian Palestinians in Israel. Both religious identity and ethnic identity are crucial for some individuals in the development of self-concept and self-meaning, especially for religious and ethnic minorities (Abu-Rayya & Abu-Rayya, 2009). Both Muslims and Christians are minorities in Israel. Both religious identity and ethnic identity had a statistically significantly positive correlation with age for Muslims and Christians.

Morris and McAdie (2009) found a significant difference in well-being between Christians, Muslims, and a non-religious group, but in a *post hoc* Scheffe test, the only significant difference was Christians scored higher on well-being than non-religious individuals. On a single-item death anxiety question, Muslims scored significantly higher than non-religious individuals did. Although Muslims are taught to believe in an afterlife, it does not seem to reduce death anxiety as predicted by the terror management theory (Morris & McAdie, 2009), but then Muslims are also taught not to take the afterlife for granted because Muhammad said most Muslims will burn in hell (Koran 19: 70-71). Thus, belief in an afterlife can be either a blessing or a curse (Morris & McAdie, 2009).

Jana-Masri and Priester (2007) argued that it is not merely sufficient to acquiesce to canonical prescriptions; canonical prescriptions must inform actual practice and practice must conform to canonical prescriptions. This argument supports the arguments of the Protestant reformers, such as Martin Luther, Huldreich Zwingli, and John Calvin, who criticized the discrepancy between Scripture and actual practice. Jana-Masri and Priester (2007) developed the Religiosity of Islam Scale (RoIS) to measure Islamic beliefs and practices, which supports my argument that religious measures should focus on the cognitive, affective, and active dimensions of religion rather than intrinsic and extrinsic motivation. Although the RoIS (Jana-Masri & Priester, 2007) is a sound psychometric measure of religious beliefs and practices, it is only appropriate for the Arab-Islamic religion and culture.

Tiliouine, Cummins, and Davern (2009) examined Islamic religiosity, subjective well-being, and health. Numerous factors contribute to subjective well-being and heath, but the authors wanted to establish a causal link between religiosity and well-being. Tiliouine et al. (2009) argued that most people are satisfied with their life and subjective well-being is held constant, like blood pressure and body temperature, at about 75 out of 100 percentage points in Western nations, and they named the internal process Subjective Well-being Homeostasis (Cummins, Gullone, & Lau, 2002, as cited in Tiliouine et al., 2009). The authors further argued that Muslims are generally more concerned with income and daily family needs than with religion because of the direct and immediate effect of personal and familial needs on well-being. This finding supports Maslow's hierarchy of needs.

Tiliouine et al. (2009) constructed their own Islamic Religious Scale to measure the beliefs and practices that Muslims are to follow in their daily lives. They found that Algerian females were higher in religious altruism than males. This means Algerian women were more likely to give to charity, tolerate others, and advise others on what is good or bad, which supports Aristotle's concept of achieving eudaimonic well-being through meaningful activities. Religiosity increased with age. Married persons and large families were more religious, and vice versa, because marriage and procreation are a religious duty and half of the religion of Islam, perhaps because the religious doctrine of

promoting overpopulation (fecundity) helps preserve the teachings and propagate the religion of Islam (Tiliouine et al., 2009).

Religious culture and religious practice had a surprisingly low correlation because the religious scholars of Islam (*'ulamā'*) emphasize practice over beliefs while Jana-Masri and Priester (2007) argued that neither beliefs nor practices are sufficient without the other. Religious practice was significantly higher among people with health problems than without health problems, perhaps because sick people turn to religion as a coping strategy and for psychological comfort, which supports the Allportian hypothesis that some people use their religion for extrinsic gain. It is interesting to note that in a hierarchical regression of religiosity, pain, anxiety, and sleep on the PWI (International Well-Being Group, 2006, as cited in Tiliouine et al., 2009); only altruism retained a positive link to subjective well-being. Thus, in this sample, it was altruism, rather than religious beliefs and practices, which formed the positive link to subjective well-being. This finding supports Aristotle's belief that eudaimonic well-being is inherent in doing good.

Raiya, Pargament, Mahoney, and Stein (2008) sought to develop a psychological measure of Islamic religiousness relevant to physical and mental health. The Psychological Measure of Islamic Religiousness (PMIR) was developed and tested for reliability and validity.

Exploratory factor analysis produced a conceptually meaningful six-factor solution with some interesting results. The findings are noteworthy in that Islam is the major reason why Muslims engage in some behaviors (e.g., helping relatives, neighbors, the needy, and orphans) while avoiding other behaviors (e.g., not engaging in sex before or outside of marriage, not committing suicide, not engaging in gossip). This is deontological ethics (Popkin & Stroll, 1993) which relies on obligations and duty to tell individuals how to behave. Socrates and Plato had a much higher standard of ethics arguing that individuals should love what is right and do what is right simply because it is right (Grube, 1981). Kant did not consider a person moral who did something because they were afraid not to do it or because they were obligated to do so (Popkin & Stroll, 1993). Morality comes only from free will and personal volition. Being told what is right and wrong does not allow individuals to develop a mature, independent intellect, religion, or set of morals because they are always dependent upon someone or something to make the decisions for them. Obligatory beliefs and practices do not allow self-development and the pursuit of one's highest human potential, which is Aristotle's concept of eudaimonic well-being. Ironically, religious morals often stand in the way of doing what is ethically right.

The six-factor solution of Raiya et al. (2008) includes a third factor that may be labeled the doubt factor. No one can know with absolutely certainty that Allah exists, that an afterlife exists, or that the Koran is the word of Allah (Erdoğdu, 2008), and without

absolutely certain knowledge that can never be wrong under any circumstance there is only probability (Wittgenstein, 1922/2003) and opinion. Religious doubts had a positive correlation with depressed affect and somatic symptoms, but a negative correlation with satisfaction and health (Kruse & Wulff, 2004).

A fifth factor concerns individual responses to problems in life, in which the respondents in the questionnaire indicated they looked for a stronger connection with Allah, considered personal problems a test from Allah, wondered why Allah was punishing them, or believed Allah was punishing them for a lack of devotion. These are passive, non-solutions to real problems facing real people. When individuals engage in behaviors that have negative outcomes, they tend to attribute cause (Pargament & Hahn, 1986), in descending order, to self, God's will, chance, God's corrective love, or God's anger. The responses also suggest Allah is a vengeful god in sharp contrast to Plato's conceptualization of God as the ultimate form of the Good: that universal moral standards existed before the concept of God, are superior to any god, and that no true god can be the cause of harm (Grube, 1981; Popkin & Stroll, 1993). The world religions often create negative, blasphemous images of God that are not founded upon certainty (Wittgenstein, 1922/2003) but which often create confusion, doubts, and psychological problems (Kruse & Wulff, 2004). Islam may be a double-edged sword, literally and symbolically, from the perspective of well-being.

Raiya and colleagues (2008) found that Islamic beliefs did not have a significant relationship with a single well-being variable: General Islamic Well-Being, depressed mood, positive relationship with others, purpose in life, physical health, satisfaction with life, angry feelings, or alcohol use. By contrast, Islamic religious struggles had a significant negative correlation with general well-being, positive relationship with others, and purpose in life, but had a significant positive correlation with depressed mood, poorer physical health, angry feelings, and even alcohol use, which is prohibited by Islam (Koran 2:216, 5:92-93).

Another factor, Islamic Religious Duty, Obligation, and Exclusivism, had a significant positive relationship with General Islamic Well-Being. However, Islamic Religious Duty, Obligation, and Exclusivism may predict negative well-being for non-Muslims because it is a religious duty to engage in jihad to expand the domain of Allah and Islam. The desire of Muslims to exclusively own and occupy Mount Zion, Jerusalem, and Israel is a major obstacle to peace in Israel and the Middle East (Patterson, 2011). Jihadism has led to Arab-Muslim terrorism and wars against the Jewish people of Israel ever since Israel became an independent state in 1948 (Patterson, 2011; Silberman, Higgins, & Dweck, 2005). Islamic Religious Duty, Obligation, and Exclusivism may predict lower well-being for non-Jews as well because jihadists have spread terrorism and jihad worldwide, including such places as Afghanistan, Bosnia, Egypt, France, Germany, India, Kenya, Kuwait, Lebanon, Pakistan, the Philippines, Saudi Arabia, Spain, Sudan,

Russia, Tanzania, the UK, the USA, and Yemen (e.g., Silberman et al., 2005). Islamic Religious Duty, Obligation, and Exclusivism may also predict lower emotional, psychological, and physical well-being from time to time between Islamic sects such as the Sunnīs, Shī´as, Imāmīs, Wahhābīs, Zaydīs, and members of other Muslim sects because members of Muslim sects fight against each other to spread their sectarian doctrines. Thus, Islamic Religious Duty, Obligation, and Exclusivism may predict lower well-being for Muslims as well as non-Muslims.

This literature review of religion has revealed that the eight major world religions - Buddhism, Christianity, Confucianism, Hinduism, Islam, Judaism, Shinto, Taoism – employ in varying degrees a belief in an idyllic afterlife – Nirvâna, heaven, union with Brahmā, Paradise, Tao--and there is a strong expectation of rewards in the afterlife (Morris & McAdie, 2009). Thus contrary to Allport's (1963) claim of intrinsic spirituality for its own sake as the master motive of religion, the world religions seem to be extrinsically motivated by their believers' fear of nonexistence and a desire for immortality. If true, this supports the hedonic theory of religious motivation and the terror management theory of religion.

The literature on religion and well-being has also revealed that religion can foster emotional, psychological, and physical well-being as well as fear of God, death anxiety, depression, terrorism, religious wars, and suicidal missions. Religion, like any manmade tool, can be used for good or evil.

Whereas the search for well-being may be as old as the search for the fountain of youth, and nearly as elusive, the conceptualization and measurement of well-being in positive psychology is no less problematic.

Conceptualization and Measures of Well-Being

Well-being is another social construct that is not always directly observable and must often be inferred by indirect means or subjective self-reports. Psychologists in the field of positive psychology conceptualize and measure well-being differently. For example, Seligman (2002) envisioned three paths to well-being: (a) pursuing challenging endeavors, (b) engaging in altruistic behaviors, (c) and having fun. Ryff (1989) conceptualized well-being as resulting from controlling one's environment, creating meaningful relationships, having a purpose in life, achieving personal growth, being independent, and living in harmony with one's true self. Still other psychologists conceptualize well-being as having subjective (e.g., Diener, 1984), objective (e.g., Inoguchi, & Shin, 2009; Scheller & Seligman, 2010), hedonic (pursuit of pleasure), and eudaimonic (pursuit of meaning) components (e.g., McMahan & Renken, 2011). How one conceptualizes and defines well-being will likely influence the operational definition, response items selected, statistical analysis, results, and interpretation.

Various instruments claim to measure mental, emotional, social, subjective, objective, hedonic, eudaimonic, or spiritual well-being. Whether or not an instrument truly measures an invisible, intangible construct is debatable (Whitt et al., 2009), and

therefore several lines of evidence may help increase understanding of the construct as well as providing evidence for the validity and reliability of the instruments (AERA, APA, & NCME, 2004). Therefore, six different measures were used to measure the construct well-being, focusing primarily on the cognitive, emotive, and physical dimensions of well-being. I used six different measures to oversample content related to well-being, to resemble previous research related to well-being, and to compare results with previous researchers (McMahan & Estes, 2010).

Aristotle (*Ethics*, Book 1) argued that every rational activity is purposeful in that all actions aim at some other end, something that we want for its own sake. Intrinsic religion for its own sake as the master motive would be pointless and ineffective. Religion is not an end in itself but merely the means to some other end. Aristotle concluded that happiness is one such end to which our actions are directed because happiness is its own reward and is desirable in itself. No rational person choses to be unhappy. Even those Hindu ascetics, Muslim mystics, and Buddhist-Christian monks who purposely endure hardship, suffering, and temporary unhappiness do so as an extrinsic means to some other end, such as self-purification, redemption, humility, propitiating a god, or freeing the spirit from sensory domination (e.g., Brandon, 1970; Frazer, 1890/1981).

Because the aim of life in general and of religion in particular, is well-being, Aristotle, in Socratic fashion, asked what constitutes well-being. This is the point where

many researchers conceptualize well-being and happiness from different perspectives. Aristotle distinguishes between hedonic well-being, characterized by the pursuit of pleasure and temporary happiness, and eudaimonic well-being, an enduring quality of life resulting from virtuous activities in accordance with an individual's highest potential. During the first two decades of positive psychology, psychologists conceptualized happiness as satisfaction with life and a balance between positive and negative affect (Ryff & Keyes, 1995; Ryff & Singer, 2008). The first two measures of well-being reviewed conceptualized well-being as a function of satisfaction with life and a balance between negative and positive affect. However, Frankl (1966, 1972) argued that the need to find meaning and purpose in life, even in the face of atrocities, is integral to well-being, and therefore the third measure reviewed looks at meaning in life (Steger et al., 2006). On the other hand, McMahan and Estes (2010) returned to Aristotle's distinction between hedonic and eudaimonic well-being, which should significantly positively correlate with extrinsic religiosity for personal gain and intrinsic spirituality for its own sake, respectively; and therefore the Beliefs about Well-Being Scale is included as the fourth measure to separate hedonic well-being from eudaimonic well-being. By contrast, Maslow (1943) argued that psychological health was only possible when basic human needs for physiological homeostasis, safety and security, love and belongingness, esteem and self-esteem, and self-actualization have been satisfied, and therefore the Needs Satisfaction Inventory (Lester, 1990) is reviewed as a measure of physiological and

psychological well-being. Physical health influences both religion (Allport & Ross, 1967) and well-being (Schat et al., 2005) and therefore the Physical Health Questionnaire is reviewed as a sixth and final measure of well-being. Together these six instruments measure emotional, psychological, and physical well-being.

Satisfaction with Life Scale

Research on subjective well-being has focused on three separate components: negative affect, positive affect, and life satisfaction (Ryff, 1989a, 1989b, 1989c). Negative and positive affect are emotional aspects of well-being while life satisfaction is a cognitive, judgmental process that forms a separate factor of well-being (e.g., Diener, Diener, & Diener, 1995; Diener et al., 1985; Lucus, Diener, & Suh, 1990). The Satisfaction with Life Scale (SWLS; Diener et al., 1985) is a 5-item questionnaire in the public domain designed to measure an individual's general sense of satisfaction with their life as a whole. Satisfaction with life is relative to the global perception of well-being. Life satisfaction is a cognitive judgmental process that each individual develops for him or herself, not some externally imposed criterion (e.g., Diener et al., 1985). Life satisfaction is influenced by the success or failure of past goals, present circumstances, and future expectations.

Diener and colleagues (1985) used a convenient sample of undergraduates in introductory psychology classes to develop and test the SWLS. The SWLS correlated

positively with self-esteem, sociability, and activity, but correlating negatively with physical symptoms, emotionality, and impulsivity.

Pavot, Diener, Colvin, and Sandvik (1991) found that convergent validity for the SWLS was supported by positive correlations between the SWLS and life satisfaction, morale among elderly persons, and daily reports of satisfaction with life. The statistically significant positive correlations of the SWLS with three similar measures of life satisfaction appeared to converge on a single construct of life satisfaction. In a follow-up, no gender differences were found in life satisfaction (Pavot et al., 1991).

In a review of the SWLS, Pavot and Diener (1993) found that the SWLS showed good temporal stability and yet was sensitive enough to detect changes in life satisfaction.

Shevlin, Brunsden, and Miles (1998) analyzed the factorial invariance, mean structures, and reliability of the SWLS among undergraduates from two British universities and found no differences across gender.

Diener, Suh, Lucas, and Smith (1999) examined the progress made in three decades of studying subjective well-being. They reviewed the effects of bottom-up influences (e.g., external events, situations, and demographic influences), personality, genetic influences, social comparison, modest aspirations, adapting and coping, health, income, marital status, age, job morale, education, intelligence, and the moderating-mediating effects of religion. Diener et al. (1999) concluded that demographic variables that may influence well-being are seldom explored. I rectified this limitation by including

demographic variables in the questionnaire as potential predictors, covariates, or mediators of well-being.

Arrindell, Heesink, and Feij (1999) tested the SWLS in a slightly different cultural context by using a sample of young Dutch citizens in three age groups: 18, 22, and 26 years of age. Their aim was to examine the psychometric properties of the SWLS, test whether physical and mental health correlate with satisfaction with life, and examine whether two demographic variables (gender and marital status) correlate with the SWLS. The sample was gender balanced: 887 females and 888 males. They also compared the demographic variable of marital status on four levels: not involved in an intimate relationship, involved but neither married nor cohabitating, cohabitating, and married young adults.

In Western countries characterized by secularism, individualism, and democracy, most respondents were *slightly satisfied* or *satisfied* with their lives (Arrindell et al., 1999). Results indicated that the young Dutch participants, like other Westerners, were satisfied with their lives in general.

Arrindell et al. (1999) found that females were slightly more satisfied with their lives than their male counterparts were, which is the opposite of findings in Arab-Islamic religions and cultures. The four marital status groups were significantly different in satisfaction with life with young married Dutch adults being the most satisfied with life

and those not involved in an intimate relationship being the least satisfied with life (Arrindell et al., 1999).

On the question of religious differences, Pavot and Diener (2004) wondered whether findings based on the SWLS, an instrument tested on mostly Christian samples, would generalize to other religions, such as Islam or Buddhism. I used the SWLS with a purposeful, stratified sample of participants from the major world religions to assess the relationship between the world religions and satisfaction with life.

Positive and Negative Affect Scale

Satisfaction with life and a balance between negative and positive affect served as the dominate measures of well-being for 20 years (Ryff & Keyes, 1995; Ryff & Singer, 2006). Affect plays a significant role in diagnosing mood and psychiatric disorders (Morrison, 1995) and may be both a cause and effect of cognitive-emotive disorders. Watson and colleagues (1984) were dissatisfied with existing measures of positive and negative effect because existing measures sampled few affects. Watson et al. (1988) sought to tap a broad range of indicators of positive and negative affect to develop the Positive and Negative Affect Scale (PANAS), a list of ten positive and ten negative mood descriptors. Positive affect (PA) was operationally defined as being enthusiastic, interested, determined, excited, inspired, alert, active, strong, proud, and attentive (Watson et al., 1988). Negative affect (NA) was operationally defined as being afraid, upset, distressed, jittery, nervous, ashamed, guilty, scarred, irritable, and hostile (Watson

et al., 1988). No gender differences were found. The PANAS internal consistency reliabilities reflected no temporal differences (e.g., *at this moment, today, past few days, past few weeks, last year*), except for the fact that participants tended to balance their high and low moods as the length of time increased. The correlation between the NA and PA scales was predictably low, supporting the idea that the PANAS measures two different constructs.

Watson and Clark (1994) also developed a 60-item expanded version of the PANAS that could be completed in 10 minutes or less. Nevertheless, the shorter PANAS is a reliable, valid, and efficient instrument for assessing the two dimensions of affective well-being (Watson et al., 1988). I used the short version.

The Meaning in Life Questionnaire

Meaning in life refers to the self-perceived significance of one's existence and is a crucial component in the development of emotional, psychological, and sometimes physical well-being (Steger & Frazier, 2005). One function of religion is to give worshipers a sense of meaning and purpose in life (Schnitker & Emmons, 2013; Schwab, 2013; Tongeren et al., 2013), and therefore meaning in life may mediate the relationship between religious identification and psychological well-being (Steger & Frazier, 2005). However, meaning in life is independent of religious philosophy or affiliation (Steger & Frazier, 2005). Religious and nonreligious people need to feel their lives are important.

The world religions are social constructs that provide members with a particular theoretical lens for interpreting the world, life, death, and an individual's personal experiences from a teleological perspective, often motivated by the desire for an afterlife in a metaphysical world. The purpose of life may be salvation through fulfilling the Law of Moses (e.g., Genesis 15:6; Leviticus 17:11; Ezekiel 33:12), salvation through belief in Christ (e.g., John 10:9; Act 2:38), salvation through righteous deeds and believing what was sent down to Muhammad (Koran 47:2), salvation through the liberation of atman and union with the Ultimate Reality of Brahmā (e.g. *Rig Veda , Upanishads*, ISTA, 2011), salvation by reaching Nirvana (e.g., *dhamma-kakka-ppavattana-sutta*, ISTA, 2011; Goddard, 1970), or by conforming to the Way of Nature (e.g., *Tao Tê Ching* 52, 58, Lau translation, 1963). Religion provides a social construct that gives people a way to make meaning of their life and experiences (Steger et al., 2010), and this socially constructed meaning of life is operant conditioned (Skinner,1950, 1963, 1984) by family, friends, and other members of the individual's culture and religious tradition (Bandura 1969, 1997, 2001, 2002, 2003; Bandura & McDonald, 1963). This meaning-making might mediate the relationship between religion and well-being (Steger & Frazier, 2005; Steger et al., 2010). Steger et al. (2010) theorized that the meaning-making systems that the various religious philosophies provide their members might vary by tradition. People with different religious philosophies approach religion differently, and therefore it may be

inferred that the results may vary accordingly (e.g., Allport, 1963; Allport & Ross, 1967; Baker & Gorsuch, 1982; Gorsuch & McPherson, 1989).

Steger and Frazier (2005) found that meaning in life significantly mediated the relationship between religiousness and life satisfaction. It was meaning in life that had the largest effect on well-being (Steger & Frazier, 2005).

The meaning-as-mediator hypothesis suggested that religious individuals experience eudaimonic well-being while participating in religious activities because they attribute meaning to, and derive satisfaction from, the cognitive, affective, and active components of religion (Steger & Frazier, 2005). The authors argued that people generally do not participate in religious activities to increase their sense of well-being, but this is counterfactual to the findings of many other researchers who argued that religion is all about feeling good in this lifetime and the next (e.g., Krause & Wulff, 2004; Pyysiäinen, 2003; Vail et al., 2010; Van Tongeren et al., 2008).

Steger et al. (2006) designed a three-part study to assess the structural, convergent, and discriminant validity of the MLQ; and then tested the MLQ against two other popular measures of meaning. The MLQ factored into a two-factor solution: a presence of meaning subscale (Presence) and a search for meaning subscale (Search). The scores were slightly above the midpoint of 20, suggesting that this sample of young, mostly female, and mostly Caucasian undergraduate introductory psychology students had a subjective sense that their lives were meaningful. The internal consistency of the

Presence (α = .86) and Search (α = -.88) scales created an enigma because those participants who had found meaning in life were still searching for more meaning and those who had not found meaning reported not searching for meaning (Steger et al., 2006).

The MLQ convergent validity indicated the instrument taps the same construct as its two closest measures of meaning but discriminant validity indicates the MLQ more precisely measures the construct of meaning in life. The MLQ shares little or no covariance with other measures of well-being, and this is especially important because well-being is a nebulous construct that requires several convergent and divergent measures to assess it accurately.

Steger and colleagues (2008) went back to Aristotle's distinction between hedonic and eudaimonic well-being to examine how eudaimonic and hedonic behaviors influence well-being. Steger et al. (2008) sought to establish directionality, predicting that eudaimonic behaviors would result in later, higher well-being rather than the reverse, well-being predicting eudaimonic behaviors. Eudaimonic behaviors were positively correlated with meaning in life and positive affect. By contrast, hedonic behaviors were inversely related to meaning in life and unrelated to well-being (Steger et al., 2008). Having engaged in hedonic behaviors was unrelated to all well-being variables.

As predicted by Aristotle (*Ethics*) in 350 BCE, Steger et al. (2008) found evidence that eudaimonic behaviors produced a sustained positive effect on well-being

while hedonic behaviors were generally unrelated to well-being. Eudaimonic activities may have a deeper, more meaningful, and longer lasting effect on emotional, psychological, and physical well-being than the hedonic pursuit of pleasure and avoidance of pain.

Steger et al. (2010) designed two studies to assess how existential seeking related to well-being (Study 1) and how the manifestations of religious beliefs in an afterlife contribute to psychological well-being (Study 2). In Study 1, Steger et al. (2010) examined the extent to which existential seeking (religious quest versus search for meaning in life) differently correlated with various measures of well-being and religious measures as a function of sectarian differences (e.g., Protestant versus Catholic). Protestants reported higher levels of extrinsic religiosity, stronger religious commitment, and greater cognitive orientation towards spirituality than their Catholic counterparts did. Among the Protestant students, the presence of meaning was significantly negatively related with both searching for meaning and religious quest. The inverse relationship among Protestants between the presence of meaning and both religious quest and searching for meaning suggests that Protestants who had found meaning in life stopped looking for more of the same because they were satisfied with both their religion and meaning in life (Steger et al., 2006; Steger et al., 2010). This relationship was not found among the Catholic college students, suggesting that Catholics reported searching for something they already had. One solution to this paradox is that an ongoing search for

meaning by individuals who already believe their lives are meaningful is motivated by the desire for a deeper and more satisfying appreciation for what makes life meaningful (Steger et al., 2006). The search for meaning in life may be a self-fulfilling prophecy: some individuals who search for meaning may believe they find what they are looking for while other individuals who do not believe they have meaning in their lives may not be inclined to look for it (Steger et al., 2006).

In a follow-up study, Steger et al. (2010) assessed the influence of existential seeking on well-being and religious variables among Evangelicals, non-Evangelical Protestants, and Catholics. Steger et al. (2010) found the search for meaning positively related for Evangelicals, non-Evangelical Protestants, and Catholics, but there were no differences in magnitude related to religious affiliation.

Just as Steger and colleagues went back to Aristotle's distinction between hedonic and eudaimonic well-being so did McMahan and Estes (2010) return to Aristotle's two sources of well-being.

Beliefs about Well-Being Scale

Extensive research has been conducted on well-being (e.g., Deci & Ryan, 2008; Diener & Lucas, 2000; Diener, Suh, Lucas, & Smith, 1999; Ryan & Deci, 2001; Ryff, 1989; Ryff & Keyes, 1995; Waterman; 1993; Waterman, Schwatz, & Conti, 2008; Waterman et al., 2010). McMahan and Estes (2010) were dissatisfied with the traditional conceptualization of well-being as a measure of satisfaction with life and a balance of

positive affect with negative affect. Moreover, McMahan and Estes (2010) theorized that laypersons' concepts of well-being might differ from that of philosophers and social science researchers. McMahan and Estes (2010) used two studies to investigate the content and measurement of lay concepts of well-being. As conceptualized by Aristotle and others, a eudaimonic perspective of well-being consists of identifying and developing an individual's talents; engaging in purposeful, meaningful activities; and contributing to society through purposeful activities that are the highest expression of individual abilities. Psychological hedonism, by contrast, suggests that the pursuit of pleasure, avoidance of pain, and personal satisfaction with life are the measure of all things. However, what is important *to* an individual may not be important *for* an individual, and vice versa. For example, a balanced diet and exercise may be important for an individual's health and well-being but diet and exercise may not be important to an individual. The two opposing conceptualizations of well-being may have different implications for an individual's well-being.

McMahan and Estes (2010) used principle components analysis and found a four-factor solution that was most interpretable. The four factors were concerned with the experience of pleasure, the avoidance of negative experiences, self-development, and contributing to others. The four subscales of the BWBS clearly tap the concept of hedonic pursuit of pleasure while avoiding pain and the eudaimonic concept of self-development and contributing to the greater good as first articulated by Aristotle.

Based on the findings of McMahan and Estes (2010), layperson's concepts of hedonic and eudaimonic well-being did reflect the construct of well-being as conceptualized by philosophers and psychologists. Following the theories of Aristotle and others, McMahan and Estes (2011) predicted that laypersons' eudaimonic approaches to well-being would more robustly predict well-being than hedonic approaches. McMahan and Estes (2011) used a convenient sample of undergraduates to confirm their hypothesis.

McMahan and Estes (2011) obtained a higher-order Hedonic (BWBS-HED) subscale score by averaging the Experience of Pleasure responses and the Avoidance of Negative Experience responses. They also found a higher-order eudaimonic (BWBS-EUD) subscale score by obtaining the mean of scores on the Self-Development and Contribution response items. As predicted, the BWBS-EUD was positively significantly associated with subjective well-being, subjective vitality, and the presence of meaning in life. The BWBS-HED positively significantly correlated with subjective well-being and subjective vitality, but not the presence of meaning in life. Thus, both hedonic and eudaimonic conceptualizations of well-being are associated with subjective well-being and vitality, but eudaimonic activities had the greatest effect on well-being. Most importantly, the hedonic pursuit of well-being did not contribute to the presence of meaning in life (McMahan & Estes, 2011).

A critical limitation of Study 1 was the use of a homogeneous sample of college students. Ryff (1989) noted that age has different influences on well-being. Ng, Ho, Wong, and Smith (2003) argued that well-being is a culturally defined construct that varies by culture. To overcome the college sophomore problem (McNemar, 1946; Gordon et al., 1986; Peterson, 2001), McMahan and Estes (2011) used a sample of adults recruited through email invitation and professional networking websites.

The eudaimonic subscale (BWBS-EUD) was positively associated with subjective well-being (SWB), vitality, and the presence of meaning in life (MLQ-P). On the other hand, the hedonic subscale (BWBS-HED) was positively associated with a sense of vitality, but not SWB or the MLQ-P. A hedonic philosophy of life may bring subjective feelings of aliveness, vigor, and mental and physical vitality but not eudaimonic well-being. Consistent with Aristotle's argument and previous research findings (e.g., McMahan & Estes, 2010; Park, Peterson, & Ruch, 2009), there are two paths to happiness, the hedonic and eudaimonic approach, but only the eudaimonic approach leads to a meaningful, purposeful life and eudaimonic well-being.

The Need Satisfaction Inventory

Maslow (1943) argued that all humans have the same basic needs, such as the need for air, water, food, and shelter, to maintain physiological homeostasis. Only after these needs are met do individuals seek to satisfy their need for safety and security. Once the physiological and safety needs are satisfied, then individuals seek to satisfy

psychological needs for love, belonging, self-esteem, achievement, recognition, independence, competence, recognition, and respect. Only when individuals met their physiological and psychological needs are they free to fulfill the need to live up to their fullest and unique potential to achieve self-actualizing spiritual or ecstatic experiences.

Lester, Havezda, Sullivan, and Ploude (1983) developed the Need Satisfaction Inventory (NSI) to measure the level of satisfaction of needs described by Maslow and to examine the effects of these needs on psychological health. One hundred fifty-one undergraduate students completed the questionnaire along with either a personality inventory designed to measure neuroticism and extraversion or a different measure of belief in locus of control by powerful others, by chance, or by self.

Students who reported high satisfaction of psychological needs, safety, and esteem reported significantly lower neuroticism scores. On the one hand, students who believed they controlled their own lives reported substantial satisfaction of physiological homeostasis, safety, belongingness, esteem, and self-actualization. On the other hand, students who believed chance controlled their lives reported that few needs were satisfied. Students who believed others controlled their lives and destiny reported the lowest satisfaction of their physiological, safety, and esteem needs. Because these findings are based on correlational data, inferences concerning causation cannot be drawn.

Because Maslow hypothesized that deprivation of basic human needs results in psychopathology, Lester (1990) tested this hypothesis. The NSI and a personality inventory were administered anonymously to 48 college undergraduates. Satisfaction of the need for physiological homeostasis, safety, belonging, esteem, and self-actualization had a significant negative correlation with neuroticism. The findings supported Maslow's hypothesis that satisfaction of basic human needs is necessary for psychological health. Maslow's hierarchy of needs seems to contradict the claims and practices of some members of the world religions who claim to experience spiritual and ecstatic states through fasting and other forms of self-deprivation.

Whereas Lester and colleagues focused on psychological health, the next assessment of well-being focuses on physical health. The Physical Health Questionnaire is the sixth and final measure of well-being reviewed in this literature review.

Physical Health Questionnaire

The linkage between religion, disease, and death is both ancient and widespread (e.g., Frazer, 1890/1981). Religion and superstitious rituals may have originated as an antidote to death and disease. Disease was commonly thought to be caused by demons or an angry god (e.g., Torah, Gospel, Koran), and the function of the priests was to cure diseases by driving away demons. In the Gospel, religion and physical health are intricately woven together in the role of the priest as medicine man and faith healer. Jesus allegedly caused the blind to see, the lame to walk, the lepers to be cleansed, the deaf to

hear, and the dead to be resurrected (Matthew 11:5) and he gave his disciples the same medical abilities (Matthew 10:8). As a sign of their faith, those who believe in Jesus Christ can drink anything lethal without harm and they are able to heal the sick through laying hands on the sick (Mark 16:17). Hundreds of Christian saints are alleged to have caused miraculous medical cures.

Schat and colleagues (2000, 2003, 2005) criticized the lack of construct validity among existing instruments used to measure physical health. Arguing that assessments lacking psychometrically sound properties may lead to erroneous conclusions and hinder scientific progress, Schat et al. (2005) examined the psychometric properties of the Physical Health Questionnaire (PHQ, Schat & Kelloway, 2000, 2003; Schat et al., 2005).

The authors conducted three studies to test the psychometric properties of the PHQ. Study 1 produced a four-factor solution--Gastrointestinal Problems, Headaches, Sleep Disturbance, and Respiratory Infections--that accounting for 68.9% of the cumulative item variance. In Study 2, the four-factor oblique model produced significantly better fit indices than a one- or five-factor model. In Study 3, changes in wording of item 14 and new response anchors for items 12, 13, and 14 improved the fit indices. A discriminant validity test of the PHQ demonstrated the scales were significantly associated with, but empirically distinguishable from, measures of negative affect.

The PHQ has some limitations. For example, poor physical health and the natural effects of aging may influence religious motivation. In spite of the potential limitations of the PHQ, I included the PHQ as an outcome measure of religion and religious motivation.

Conclusion

The purpose of this literature review was to highlight a gap in the research concerning the effects of religion motivation on the relationship between religion and well-being. Researchers and the practitioners of each of the world religions define religion differently. How religion is defined seems far less relevant to understanding the phenomenon than the intended consequences and actual effects of religion on emotional, psychological, and physical well-being. The promise of tangible benefits in the form of health and well-being in this world and the hope of a posthumous life afterwards seem to be the mysterious primacy that attracts followers to religion worldwide. The literature suggests that religion is a relative-subjective social construct driven by Maslow's (1943) hierarchy of needs for well-being, that believers practice religion largely for its extrinsic value in meeting individual and communal needs, and that worshipers expect tangible results. Religion appears to be a coping mechanism used to satisfy basic human needs for physiological sustenance, safety and security, love and belonging, meaning and purpose in this life, and a path to perpetual self-survival. A crucial test of the claims of the world religions is the actual effect of beliefs and practices on the health and well-being of believers.

The literature pertaining to religion, spirituality, and well-being reveals a contradiction and a dilemma. On the one hand, the APA has Division 36: Psychology of Religion and Spirituality, and on the other hand, the APA does not recognize the canonical texts of the world religions as authoritative sources of information. Many psychologists and counselors are members of the APA who use religion, spirituality, meditation, and mindfulness in the practice of their profession (e.g., Delany, Miller, & Bisino, 2007; Dowd & McCleery, 2007; Smith & Orlinsky, 2004), but the APA does not recognize the sources of those religious and spiritual beliefs and behaviors as legitimate sources of knowledge. Although Galton (1872) found that prayers had no efficacy in speeding recovery, preventing stillbirths, preventing mental illness, or prolonging life, little or no subsequent research has tested the efficacy of religious beliefs and practices among the world religions in a single study. It is unknown whether the beliefs and practices of the various world religions have a direct effect on the emotional, psychological, or physical well-being of believers. This study filled a gap in the literature by examining the effects of religious philosophy on well-being across a stratified purposeful sample of participants from the major religions in a single study.

It is known that individuals pursue the same goals for different reasons and different goals for the same reasons, and therefore Allport (1963) argued that intrinsic and extrinsic motivation mediate the relationship between religion and its outcomes. Allport's (1963) claim that there are intrinsically and extrinsically motivated Christians,

Jews, and Muslims has been partially verified by using the ROS on mixed samples of participants from some of the world's major religions in various combinations with mixed results. However, based on a review of the literature, the ROS and Quest scales had not been tested on a stratified purposeful sample of the major world religions in a single study. This study filled a second gap in the literature by examining the effects of religious motivation on the relationship between religion and well-being across the major religions in a single study.

What is unknown is whether extrinsic religiosity correlates positively and significantly with hedonic well-being or whether intrinsic spirituality correlates with eudaimonic well-being. If extrinsic religiosity is motivated by personal and social gain, and if hedonic well-being is characterized by the pursuit of rewards and pleasure, then extrinsic religiosity should correlate with hedonic well-being. Likewise, if intrinsic spirituality is religion for its own sake, the master motive, and if engrossing eudemonic activities are pursued for their own sake, for their intrinsic value, then intrinsic spirituality should correlate with eudaimonic well-being. Examining the relationship between the ROS and the BWBS informally answered this question.

Stankov, Saucier, and Knežević (2010) argued that many ordinary people unaffiliated with any terrorist group nevertheless endorse some statements that reflect an extremist ideology. Their research found that members of some religions endorse violence more readily than members of other religions. It is unknown whether the

endorsement of violence for positive social change is evenly distributed across atheists and theists alike. Correlations between religious philosophies and the Militant Extremist Mind-Set scale across a purposeful stratified sample of atheists and members of the world religions informally answered this question.

Belief in an afterlife mediated the fear of death (Oscarchuk & Tatz, 1973) and different levels of beliefs in an afterlife among theists resulted in different levels of death anxiety (Cohen & Hall, 2009). It is unknown whether a belief in the afterlife is related to well-being among atheists or members of the different world religions. Correlations between the Belief in Afterlife Scale (Oscarchuk & Tatz, 1973) and various measures of well-being across a purposeful stratified sample of atheists and members of the world religions informally answered this question.

In Chapter 3, I describe my research design and rationale for its use in investigating the effects of religious motivation on the relationship between the major world religions and well-being. I describe the target population and psychometric properties of assessments used for testing the mediating effects of religious motivation on well-being. In Chapter 3, I also provide a rationale for the use of mediational analysis for testing the effects of religious motivation on well-being. Finally, I discuss potential threats to validity in Chapter 3.

In Chapter 4, I present the findings and then discuss the findings in Chapter 5.

Chapter 3: Research Method

Introduction

In this study, I describe procedures for examining the effects of intrinsic spirituality, extrinsic religiosity, and quest as mediating variables in the relationship between religious identification and the perception of well-being. In the first section, I describe the research design and justify this design as the research method needed to advance the understanding of religion, religious motivation, and the outcomes of religion. In the second section, I discuss the methodology in more detail, including describing the target population and sample size, sampling procedures, instruments and operationalization of constructs, data analysis, and threats to validity. In the third section, I discuss ethical procedures.

Research Design and Rationale

Social science researchers encounter problems in operationally defining and measuring such nebulous concepts as religion (Brown, 2011, Conroy, 2010; Contreras-Véjar, 2006; Crosby, 2013; Edwards v. Aguillard, 1987; Eisgruber & Sager, 2009; Harrison, 2006; Hood, 2013; McIntosh & Newton, 2013; Pargament 2002, 2013; Rossano, 2007; Seeger, 2008; Shermer, 1991; Usman, 2007; Valdecasas, Boto, & Correas, 2013). For the purposes of this study, the predictor variable, religion, is self-designated religious affiliation as defined by each participant having indicated his or her philosophical view as being (a) atheist, (b) agnostic, (c) spiritual-but-not-religious, (d)

Christian, (e) Buddhist, (f) Hindu, (g) Jew, (h) Muslim, (i) Confucian, (j) Shinto, (k) Taoist, or (l) other. I used no operational definition of these philosophical views because each person and religious group constructs their own religious paradigm (Gorsuch, 2013; Harrison, 2006; Johnson, Li, Cohen, & Okun, 2013; Peet, 2005; Schwab, 2013; Usman, 2007; Van Tongeren, Hook, & Davis, 2013).

The mediating variables are extrinsic religiosity, intrinsic spirituality, and quest. Allport (1963) conceptualized the practice of religion as either extrinsically motivated by external rewards and *used* as a means to something else, such as food, clothing, shelter, social belonging, or personal security; or religion was intrinsically motivated as something desirable in itself and *lived* as the master motive in life (Allport & Ross, 1967). The quest factor conceptualizes religious beliefs and practices as moved by a skeptical, open-minded quest for religious truths concerning meaning and purpose in life (Batson & Schoenrade, 1991; Batson et al., 1982; Batson & Venis, 1982).

The outcome variable is well-being. Psychologists have conceptualized well-being as satisfaction with life and a balance between positive and negative affect (Ryff & Keyes, 1995; Ryff & Singer, 2006). However, Frankl (1966, 1972) argued that the need to find meaning and purpose in life, even in the face of atrocities, is integral to well-being (Steger et al., 2006). Meaning in life refers to the self-perceived significance of one's existence and is a crucial component in developing and maintaining emotional, psychological, and sometimes physical well-being (Steger & Frazier, 2005). Maslow

(1943), on the other hand, conceptualized psychological health as resulting only when basic human needs are met. Aristotle (*Ethics*) distinguished between hedonic well-being, characterized by the pursuit of pleasure and temporary happiness, and eudaimonic well-being, an enduring quality of life resulting from virtuous activities in accordance with an individual's highest potential. McMahan and Estes (2010, 2011) used Aristotle's distinction between hedonic and eudaimonic well-being, which conceptualize different aspects of well-being, to examine associations with other measures of well-being. Physical health influences both religion (Allport, 1967) and well-being (Schat et al., 2005). Therefore, my measurement of well-being included an assessment of physical health.

I used a quantitative, quasi-experimental design that employed an online questionnaire. Religious motivation, defined as intrinsic spirituality, extrinsic religiosity, and quest, is the mediating variable that may change the direction, or magnitude, or both the direction and magnitude, of the relationship between religious identity and well-being. An online questionnaire was the optimal choice of data collection—obtaining a stratified, purposeful sample of the adherents of the world religions--because it could gather data from a diverse population faster and cheaper than face-to-face structured interviews.

Methodology

Population

The sample is a stratified, purposeful sample drawn from atheists, agnostics, spiritual-but-not-religious individuals, Christians, Buddhists, Hindus, Jews, Muslims, Confucians, Shinto, and Taoists. Qualtrics Labs, an online survey company like Survey Monkey and Google Survey, hosted the questionnaire. Qualtric Labs was used because they have partnerships with business and consumer-based groups, such as e-Rewards Market Research that could target a stratified purposeful sample of participants. Qualtrics Labs used their best efforts to obtain 40 participants in each category. Although the goal was 40 participants per religious philosophy, only 33 Shinto participants completed the survey while 83 agnostics completed the survey.

Sample Size

Path Analysis uses Multiple Linear Regressions with a Fixed Model, R^2 increase. A medium effect size, .05 probability of Type I error, and .80 probability of Type II error was a balance between detecting an effect that does not exist and not detecting an effect that does exist. For a medium effect of 0.15, alpha error probability of .05, statistical power (1-β error probability) of .80, and 22 religious subscales as predictors, a sample size of 163 participants was minimally necessary (Faul, Erdfelder, Lang, & Buchner, 2011). The sample size goal was 440 participants, approximately 40 participants for each of 11 religious and nonreligious categories. A sample of approximately 40 participants

per category was intended to ensure adequate representation in each category while allowing for elimination of cases of missing data and outliers.

Sampling and Sampling Procedures

To ensure adequate representation in each category of religion, I used a stratified, purposeful sample of approximately 40 participants per category of atheists, agnostics, spiritual-but-not-religious individuals, Christians, Buddhists, Hindus, Jews, Muslims, Confucians, Shinto, Taoists, others. These groups were chosen because they represent the majority of world's different religious philosophies (Brandon, 1970; Central Intelligence Agency, 2013; Pew Research Center, 2012; Sanneh, 2013). Allport (1963) hypothesized that there are intrinsic and extrinsic Christians, Jews, Muslims, and Hindus; I tested this hypothesis across the eleven most common religious philosophies. Allport (1963) also hypothesized that intrinsic and extrinsic motivations would have different effects on the health and well-being of believers; this hypothesis that religious motivation is a mediator of well-being was tested using eleven different categories of religion. My goal was an approximately equal number of females and males because gender influences religious motivation and the perception of well-being. The participants were volunteers recruited from a pool of members of business, industry, and consumer groups with access to Internet service.

Participants

The total number of participants that were included in the analyses to be reported was 763. The participants self-identified themselves by religious philosophy as atheist: 80 (10.5%), agnostic: 83 (10.9%), spiritual-but-not-religious: 57 (7.5%), Buddhist: 74 (9.7%), Christian: 78 (10.2%), Confucian: 58 (7.6%), Jewish: 73 (9.6%), Muslim: 61 (8.0%), Hindu: 62 (8.1%), Shinto: 33 (4.3%), Taoist: 48 (6.3%), and other: 56 (7.3%). Gender, which influences well-being (e.g., Ayyash-Abdo & Alamuddin, 2007), divided into 427 (56%) females and 336 (44%) males. Ethnicity, which correlates statistically significantly positive with religious philosophy (e.g., Abu-Rayya & Abu-Rayya, 2009), was widely represented, but the majority of participants were Asian (32.6%), Caucasian (26.6%), Chinese (19.4%), and Japanese (11.8%). Origin of birth, which predicts religious philosophy (Pew Research Center, 2012), was predominately Asian (55.2%) and American (33.4%) while all other regions of birth were in the single digits. Data on level of education was collected as a categorical variable with most participants having a Bachelor's degree (32.6%) or Master's degree (28.8%). Household income level was collected as a categorical variable with the highest categories consisting of the range between $100,000 to $500,000 (22.0%), $30,000 to $44,000 (13.9%), $45,000 to $59,000 (12.8%), $15,000 to $29,000 (10.9%), and $90,000 to $100,000 (10.9%). Most participants were working full-time (65.7%) with all other categories in the single digits. Most participants were married (58.3%) while a significant number were single (30.9%).

Most participants were part of a nuclear family (52.7%), the single head of household (19.9%), or members of an extended family (13.2%) with all other categories in the single digits. The percentage of religious participants per category resemble estimates by the Central Intelligence Agency (2013) and the Pew Forum on Religion & Public Life (Pew Research Center, 2012).

Procedures For Recruitment, Participation, and Data Collection

The commercial online research company Qualtrics Labs, in partnership with e-Rewards Market Research, conducted the online questionnaire. In forming a research panel for this questionnaire, Qualtrics Labs used a "by-invitation-only" recruitment method and best efforts to obtain 40 participants per category from among business leaders and regular consumers who have an established relationship with e-Rewards Market Research.

e-Rewards Market Research is a sample provider that provided a stratified, purposeful sample based on religion. e-Rewards had more than 6 million people enrolled into its opinion panels around the world, and therefore a more demographically diverse sample was obtained compared to other online survey companies. In building research panels, e-Rewards panel experts used a "by-invitation-only" methodology to recruit everyday consumers and business leaders from a diverse set of globally recognized consumer and business-focused brands such as Best Buy®, Blockbuster®, Borders®, Continental Airlines®, Delta Air Lines®, Hilton Hotels®, Macy's®, and Pizza Hut® (e-

Rewards Market Research, 2008). Panel managers used sophisticated filters to guard against duplication, fraudulent responses, and professional survey takers, and thus provided high quality data. Qualtrics Labs and e-Rewards Market Research personnel invited potential participants by email to earn e-Rewards Currency in the form of coupons, points, and discounts for completing a research survey. The use of extra credit and small monetary rewards to encourage participation is common in social science research (e.g., Keyes, Shmotkin, & Ryff, 2002; McMahan & Estes, 2010; Pavot, Diener, Colvin, & Sandvik, 1991; Steger & Frazier, 2005). The use of modest incentives increase response rates, is considered ethical, does not seem to produce any response bias, and is not considered coercive (e.g., Griffin et al., 2011; Seymour, 2012; Singer & Bossarte, 2006). The APA Ethics Code recognizes that some inducement for research participation is often necessary to ensure a diverse and sufficiently large sample (Fisher, 2009).

Inclusion criteria included self-identification with one of the designated religious or nonreligious philosophies, age 18 or older, the ability to read English, and had Internet access. Exclusion criteria included being a minor because of ethical concerns and the need for parental informed consent. To guard against professional survey takers, e-Rewards Market Research participants qualify for and participate in only five full surveys per year; therefore, e-Rewards Market Research panelists who have already completed five surveys were excluded. The introduction to the questionnaire informed participants that they were always free to opt-out of this questionnaire unconditionally.

Eligibility Criteria for Participants

Eligibility criteria for this study required participants to be members of businesses, industries, or consumer groups who were 18 years of age or older at the time of the survey and who volunteered to participate in online questionnaires. Participants were invited to participate from a pool of 6 million eligible members by invitation from e-Rewards Market Research based on the criteria of religious philosophy. e-Rewards Market Research panel managers screened participants for eligibility criteria, and participants earned e-Rewards Currency from e-Rewards Market Research in the form of coupons and merchandise discounts for completing the questionnaire. In the introduction to the survey, I informed participants that the results of the study would be available in the Walden University Library database of doctoral dissertations.

Data Collection and Analysis

The data for this research project was collected online at a website maintained by Qualtrics Labs, Panels Management & Sales, which was routinely used by Walden University for student satisfaction surveys. Qualtrics Labs panel managers selected atheists, agnostics, spiritual-but-not-religious individuals, Christians, Buddhists, Hindus, Jews, Muslims, Confucians, Shinto, and Taoists, who were invited to log onto the Qualtrics Labs website and the researcher's questionnaire. Participants viewed a webpage containing a brief description of the questionnaire, including its aim, author, and use. The instructions contained an informed consent form that was agreed to by clicking on an

"*Accept*" button. After indicating their informed consent and acknowledging the right to opt-out unconditionally at any time, the participants completed a series of six questionnaires related to well-being, eight questionnaires related to religion, 17 items concerning demographics, and four optional questions concerning the participant's perception of prima facie validity of my questionnaire. The demographic information requested age, gender, mother's religious affiliation, father's religious affiliation, participant's religious identity, ethnicity, birthplace, type of government, income, education, employment status, marital status, and family structure. The questionnaire took approximately 60 minutes to complete. After completing the questionnaire, participants were debriefed and thanked for their participation.

Instrumentation and Operationalization of Constructs

Religious motivation and well-being are latent or unobserved variables that are conceptualized and operationally defined differently by different researchers. The American Educational Research Association, American Psychological Association, and National Council on Measurement in Education (AERA, APA, & NCME, 2004) argued that several different measures of a construct could increase validity and reliability while increasing an understanding of the construct's meaning. The investigation of one scale should include several other standard scales (Gorsuch, 1984). Allport and Ross (1967) conceptualized and operationally defined intrinsic and extrinsic religious motivation using the Religious Orientation Scales (ROS), but the ROS has theoretical and

psychometric problems (e.g., Burris, 1994; Donahue, 1985; Genia, 1993; Gorsuch & McPherson, 1989; Kirkpatrick & Hood, 1990). The Quest scale also has conceptual and psychometric difficulties (Cosby, 2013; Donahue, 1985). Therefore, seven other measures of religious variables were included to help operationally define and measure religious motivation. Genia (1997) argued that the Spiritual Experience Index –Revised (SEI-R) is a universal scale of religious motivation that transcends Christianity, and therefore the SEI-R was included as a measure of potential religious motivation. Belief in an afterlife and beliefs about God are integral aspects of most religions (Brandon, 1970), and therefore the Belief in Afterlife scale (Oscarchuk & Tatz, 1973) and the Beliefs about God scale (Leondari & Gialamas, 2009) were included as potential determinants of religious motivation and mediators between religion and well-being (Steger et al, 2010). Struggling with one's faith is associated with the quest motivation (Batson, 1976; Batson & Gray, 1981; Batson & Ventis, 1982; Genia, 1996) and a decline in well-being (Galek et al., 2008; Hunsberger et al., 1993; Krause, 2006; Krause & Wulff, 2004), and therefore the Spiritual Struggles Measure (Rosmarin, Pargament, & Flannelly, 2009) was included in this study as a potential variable in religious motivation. I included the Behavior and Faith Scale (Nielsen, 1995) and the Religious Background and Behaviors questionnaire (Connors et al., 1996) to increase the scope, validity, and reliability of this study. I also included the Militant Extremist Mind-Set questionnaire (Stankov, Saucier, & Knežević,

2010) to examine the propensity for extremism and violence across religious philosophies.

Well-being is a latent variable that has been conceptualized as having numerous components. Aristotle (*Ethics*) distinguished between eudaimonic and hedonic well-being, and therefore the Beliefs about Well-Being Scale (BWBS; McMahan & Estes, 2010) were included in this study to capture the two different aspects of well-being. In the early decades of research on well-being, researchers identified life satisfaction, positive affect, and negative affect as key components of wellness; and therefore the Satisfaction with Life Scale (SWLS; Diener et al., 1985) and the Positive and Negative Affect Scale (PANAS; Watson et al., 1988) were included in this study to measure key aspects of well-being. Maslow (1943) argued that psychological health and well-being is possible only when basic human needs are satisfied, therefore, the Needs Satisfaction Inventory (NSI; Lester, 1990) was used as an outcome measure of well-being. By contrast, Frankl (1966, 1972) argued that finding meaning in life was essential for psychological well-being, and therefore the Meaning in Life Questionnaire (MLQ; Steger et al., 2006) was included in this study to capture another key aspect of well-being. Moreover, physical health may be a crucial component of the perception of well-being, and therefore the Physical Health Questionnaire (PHQ; Schat et al., 2005) was used as the sixth and final measure of well-being.

Intrinsic Spirituality, Extrinsic Religiosity, and Quest

The Religious Orientation Scale (ROS, Allport & Ross, 1967) was published to test the mediating effects of religious motivation. Allport (1963) had argued that there are intrinsically and extrinsically motivated Jews, Muslims, and Hindus before he developed and validated the ROS; therefore, the ROS is an appropriate instrument for testing the mediating effects of religion motivation.

Intrinsic spirituality was conceptualized as a religious motivation in which religion is internalized as the master motive of life and lived as an end in itself (Allport, 1963; Allport & Ross, 1967). Extrinsic religiosity was conceptualized as religious motivation in which religion is used as a means to something else, such as security, comfort, status, and social support (Allport & Ross, 1967; Donahue, 1985a).

Building on previous literature (Allport & Ross, 1967; Batson, 1976; Batson & Gray, 1981; Batson et al., 1983; Batson & Ventis, 1982), Batson and Schoenrade (1991) published the 12-item Quest scale. The ROS (Allport & Ross, 1967) and the Quest Scale (Batson & Schoenrade, 1991) are the dominate scales for measuring religious motivation and therefore they are appropriate for studying the effects of religious motivation on well-being. Batson (personal communication, September 11, 2011) granted permission to use the Religious Life Inventory (Darby & Batson, 1973), which includes both the ROS and Quest scales.

Batson and colleagues conceptualized religious quest as an open-minded search for answers to existential questions raised by the contradictions and tragedies of life. The Quest scale is viewed as a third dimension of religious motivation independent of extrinsic and intrinsic motivation. Intrinsic spirituality (end), extrinsic religiosity (means), and quest (existential seeking) are three independent, orthogonally defined religious orientations that are not interchangeable. Whereas extrinsic religion is a means to self-serving ends and intrinsic religion is an end in itself, quest is seeking answers to existential questions concerning meaning of life, death, and the vicissitudes of life that resist clear-cut dogmatic answers (Batson & Schoenrade, 1991).

The ROS (Allport & Ross, 1967) and the Quest scale (Batson & Schoenrade, 1991) are self-report questionnaires used to assess religious motivation. Thirty-two items measure the three motivational dimensions of extrinsic religiosity, intrinsic spirituality, and existential searching. Participants indicated religious beliefs and practices on a 9-point Likert-type scale ranging from 1 (*strongly disagree*) to 9 (*strongly agree*). Mean scores were calculated for extrinsic religiosity, intrinsic spirituality, and quest. The mean scores represent the degree of emphasis on different approaches to religion in which each approach may inhibit or enhance well-being (Batson & Schoenrade, 1991b). An example of a Quest item is “My life experiences have led me to rethink my religious convictions” (Batson & Schoenrade, 1991a, p. 436). Several questions were be amended by adding synagogue, mosque, shrine, and temple to go with church; or adding rabbi, imām,

ayatollah, rishi, vanaprasthas, sannyasins, Bodhisattvas, Samma-sambuddhas, hsien, shêng jên, and chên jên to go with priest and minister; and adding Torah, Koran, al-Hadīth, Veda, Tipitaka, I Ching, and the Tao Tê Ching to go with the Gospel. This broadened the applicability of the ROS and Quest scales to member of the world religions, increased prima facie validity to participants, reduced response item ambiguity for non-Christians, and reduced the chances of missing data, thus maintaining the sample size and power.

Allport and Ross (1967) tested the ROS on a sample of 309 active members of the Catholic and Protestant faiths using factor analysis and correlations. The intrinsic-extrinsic paradigm of the ROS has been tested on Christians (Baker & Gorsuch, 1982; Batson, 1976; Batson & Ventis, 1982; Donahue, 1985a), Christians and Jews (Genia, 1991, 1993), Muslims (Momtaz, Ibrahim, Hamid, & Yahaya, 2010), and Japanese participants (Lavrič & Flere, 2008). Kuder-Richardson 20 (KR-20) reliabilities ranged from .67 to .76 for the intrinsic-extrinsic scales (Batson, 1976; Kahoe, 1974). Construct validity was determined by correlations with other measures of religion. The intrinsic scale had an average correlation of .76 with religious commitment and other measures of religion (Donahue, 1985a) but with little else (Donahue, 1985b). Extrinsic religiosity correlated with nonreligious variables that give religion a bad name (Donahue, 1985b), such as prejudice (Allport & Ross, 1967), anxiety (Baker & Gorsuch, 1982), and fear of death (Allport & Ross, 1967; Donahue, 1985b). The extrinsic and intrinsic scales have

moderate negative correlations, ranging from -.30 to -.40 (Donahue, 1985b), suggesting the two variables measure different but related constructs.

For a sample of 214 Christian undergraduate introductory psychology students, internal-consistency reliability (Cronbach's alpha) was .81 for the 12-item Quest scale (Batson & Schoenrade, 1991a). Across a larger sample of 424 undergraduate students, which included the initial sample and a replication sample, the 12-item Quest scale had an internal-consistency reliability of .78. Item analysis, using a principal-axis factor analysis with orthogonal (varimax) rotation, produced an interpretable three-factor solution that accounted for 55% of the variance.

The Spiritual Experience Index –Revised

Building on previous research (Allport, 1963; Allport & Ross, 1967; Genia, 1991, 1993, 1996), Genia (1997) published the Spiritual Experience Index –Revised (SEI-R). The SEI-R (Genia, 1997) was developed to measure a mature faith not conceptualized as a personal relationship with an ultimate being, and therefore, as a measure of diverse religious affiliations, the SEI-R was appropriate to this study of the world religions. Genia (personal communication, August 21, 2011) gave permission to use the scale.

The SEI-R consists of 23 items that measure spirituality on two dimensions: Spiritual Support and Spiritual Openness. Genia (1997) conceptualized mature faith as adaptive spiritual functioning that transcends allegiance to a particular faith or a personal relationship with an ultimate being. Participants indicated the strength of religious beliefs

on a Likert-type scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Four items on the Spiritual Openness subscale (items 1, 3, 7, and 10) were reverse scored. The means for Spiritual Support, Spiritual Openness, and the composite Spiritual Index were calculated. A high mean score on the SO scale reflects a faith that is mature, open to other views, and inclusive of other faiths. A high mean score on the SS scale reflects a faith that provides a strong foundation for the personality of the believer. An example is "I believe there is only one true faith" (Genia, 1997, Appendix), which was reverse coded. Content validity was determined by principal axis factor analysis using varimax rotation that produced two factors, Spiritual Support (SS) and Spiritual Openness (SO), which accounted for 50% of the variance.

Construct validity was determined by correlations with other religious variables and personality measures (Genia, 1991, 1997). Reliability for the full scale using Cronbach's alpha was .89 while reliability for the subscales SS and SO was .95 and .79, respectively.

The Religious Background and Behaviors Questionnaire

The Religious Background and Behaviors (RBB; Connors, Tonigan, & Miller, 1996) was developed as a reliable measure of overt religious behavior negatively associated with substance abuse. The two-factor component (God Consciousness and Formal Practices) of the RBB is a more parsimonious conceptualization of religion than the intrinsic-extrinsic paradigm of Allport and Ross (1967). The RBB has more sound

psychometric properties and a less exclusively Christian focus than most other measures of religion, therefore the RBB was appropriate for this study. Permission was granted for the use of the RBB (Connors, personal communication, August 18, 2012).

Connors et al. (1996, p. 90) conceptualized religion as "a multidemensional construct that can include behavioral, cognitive, existential, spiritual, and social components". The RBB questionnaire is a brief self-report 13-item measure of religious beliefs and behaviors for use in behavior change, such as recovery from addiction and substance abuse. The first item is categorical; participants indicate the ideology that best describes them: atheist, agnostic, unsure, spiritual, or actively religious. On the next six items, participants provide ordinal responses on an 8-point Likert scale from 1 (*never*) to 8 (*more than once per day*) indicating the frequency during the past year of engaging in religious behaviors, such as thinking about God, praying, meditating, attending liturgical services, reading scared texts, or having had a direct experience with God. The last six items assess one's lifetime religious background and changes in religious beliefs and behaviors on a 3-point Likert scale consisting of 1 (*never*), 2 (*yes, in the past but not now*), or 3 (*yes, and I still do*). High scale scores indicate stronger belief in God and more frequent religious activity. An example of an item from the God Consciousness subscale is "For the past year, how often have you … thought about God" (Connors et al., 1996, p. 96).

Internal item consistency (Cronbach's alpha) for the initial psychometric testing (Connors et al., 1996) was satisfactory for the two RBB components—God Consciousness (.76) and Formal Practices (.81)—as well as for the total RBB scale (.86). High test-retest correlations for God Consciousness (.94), Formal Practices (.96), and the total RBB scale (.97) indicated strong replicability. Correlations between the two components were high enough (.60) to suggest that the two components measure different constructs but not so high as to indicate they are measuring the same construct.

Convergent and divergent validity of the two RBB components and total RBB scale were tested using Pearson correlations with selected measures, such as Beck Depression Inventory (Beck, Ward, Mendelson, Mock, & Erbaugh, 1961), Purpose in Life (Crumbaugh & Maholick, 1976, as cited in Connors et al., 1996), *Structured Clinical Interview for DSM-III-R* (Spitzer & Williams, 1985, as cited in Connors et al., 1996), attendance at AA meetings, drinks per day, percentage of abstinent days, and other variables. The total RBB and component scales were positively correlated with religious attendance, AA attendance, spiritual awakening in AA, goal seeking, structured interviews, and abstinence. The total RBB and component scales negatively correlated with heavy drinking.

Zemore (2007) used the RRB with a sample of 733 adults diagnosed with chemical dependency and found, for *the past year* timeline, internal item consistency alpha was .81 at baseline and .77 at 12 months. In a doctoral dissertation, Kaiserman

(2010) used the RBB with a sample of 165 Jewish participants, but did not provide data on validity or reliability for this sample. Tyce (2009) used the RBB in a doctoral study with a sample of 115 adults court mandated to participate in treatment for alcoholism, but did not provide data on validity or reliability. Armento, McNulty, and Hopko (2012) used the RBB in supportive therapy sessions for treatment of depression and found internal item consistency using Cronbach's alpha was high (α = .95) in this study.

To make the RBB more universal and applicable to members of the world religions, I added "Allah, Brahmā, Shiva, Vishnu, Krishna, Buddha, Tao, or a Higher Power" to the word "God" in response items.

Behavioral and Faith Scale

Poll (1967, Winter; 1972, Spring; 1983, Summer) conceptualized religious orientation as an Iron Rod or Compass. An Iron Rod orientation is one in which the believer is confident that the answer to every existential question can be found in the Judeo-Christian scriptures, the Book of Mormon, and faith in God. The Iron Rod believer holds steadfast to the word of God as if it were an iron rod by which God will pull the believer up to heaven. The Iron Rod believer (Iron Rodder) uses religion as a wrought iron handrail to the kingdom of God. The Compass orientation is characterized by believers who believe that enough answers to important questions can be found in the Scriptures to allow a meaningful and purposeful life without providing answers to all questions concerning life and death. The Compass orientated believer (Liahona) uses

religion as a compass that guides him or her on the path to heaven. Iron Rodders view Liahonas as having imperfect faith and Liahonas view Iron Rodders as closed-minded (Poll, 1967, Winter). The Iron Rod and Compass symbolism was derived from Mormon literature.

To test Poll's conceptualization of religious motivation, Nielsen (1995) developed the Behavioral and Faith Scale. The Behavioral and Faith Scale (Nielsen, 1995) has greater reliability and validity than the ROS (Allport & Ross, 1967) and Quest scale (Batson & Ventis, 1992, Batson & Schoenrade 1991b); therefore the Behavior and Faith Scale was appropriate for this study of religious motivation and well-being. Permission was granted (Nielsen, personal communication, September 9, 2011) to use the Behavior and Faith Scale in my dissertation.

The Behavioral and Faith Scale (Nielsen, 1995) used 23 response items to operationally define and measure religious beliefs and behaviors associated with traditional faith and existential questions. Participants were asked to indicate their degree of interest in religion on a scale ranging from 1 (*not at all*) to 9 (*extremely*) and their frequency of participation in religious activities (*never, yearly, monthly, weekly, daily, more than once a day*). On the protocol, response items are grouped in four categories: Personal Religious Behavior (.88), Church Behavior (.88), Science Behavior (.89), and Faith (.95). Religious motivation was assessed by nine items on faith grouped under the Iron Rod (intrinsic) orientation (coefficient alpha = .87) and five items measured the

Compass (quest) orientation (coefficient alpha = .70). Two items in the Faith category (#4 and #10) were reverse-coded to minimize acquiescence. Mean scale scores were calculated for the scales with the highest score indicating either greater faith or more doubts and existential questioning of faith and doctrine. An example of an item from the Science Behavior subscale is "I read about science" (Nielsen, 1995, p. 494).

In Study 1, using a convenient sample of 76 adult Latter-Day Saints, internal consistency (Cronbach's alpha) was .82 for the Iron Rod (intrinsic) scale and .72 for the Compass (quest) scale (Nielsen, 1991). Construct validity was demonstrated by a two-factor solution: the Iron Rod orientation had a positive, significant correlation with intrinsic spirituality (Allport & Ross, 1967) and the Compass orientation had a significant positive correlation with Baton and Ventis's (1982) interactional scale.

Construct validity was demonstrated using correlations with self-reported personal, religious, and science-related behaviors. The Iron Rod (intrinsic) orientation correlated positively and significantly with faith, personal religious behavior, church membership, and church attendance. The Compass (quest) orientation correlated positively and significantly with an interest in science but correlated negatively and significantly with faith and personal religious behavior.

Using a sample of 154 undergraduate students, Shaffer and Hastings (2007) found internal consistency of .96. Validity was supported by significant positive correlations

between the Behavior and Faith Scale, right-wing authoritarianism, and religious fundamentalism.

To make the Behavioral and Faith Scale (Nielsen, 1995) more universal and applicable to more members of the world religions, I added the words "Allah, Brahmā, Shiva, Vishnu, Krishna, Buddha, Tao, or a Higher Power" to the phrase "faith in God". The instrument was designed for a Christian population, and therefore I added "synagogue, mosque, pagoda, stupa, honden, haiden, tori, or other spiritual place" to the word "church" in two response items.

Militant Extremist Mind-Set

The Militant Extremist Mind-Set questionnaire (MEM, Stankov, Saucier, & Knežević, 2010) was developed because various domains in psychology, especially the psychology of religion, have failed to include essential recurrent features found in militantism, authoritarianism, and dogmatism. The Josephan faiths of Judaism, Christianity, and Islam have militarized religion by ascribing to God the attributes of intolerance, vengeance, and war likeness (Saucier, Akers, Shen-Miller, Knežević, & Stankov, 2009). By contrast, Taoists, Jainists, Sufists, Buddhists, and Quakers have adopted a quietist philosophy of passivity and acceptance. Violence, whether secular or religious, violates human rights by causing fear, death, destruction, instability, and financial loss; and therefore detecting and predicting which groups are most likely to be violence-prone has ethical and psychological implications. To exclude a measure of

militant extremist thinking in a study of the relationship between religiosity, religious motivation, and well-being would be disingenuous and may reflect a pro-religious bias. Stankov (personal communication, September 17, 2011) gave permission to use of the MEM in this study.

The militant extremist mind-set questionnaire (Stankov, Saucier et al., 2010) assesses two key features of militant extremism: extremism, the advocacy of measures beyond the norm, and militancy, the willingness to use violence. Militant extremism is conceptualized as a way of thinking that advocates extreme measures, including violence, to effect positive social change for the participant and the participant's in-group. Responses are measured on a Likert-like scale ranging from 1 (*strongly and completely disagree)* to 5 (*strongly and completely agree*). The three factor-derived dimensions that elicit violent militant extremism are beliefs that (a) the participant's in-group is suffering because the world is unjust and morally corrupt (Vile World), (b) that God or a higher power advocates the use of violence (Divine Power), and (c) violence is morally and divinely justified for positive social change (Proviolence). Three items in the Proviolence subscale and three items in the Divine Power subscale were reverse-coded to lessen the effects of acquiescence. After the six response items were recoded, mean scores were calculated for the three subscales. A high score on Vile World scale indicates that the participant strongly believes an immoral enemy is obstructing personal and social goals. A high score on the Proviolence scale indicates a believer is prepared to support,

advocate, or even use violence to achieve personal and social goals. A high score on the Divine Power scale describes a person who invokes the name of God to justify death and destruction and to absolve the militant extremist of responsibility for the consequences of violence (Stankov, Higgins et al., 2010). An item example from the Militant Extremist Mind-Set is "Martyrdom is an act of a true believer in the cause, not an act of terrorism" (Stankov, Saucier, & Knežević, 2010, p. 74).

Using a sample of 215 American undergraduates and 297 advanced high-school students in Serbia, Saucier and colleagues (2009) found reasonably high internal consistency for the MEM: .80 for the American sample and .74 for the Serbian sample. Concurrent validity was determined by correlations with similar measures of militant-extremist thinking and ranged from .50 to .55. Construct validity was supported by correlations with measures of authoritarianism, dogmatism, and fundamentalism that were high enough to suggest a related-but-different construct (Saucier et al., 2009).

In a pilot study, Stankov, Higgins, Saucier, and Knežević (2010) used Serbian high school students, American college students, and entry-level Australian job applicants and found similar results on a modified version of the MEM scale. The psychometric properties of the MEM were further tested using a sample of 2,424 college students located in nine countries of similar socioeconomic status representing five world regions and three major religions (Stankov et al., 2010). Reliability estimates using

Cronbach's coefficient alpha were satisfactory for all three subscales: Proviolence (.80), Vile World (.79), and Divine Power (.74).

Belief in Afterlife

Oscarchuk and Tatz (1973) developed the Belief in Afterlife (BA) scale to assess the effects of fear of death on belief in afterlife. Because a belief in afterlife may mediate the relationship between fear of death and well-being, the BA scale was appropriate for this study of the effects of religious motivation on religion and well-being. Tatz (personal communication, September 13, 2012) gave permission to use the BA scale in this study.

The BA (Oscarchuk & Tatz, 1973) is a 10-item assessment used to measure participants' belief or disbelief in an afterlife. Response items such as believing that the deceased still live, believing that there is supporting evidence for the existence of an afterlife, and believing that we will be united with those deceased whom we knew and loved operationally defined belief in an afterlife. Disbelief in an afterlife was operationally defined by the belief that earthly existence is the only existence we have and that death signals the end of life. Items in the BA are rated on a 7-point scale of strength of belief or disbelief ranging from 1 (*absolutely untrue*) to 7 (*absolutely true*). Items denying an afterlife (items 1, 3, 4, 5, 7, 8, and 10) are reverse-scored so that a higher score denotes a stronger belief in an afterlife. An example of a BA item from Form A is "In the premature death of someone close, some comfort may be found in

knowing that in some way the deceased is still existing" (Oscarchuk & Tatz, 1973, p. 257).

Oscarchuk and Tatz (1973) administered the BA scale to 311 introductory college students, including Catholics, Protestants, Jews, atheists, and agnostics, but did not report reliability or validity data. Berman and Hays (1973) used the BA scale with a sample of 300 college-aged participants, but did not report validity or reliability data for their study. Aday (1984) used the BA scale with a sample of 181 introductory sociology students, but reported no reliability or validity data. Falkenhain and Handal (2003) used the BA scale with a sample of 71 elderly Protestants, Roman Catholics, Jews, and atheists, but reported no reliability or validity data for the BA. Cohen and Hall (2009) used the BA scale with a sample of Protestants, Catholics, and Jews and found internal consistency alphas for the BA scale was .86 for Catholics, .83 for Jews, and .89 for Protestants. Cohen and Hall (2009) did not report validity data. Steger et al. (2010) used the BA with a sample of 454 self-identified Catholic, Evangelical, and non-Evangelical Protestant undergraduate psychology students, but did not report reliability or validity data.

Beliefs about God

Leondari and Gialamas (2009) published the Beliefs about God scale, a single item referring to three common concepts of God, to investigate the relationship between religiosity and psychological well-being. Beliefs about God are associated with different religious orientations. The concept of God may influence psychological and physical

well-being (Burris & Sani, 2014), therefore, a measure of concepts about God was appropriate to the current study of religion and well-being. Leondari (personal communication, January 17, 2012) gave permission to use the single-item Beliefs about God in the current study.

Beliefs about God was operationally defined by one of three response items: (1) "I don't believe in God;" (2) "God is an abstract or impersonal force in the universe;" or (3) "God is a living, personal being who is interested and involved in human lives and affairs" (Leondari & Gialamas, 2009, p. 244). Based on their responses, participants were assigned to one of three groups: those who believed in a personal God, those who believed in an impersonal force, and nonbelievers.

The Beliefs about God instrument was used to assess personal belief in God in a sample of 363 Greek Orthodox Christian undergraduates and teachers. Leondari and Gialamas (2009) did not report validity or reliability data.

Spiritual Struggles Measure

Rosmarin, Pargament, and Flannelly (2009) developed the Spiritual Struggles Measure (SSM) to assess the effects of spiritual struggles of Jews on physical and mental health. Spiritual struggles involving religious beliefs and practices was a significant predictor of poor mental and physical health among Hindus (Tarakeshwar, Pargament, & Mahoney, 2003), Muslims (Abu-Raiya, Pargament, Mahoney, & Stein, 2008), and Jews (Rosmarin et al., 2009), and therefore the SSM was appropriate for this study of the

relationship between religion and well-being. Religious struggles may be a significant mediator in the relationship between religion and well-being. Rosmarin (personal communication, January 14, 2012) gave permission to use the SSM in this study.

Spiritual struggles was operationally defined as emotional tension in a worshiper's relationship with God (e.g., anger toward God, arguing with God, feeling punished by God). Spiritual struggles is measured by five items: (1) "I get mad at God;" (2) "I argue with God;" (3) "I question whether God can really do anything;" (4) "I wonder if God cares about me;" and (5) "I question my religious beliefs, faith, and practices". The responses are anchored on a 5-point Likert-like scale: (1) *never*, (2) *hardly ever*, (3) *sometimes*, (4) *most of the time*, and (5) *always*. Spiritual struggles scale scores were calculated by adding response items with a higher score reflecting increased spiritual struggles. The 5-item scale demonstrated satisfactory internal consistency (α = .71). Construct validity was determined by principal components factor analysis with a single factor accounting for 35.45% of the variance.

Because atheists, agnostics, Buddhists, Confucians, and Taoists were included in this questionnaire, I added the response option "0 – *Not applicable*" to the response anchors.

Beliefs about Well-Being Scale

The Beliefs about Well-Being Scale (BWBS; McMahan & Estes, 2010) was developed to measure the layperson's conceptualization of well-being. Aristotle (*Ethics*)

distinguished between eudaimonic well-being, derived from experiencing meaningful events in life, and hedonic well-being, derived from experiencing pleasure and avoiding pain. The two different concepts of well-being have important implications for well-being, and therefore the BWBS was appropriate to this study of religious motivation and well-being (McMahan & Estes, 2010). McMahan (personal communication, October 6, 2011) gave permission to use the BWBS.

The BWBS (McMahan & Estes, 2010) was developed to measure laypersons' conceptualization and pursuit of well-being. Hedonic well-being was operationally defined as consisting of life satisfaction, the experience of pleasure, and the absence of unpleasant experiences. Eudaimonic well-being was operationally defined as living a purposeful life and realizing the potentialities of life. Participants were asked to rate on a Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) the degree to which their concept of well-being included (a) the experience of pleasure, (b) the avoidance of negative experience, (c) self-development, and (d) contributing to society. A higher-order hedonic scale (BWBS-HED) was calculated by adding items 1, 2, 4, 7, 9, 12, 14, and 16. A higher-order eudaimonic scale (BWBS-EUD) was calculated by adding items 3, 5, 6, 8, 10, 11, 13, and 15. A higher score on the BWBS-HED or BWBS-EUD represents the prevalence of that concept of well-being (McMahan & Estes, 2010; McMahan & Estes, 2011; McMahan & Renken, 2011). An example item is "Living in ways that benefit others" (McMahan & Estes, 2010, Appendix).

The psychometric properties of the BWBS (McMahan & Estes, 2010) were assessed using a sample of 406 undergraduates. Test-retest reliability for the four subscales was assessed using correlations between Time 1 and Time 2 (Experience of Pleasure: .55, Avoidance of Negative Experience: .61, Self-Development; .54, and Contributing to Others: .65) indicating adequate stability across time. Internal consistency was measured using Cohen's alpha and were acceptable for both the higher-order BWBS-Hedonic (α = .75) and BWBS-Eudemonic (α = .75) scales. Convergent and discriminant validity was demonstrated by subscales correlating negatively or positively with the Intensity and Time Affect Scale (ITAS, Diener, Smith, & Fujita, 1995), Satisfaction with Life Scale (SWLS; Diener et al., 1985), Positive and Negative Affective Schedule (PANAS; Watson et al., 1988), and Meaning in Life Questionnaire-Presence (MLQ-P; Steger et al., 2006).

McMahan and Estes (2011) further assessed the psychometric properties of the BWBS in two subsequent studies. Study 1 used 115 undergraduate students to assess convergent and divergent validity. The BWBS-EUD scale correlated with the SWLS and the Subjective Vitality Scale (SVS, Ryan & Fredrick, 1997) while BWBS-EUD correlated with the SWLS, SVS, and MLQ-P, suggesting only eudaimonic well-being is associated with meaningful experiences in life.

Study 2 used a more diverse group of 240 participants recruited from nonstudent populations. The BWBS-HED correlated positively, significantly with the SVS, but not

the SWLS or MLQ-P. The BWBS-EUD correlated positively with the SVS, SWLS, and the MLQ-P. Regression analysis indicted that the BWBS-HED scale failed to predict significantly subjective well-being, vitality, and the presence of meaning when controlling for BWBS-EUD. However, BWBS-EUD did significantly predict subjective well-being, vitality, and the presence of meaning when controlling for BWBS-HED.

McMahan and Renken (2011) used the BWBS with a sample of 275 adult volunteers. The four subscales all demonstrated satisfactory internal consistency coefficients: Experience of Pleasure (.83), Avoidance of Negative (.85), Self-Development (.74), and Contribution to Others (.83).

Satisfaction with Life Scale

The Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) was developed to assess a person's overall evaluation of their life. The early decades of research on subjective well-being identified life satisfaction, positive affect, and negative affect as key components of wellness, and therefore the SWLS was appropriate to this study of religion and well-being. The SWLS is one of the most commonly used measures in well-being research (e.g., Arrindell et al. 1999; Diener et al. 1999; Shevlin et al., 1998), and therefore the SWLS was appropriate for this study of religion and well-being. The SWLS is in the public domain and permission to use it is not needed (Pavot & Diener, 1993, Appendix).

Life satisfaction is operationally defined as a subjective, cognitive judgment of the participant's overall life based on one's own criteria. The five items were rated in terms of agreement or disagreement on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Total scores were obtained by adding item responses. Higher scores reflect more satisfaction with life. The possible range of scores was from five to thirty-five with a score of 20 representing the neutral middle point where one is about equally satisfied and dissatisfied. An example of an item is "In most ways my life is close to my ideal" (Pavot & Diener, 1993, Appendix).

In the initial phase of scale development, Study 1, a sample of 176 introductory psychology students completed a 48 item self-report related to satisfaction with one's life and a battery of nine additional measures of subjective well-being. Principal axis factor analysis, based on an inspection of the scree plot, produced a single factor consisting of five items accounting for 66% of the variance. In Study 2, 163 undergraduate introductory psychology students completed the SWLS and a battery of the same nine subjective well-being measures used in Study 1 plus a questionnaire of temperaments, a questionnaire of self-esteem, a measure of neuroticism, and a symptom checklist, with an additional measure of social desirability to ensure the SWLS did not evoke a social desirability response. Seventy-six students who completed both Study 1 and Study 2 established reliability with a two-month test-retest correlation of .82. Cronbach's coefficient alpha for internal item consistency was .87. Positive correlations between the

SWLS and other measures of subjective well-beings established convergent validity. A negative correlation between the SWLS and negative affect provided support for divergent validity. In Study 3, a sample of 53 elderly persons completed the SWLS, a life satisfaction index (LSI), and a structured interview concerned with the extent to which they remained active and orientated toward self-directed learning. Correlations between the LSI and the SWLS and between the LSI and interviewer composite scores supported criterion validity for the SWLS.

Pavot, Diener, Colvin, and Sandvik (1991) tested the reliability and validity of the SWLS with two studies. Study 1 used 39 older members of the Champaign-Urbana community. Internal consistency for the five items averaged .83. Construct validity was established with principle components factor analysis and inspection of the spree plot. Evidence for convergent validity of the SWLS emerged from high inter-correlations with two other measures of life satisfaction and the three instruments appeared to converge on the construct of life satisfaction. In Study 2, Pavot et al. (1991) used a sample of 136 University of Illinois students. Test-retest reliability averaged .84 for both a 2-week and a 1-month interval.

Positive and Negative Affect Scale

After presenting evidence that affect has two factors (Watson & Tellegen, 1985), Watson, Clark, and Tellegen (1988) developed the Positive and Negative Affect Scale (PANAS) as a psychometrically sound measure of positive and negative affect. The

research on subjective well-being has identified positive affect, negative affect, and life satisfaction as key components of wellness (Diener et al., 1985; Ryff & Keyes, 1995), and therefore the PANAS was appropriate to this study of religion and well-being. Affect plays a significant role in diagnosing mood and psychiatric disorders (Morrison, 1995), and may be both a cause and effect of cognitive-emotive disorders; therefore, the PANAS was appropriate to this study of religion and well-being. The American Psychological Association granted permission to use the PANAS in my study.

The PANAS uses a list of 20 adjectives often used to describe different emotional states. The authors operationally defined positive affect as being enthusiastic, interested, determined, excited, inspired, alert, active, strong, proud, or attentive, and these are the exact adjectives that Watson et al. (1988) used to measure positive affect. A negative affect was operationally defined as being distressed, upset, guilty, scared, hostile, irritable, ashamed, nervous, jittery, or afraid, and again these are the exact adjectives that Watson et al. (1988) used to measure negative affect. On the paper and pencil protocol, the positive and negative affect descriptors were alternated in two columns and participants were asked to rate the extent to which they had experienced the 10 positive and 10 negative feelings during the researcher-specified timeframe. The scale ranged from 1 (*very slightly or not at all*) to 5 (*very much*). The participant wrote the appropriate number on a line in front of the descriptor that best described her or his experience. Scale scores were calculated by adding responses to PA items and NA items separately.

Because well-being was conceptualized as a balanced affect, scale scores should be balanced or skewed slightly in the direction of PA. An example of negative affect is being upset.

Watson and colleagues (1988) administered the PANAS at different times to several groups of Southern Methodist University (SMU) undergraduate psychology students, SMU employees, adults not affiliated with SMU, and a clinical population. The PANAS administrator designated a specific time interval for participants to reflect upon when completing the assessment: the *moment* (that is, right now), *today*, *past few days*, *past few weeks*, the past *year*, or in *general*. Internal consistency reliability, based on Cronbach's coefficient alphas, ranged from .86 to .90 for the Positive Affect (PA) scale and from .84 to .87 for the Negative Affect (NA) scale. Low negative inter-correlations between the PA and NA, ranging from -.12 to -.23, supported discriminant validity. Test-retest reliability using a sample of 101 SMU graduates over 8-week intervals indicated stability at each timeframe. Scale validity was assessed using principal factor analysis with squared multiple correlations in the diagonal that produced two factors. Item validity was demonstrated using principal factor analysis with squared multiple correlations as the initial communality estimates in which two factors accounted for virtually all of the common variance. External validity was demonstrated by correlations with published measures of depression, distress, dysfunction, and psychopathology.

Steger and colleagues (2008) used the PANAS with a sample of 65 undergraduate psychology students, but did not report validity or reliability data. Abu-Rayya and Abu-Rayya (2009) used the PANAS with a sample of Muslim and Christian Palestinians in Israel. The PA subscale had a Cronbach alpha reliability of .71 for Muslims and .73 for Christians. The NA subscale had a coefficient of .77 for Muslims and .75 for Christians.

McMahan and Estes (2010) used the PANAS with a sample of 300 undergraduate students and found that internal consistency was .91 for the PA subscale and .80 for the NA subscale. Convergent and discriminant validity were supported.

Needs Satisfaction Inventory

Lester (1990) developed the Needs Satisfaction Inventory (NSI) to measure the degree to which Maslow's classification of human needs were satisfied in the general population. Research on the relationship between religious motivation, basic human needs, and well-being is a gap in the literature (e.g., Brown & Cullen, 2006); therefore, a measure of basic human needs was appropriate to this assessment of religious motivation and well-being. Maslow (1943) argued that psychological health and well-being is possible only when individuals have met their basic human needs, therefore the NSI was appropriate to this study of religious motivation and well-being. Lester (personal communication, October 23, 2012) gave permission to use the NSI in my research.

Lester (1990) operationalized Maslow's five categories of basic human needs with ten statements per category. An example item is "I feel safe and secure" (Lester,

1990, Appendix). Participants responded on a 6-point Likert-like scale, ranging from -3 (*strong disagreement*) to +3 (*strong agreement*). A composite score and subscale scores were calculated by adding the numerical value of item responses. Higher scores on NSI and subscales indicate a higher degree of satisfaction of the need for physiological homeostasis, safety and security, belongingness and love, esteem and self-esteem, and self-actualization (as assessed by the NSI).

Lester et al. (1983) used the NSI with a sample of 166 undergraduates. Lester (1990) used the NSI with a sample of 46 college undergraduates. The authors (Lester, 1990; Lester et al., 1983) did not publish reliability and validity data. Nevertheless, the instrument seems to have prima facie validity that captures the essence of Maslow's hierarchy of needs. The NSI found significant relationships between basic human needs, psychological health, and the belief in an internal locus of control (Lester, 1990; Lester et al., 1983). The NSI is found in the PsycTest database at Walden University Library.

The Meaning in Life Questionnaire

The Meaning in Life Questionnaire (MLQ; Steger, Frazier, Oishi, & Kaler, 2006) uses 10 items to measure the presence of, or search for, meaning in life. Man is a meaning-making animal and each person, whether religious or irreligious, creates their own meaning in life through constructivism and social relationships (Bandura, 2006; Gergen, 2002, 2011; Steger et al., 2006), therefore, the MLQ was appropriate for this study of well-being. The world religions are often viewed as providers of meaning and

purpose in life for their adherents, and this existential meaning in religion and life may vary between religions (Steger et al., 2010); therefore, meaning in life was an apt measure of the effects of religion on well-being. Steger (personal communication, September 28, 2012) gave permission to use the MLQ in my dissertation on religion and well-being.

The MLQ was designed as a brief measure of the search for, or presence of, meaning in one's life. Although there is no universal definition of meaning in life (Frankl, 1966), Steger et al. (2006) defined meaning in life as the subjective sense made of, and significance attached to, one's existence. The MLQ-P measures the subjective sense that one's life is meaningful and purposeful while the MLQ-S measures the search for the unmet need to establish meaning and purpose in life.

To score the Presence subscale score, add the ratings for items 1, 4, 5, 6, and 9. To calculate the Search subscale score, add together the ratings for items 2, 3, 7, 8, and 10. Scores range between 5 and 35 for both subscales. Scores above 24 on Presence and above 24 on Search indicate the participant believes his or her life has meaning and purpose, yet the person is still openly exploring that meaning or purpose. Scores above 24 on Presence and below 24 on Search indicate the participant believes his or her life has meaning and purpose, and is not actively seeking meaning in life. Scores below 24 on Presence and above 24 on Search suggest the participant probably does not feel his or her life has meaning or purpose, and is probably actively searching for something or someone

that will give life meaning or purpose. Individuals in this category may feel lost in life, and this idea may cause distress. Scores below 24 on Presence and also below 24 on Search indicate the individual probably does not feel her or his life has meaning and purpose, but she or he is not actively exploring or seeking meaning in life. Overall, participants in this low-presence, low-search category probably don't find the idea of thinking about life's meaning very interesting or important. An example of a MLQ-P item is "My life has a clear purpose" (Steger et al., 2006, Appendix).

Steger and colleagues (2006) developed the MLQ to measure the presence of, or search for, meaning in life. The 2-factor structure of meaning in life produced the better goodness-of-fit indices. Temporal stability was demonstrated by 1-month test-retest coefficient alphas of .70 for the MQL-P and .73 for the MLQ-S. The aggregate sample (Time 1 and Time 2) displayed good reliability for MLQ-P (α = .82) and MLQ-S (α = .82). Evidence of convergent validity for the MLQ-P was demonstrated by correlations with another measure of meaning, a measure of positive life regard, and a measure of optimism. Convergent validity for the MLQ-S was supported by significant correlations between self- and informant reports on the MLQ-S at Time 1 (.31) and Time 2 (.35).

Steger and Frazier (2005) used the MLQ-P with 512 introductory psychology students. The alpha coefficient of the MLQ-P was .85. In a second study, Steger and Frazier (2005) used the MLQ-P with 84 introductory psychology students. Convergent

validity of the MLQ-P was demonstrated by positive, significant correlations with measures of daily well-being and daily meaning.

Steger et al. (2010) used the MLQ with a sample of 284 Catholic and Protestant young adults and a sample of 454 Catholic, Protestant, and non-Evangelical Protestant young adults, but the psychometric properties of the MLQ were not reported. McMahan and Estes (2010) used the MLQ-P with a sample of 300 undergraduates and found internal consistency acceptable (α = .88).

Physical Health Questionnaire

The Physical Health Questionnaire (PHQ; Schat, Kelloway, & Desmarais, 2005) is a 14-item self-report scale of physical (somatic) health. The world religions and their gods claim to be able to prevent and cure diseases (e.g., Exodus 8, 23:25; Deuteronomy 7:15; 1 Chronicles 21:14; Matthew 11:5; Mark 16:17; Koran 10:57, 17:82, 26:80, 41:44); therefore, a measure of physical health was appropriate as an outcome variable in my study of religion and well-being. Schat (personal communication, October 10, 2011) gave permission to use the PHQ in my research.

The PHQ was designed as a brief measure of four physical symptoms: quality of sleep, gastrointestinal problems, headaches, and respiratory illnesses. Physical health was operationally defined by the absence of sleep problems, gastrointestinal problems, headaches, and respiratory illnesses. The researcher specifies the period covered, for example *the past 30 days*, *the past six months*, or *the past year*. The first 13 items

measure the frequency of difficulty falling sleep, undisturbed sleep, nightmares, headaches, upset stomach, nausea, constipation, diarrhea, minor colds, and respiratory infections on a scale ranging from 1 (*not at all*) to 7 (*all of the time*). On the paper and pencil protocol, participants circled the appropriate number. Item 14 asked about the frequency of a bad cold or flu lasting longer than it should. An example of a response item is Item 14, "When you have a bad cold or flu, how often does it last longer than it should?" (Schat et al., 2005, p. 375). Item number 4, "How often has your sleep been peaceful and undisturbed?" was reverse coded. I calculated scores by adding all responses. Higher scores represent a higher frequency of physiological symptoms.

Schat et al. (2005) used a sample of 194 staff members from a hospital in Ontario, Canada in Study 1 to examine the factor structure and internal consistency of the PHQ. Principal components extraction with varimax rotation produced a four-factor solution—Gastrointestinal Problems, Headaches, Sleep Disturbance, and Respiratory Infections—that cumulatively explained 68.9% of the item variance.

In Study 2, a sample of 222 employees of a social service agency responsible for administering group homes for adults diagnosed with developmental disabilities living in Ontario, Canada provided the data by completing the PHQ, a negative affect scale, and self-ratings of their job performance. A four-factor oblique model provided the best goodness-of-fit indices. The PHQ demonstrated discriminant validity by correlations between negative affect and physical health as measured by the PHQ, revealing that

negative affect and somatic symptoms are related but distinct constructs. Correlations between the PHQ subscales and self-reported job performance also supported discriminant validity.

In Study 3, Schat et al. (2005) tested the psychometric properties of the PHQ with several item revisions using 187 introductory psychology students at the University of Guelph in Ontario, Canada. Data was also collected one year later on two samples of university students. Rewording one response item and changing the response anchor on three items reduced missing data. Internal item consistency, based on Cronbach's values, for the revised scales were .84 in Sample 1 and .86 in Sample 2 for the Gastrointestinal Problems subscale, .90 in both samples for the Headaches subscale, .81 for both samples for the Sleep Disturbance subscale, and .70 in Sample 1 and .71 in Sample 2 for the Respiratory Infections subscale.

Data Analysis Plan

Factor Analysis

The three study mediators of extrinsic, intrinsic, and quest were analyzed using Principal Components Analysis and Direct Oblimin Rotation. This procedure was also done on all the outcome variables to see which questions defined each construct. The outcome variables are nine total: Beliefs About Well Being (BWBS) with two factors, hedonic and eudaimonic well-being; Satisfaction with Life Scale (SWLS); Meaning of Life Questionnaire with two factors, MLQ-P (present) and MLQ-S (seeking); Positive

and Negative Affect Scale (PANAS) with two factors, PA (Positive Affect) and NA (Negative Affect); Needs Satisfaction Inventory (NSI) with the three unnamed factors that held; and Physical Health Questionnaire (PHQ).

After each factor was analyzed using Principal Components Analysis and Direct Oblimin Rotation, the remaining questions were retained. The global score or mean was calculated for each of the mediators and the outcome variables used in the mediator hypothesis testing. The predictor variable was coded into an individual variable for each religion with 1 = that religion and 0 = not that religion.

Mediator Analysis

Mediator Analysis was performed using SPSS (IBM Version 21). Data analysis procedures used a regression based mediator analysis process developed by Baron and Kenny (1986).

Equation 1. The first equation should show that the predictor variable is a significant predictor of the mediator (Baron & Kenny, 1986).

Equation 2. The second equation should show that the predictor variable is a significant predictor of the outcome variable (Baron & Kenny, 1986).

Equation 3. The third equation should contain both the predictor and mediator variables entered simultaneously with the outcome variable. Two conditions must be met in the third equation if a mediator effect is present: (a) the mediator is a significant predictor of the outcome variable and (b) the direct relationship of the predictor variable

to the outcome variable is less significant than it was in the second equation (Baron & Kenny, 1986).

Reverse causal effects. The mediator effect may be caused by the outcome variable, which would be the path Y to M. Kenny (2014) refers to this as the feedback model and advises to examine the Y-M path. If M-Y and Y-M and X-M and M-X are the same in the model, then this may be causal and not mediational. However, if M-Y and Y-M and X-M and M-X are different and Y-M and M-X are closer to zero, then there is a definite mediator effect in the model. The reverse causal effects were examined in the models.

Bonferroni alpha adjustment. The Bonferroni correction is used to adjust alpha when several comparisons of predictor variables are being made simultaneously (Schaffer, 1995). Given that 80 final comparisons were entered into the third equation, the alpha was adjusted for family-wise error to $p = .0006$ in order for a mediator relationship to be significant.

Extrinsic, Intrinsic, and Quest Entered as Mediators at the Same Time. When there are multiple mediators, they can be tested together or separately. One advantage of testing the mediators together is being able to determine if the mediation is independent of the effect of the other mediators. This can be done if the mediators have been found to be distinct from one another and not too highly correlated (Kenny, Kashy, & Bolger, 1998). This was found to be true in the factor analysis run on the mediators. The three

mediators of extrinsic, intrinsic, and quest were entered into multiple regressions at the same time in order to look at their mediation possibilities on the relationships between the predictor variable of religion and outcome variables of well-being (Baron & Kenny, 1986).

Bootstrapping for confirmatory analysis. Bootstrapping is an analysis method based on resampling with replacement (Shrout & Bolger, 2002). From the samples taken, the indirect effect is computed and a sampling distribution is empirically generated. The mean of the bootstrapped sample will not equal the indirect effect, so a correction for bias is usually made. From this analysis, a distribution, confidence interval, *p* value, and the standard error were determined. If zero is not within the confidence interval, then one can be sure the indirect effect is different from zero (Hayes, 2013; Jose, 2013).

Preacher and Hayes (2008) developed an SPSS macro that estimates the path coefficients in a multiple mediator model and generates bootstrap confidence intervals (percentile, bias-corrected, or bias-corrected and accelerated) for total and specific indirect effects of *X* on *Y* through one or more mediator variable(s) *M*. The macro allows for more than one mediator in the model (Preacher & Hayes, 2008). This macro was used to analyze the data. Bootstrapping was done at a recommended 1000 iterations (N=763).

Test of assumptions. The assumptions of linearity, normality, and homoscedasticity were tested. Scatter plots were created for all variables in relationship to one another to check for linearity, normality, and equality of variance-covariance.

Because bivariate scatterplots are subjective in examining linearity, normalcy, and homoscedasticity, I ran a preliminary regression to create residual plots to test these assumptions (SPSS: Analyze-Regression-Linear). The measures of well-being served as the outcome variable and self-selected religious philosophy served as the predictor variable. A search of the literature revealed that age, culture, education, employment status, ethnicity, family structure, gender, health, income, marital status, region, type of government, socioeconomic status, and other secular variables predict well-being (Abu-Rayya & Abu-Rayya, 2009; Arrindell et al., 1999; Ayyash-Abdo & Alamuddin, 2007; Diener, Diener, & Diener, 1995; Diener & Lucas, 1999; Diener et al., 1999; Keyes et al., 2002; Lavric & Flere, 2008; Leondari & Gialamas, 2009; Roemer, 2006; Ryff, 1989; Tay & Diener, 2011; Tiliouine et al., 2009). Therefore, these demographic variables were considered as potential mediators or moderators. I plotted the standardized residuals (ZRESID) on the *y*-axis and the standardized predicted values (ZPRED) on the *x*-axis.

The research question was, do religious motivations mediate the relationship between religious philosophy and well-being? I tested the following hypothesis and its corresponding null hypothesis:

Ha: Religious motivation will mediate the effect of religious philosophy on well-being.

Ho: Religious motivation will NOT mediate the effect of religious philosophy on well-being.

I conducted linear regressions using SPSS. The direct, indirect, and total effects of religious identification on well-being were calculated. I interpreted the results as either supporting or not supporting the hypothesis that religious motivation mediates the relationship between religious identification and well-being.

When including a mediating variable and attempting to demonstrate cause and effect, path analysis is an appropriate methodology (Dr. Stephen Rice, personal communication, August 24, 2011). Linear regressions were used to calculate path coefficients. Descriptive statistics and significant correlations between measures of religious motivation and well-being are presented in several tables.

Threats to Validity

Threats to External Validity

I selected the number of measures of religious motivation and well-being to oversample the two constructs so that if one measure confounded a variable, that measure could be removed from the statistical analysis. Because intrinsic spirituality, extrinsic religiosity, and quest may be inversely and curvilinearly related (Burris, 1994), seven other measures of religion were included.

Threats to Internal Validity

With paper and pencil questionnaires, responses are anchored by a series of numbers that may connote an unwanted and unwarranted ordinal position. In my online questionnaire, I used radio buttons (a small circle with a dot in the center) under each

response item for the participant to click without the implication of ordinality. The well-being measures were presented first in the questionnaire, followed by the measures of religious motivation, to lessen the likelihood that responses to prior questions on religion would bias answers on well-being. Some people have an agreement-disagreement bias in that they agree with all positively worded, and disagree with all negatively worded items, thus some items were phrased negatively and reverse-coded. Moreover, two quality assurance items were included in the questionnaire.

Threats to Construct or Statistical Conclusion Validity

I specified a classic mediation triangle based on the literature, formal and informal theories, and common sense (Mertler & Vannatta, 2010). However, with any three concurrent variables six different mediational triangles are possible (Jose, 2013). Therefore, the conclusion will be qualified with the statement that other mediation models may be equally plausible.

A majority of the participants were middle-class or upper middle-class individuals living in Asia and America with access to a computer and online services. Therefore, the results may not generalize to poor individuals and citizens of less developed nations.

Ethical Procedures

I obtained Walden's Internal Review Board (IRB) approval (#05-16-13-0164381) before collecting any data. Participants volunteered to participate in Qualtrics Labs questionnaire panels and were required to double opt-into the questionnaire. Participants

were presented with informed consent information in the instruction page with the option to temporarily accept and the option to opt-out of the questionnaire unconditionally at any time during the questionnaire. Participants could have exited the questionnaire unconditionally at any time without consequences and without the researcher knowing. This questionnaire involved no more than minimal risk to participants; none greater than those encountered in daily life. I received only raw anonymously collected data and did not have access to any personally identifiable or protected health information.

Qualtrics Labs hosted the questionnaire and an e-Rewards Market Research panel manager sent out an email to their members who had indicated their religious identity and invited them to go to a specific website to complete the questionnaire. e-Rewards Market Research had over 6 million active members. e-Rewards Market Research employs a privacy policy that complies with all U.S. and European laws regarding privacy, including the Council of American Survey Research Organization (CASRO), World Association of Research Professionals (ESOMAR), and the Marketing Research Association (MRA). e-Rewards Market Research enforces data protection and security policies and guidelines for information they collect. Physical security includes closed-circuit video surveillance, access cards and palm-scan identification, uninterrupted power source, 24/7 network monitoring, equipment receiving and storage controls for tracking and securing equipment, and data privacy and security (e-Rewards Market Research, 2009). Network security includes password security, redundant firewalls with intrusion

detection, and firewalls that hide the IP address for all devices, such as web servers and caches. Data classification security includes strong data encryption for transmitting and receiving information, encrypted back-ups, cryptographic protection of sensitive information, and information classification on a “need-to-know” status (e-Rewards Market Research, 2009).

The data I collected was collected anonymously and no personally identifiable private health information (PHI) was asked for or obtained. The anonymous data is stored on my home computer, which is password protected, and has a firewall for Internet security. My computer is turned off at all times when not in use as an extra security precaution. Minors were excluded from the questionnaire by the e-Rewards Market Research selection process. A certificate of training on Human Research Protection was completed with the National Institute of Health (NIH,<http://www.phrp.nihtraining.com>) and accompanied the IRB application.

Summary

In this chapter, I described the purpose of the study, research design, target population, sample size, how the participants were recruited, the psychometric properties of the measures, and method of statistical analyses. I describe the results in Chapter 4 and discuss the findings in Chapter 5.

Chapter 4: Results

The purpose of this study was to examine whether intrinsic, extrinsic, and quest motivations influence the strength of the relationship between religious philosophy (the predictor) and the well-being of believers (the outcome). In the first section of this chapter, I will describe the time-frame for data collection and discrepancies in data collection from the plan presented in Chapter 3 as well as actual recruitment and response rates. I will also report baseline descriptive and demographic characteristics of the sample, describe how representative the sample is of the population of interest, and how proportional it is to the larger population (external validity) because non-probability sampling was used. In the second section, I will report descriptive statistics, evaluate statistical assumptions, and report statistical findings pertaining to the research question and hypotheses. I will include the factor analysis results for my constructs and the tests for mediators. Finally, I will summarize the answers to research question and link the descriptive statistics in Chapter 4 to the discussion in Chapter 5.

Data Collection Issues

Data were collected online over a period of 54 days using Qualtrics Labs online service; participants were recruited by e-Rewards Market Research. Five anchors (F5 – F9) on the modified Behavior and Faith Scale (Nielson, 1995) were

mislabeled for the first 398 participants. The five mislabeled responses for the first 398 participants were deleted, which was approximately .97% of the item responses collected.

Descriptive Statistics

Response Rate

All questions were completed by 763 participants. Out of 2,319, this represents a response rate of 32%.

Measures of Central Tendency Analysis

This is a large and diverse sample, so there are outliers and the distribution of scores is often skewed, usually positively. Because I surveyed atheists, agnostics, the spiritual-but-not religious, and eight religious groups, the distribution of item responses is often flat (platykurtic) or multimodal. However, large samples tend to show outliers, skewedness, and kurtosis that may not affect the analysis (Arbuckle, 2012; Hayes, 2013; Mertler & Vannatta, 2010; Tabachnick & Fidell, 2007; Warner, 2008).

Outlier Screening

Univariate analyses using SPSS with grouped data were conducted to examine missing values, outliers, normality, linearity, and homoscedasticity. Other than the questionable data for the first 398 participants to the response items F5, F6, F7,

F8, and F9, which were deleted, there were no missing values. Most religious philosophies had some outliers. I left the outliers in the data set.

Analysis of Normal Distribution, Homoscedasticity, and Linearity

Normal distribution is one of the least important assumptions in linear regression analysis and social science researchers rarely meet the assumption because measurement scales tend to produce discrete rather than truly continuous data (Hayes, 2013). For a normal distribution, skewness and kurtosis values are close to zero but may range between -1 and +1. Large samples greater than 100 participants may show significant skewness or kurtosis, or both, but this deviation from normal often does not make a difference in analyses (Mertler & Vannatta, 2010; Tabachnick & Fidell, 2007). For the mediator variables in this sample, Proviolence (1.034) and Divine Power (1.412) demonstrated skewness while kurtosis was evident in the Belief in After Life (1.465) and Divine Power (2.744). For the outcome variable, only the variable respiratory infection was skewed (1.023) because a majority of the participants did not experience these symptoms in the past 30 days. Observed values on Q-Q Plots generally fell close to a straight line, indicating normal distributions. Levene's statistic (2.912, $p < .001$) violates the assumption of equality of variance between religious philosophies, which is common in large samples (Warner, 2008) and is not fatal to analysis (George & Mallery, 2012; Mertler & Vannatta, 2010).

Residual plots for intrinsic, extrinsic, and quest were used to compare standardized residuals to predicted values of subjective well-being. The residual plots for hedonic well-being, eudaimonic well-being, negative affect, presence of meaning in life, search for meaning in life, and physical health were rectangular with scores concentrated in the center. The residual plot for positive affect formed a rectangle but was less well defined and less concentrated in the center. The residual plot for basic human needs did not form a clear rectangle but scores were concentrated in the center. Since residuals were not clustered near the sides of the plots or curved, the assumptions of normality, linearity, and homoscedasticity were met (Mertler & Vannatta, 2010).

Multivariate normality, linearity, and homoscedasticity were assessed for all variables in relation to one another using SPSS (Mertler & Vannatta, 2010). Although most matrix scatterplots for each religious group formed enlarged ovals, multivariate normality and linearity may be questionable for some religious groups. Box's test of homogeneity of variance-covariance was significant at the .01 level, indicating that the covariance matrices for the outcome variables are not equivalent for the different religious philosophies. The violation of the assumption of homoscedasticity of variance is reported in the limitations section of Chapter 5 (Warner, 2008)

Mediator and Dependent Variables

Descriptive statistics for the potential mediator variables were calculated using SPSS. Results are presented in Table 1. All mediator variables were statistically significantly correlated at the 0.01 level (2-tailed). After completing a factor analysis, I ran Cronbach's alpha and it was below 0.70 at $r = 0.229$ for all three mediators combined, which supports the findings of Batson and Schoenrade (1991) that intrinsic spirituality (end), extrinsic religiosity (means), and quest (existential seeking) are three independent, orthogonally defined religious orientations that are not interchangeable. The descriptive statistics for the factor reduction analysis are presented in Table 11.

Table 1

Descriptive Statistics for the Mediator Variables (N = 763)

	Extrinsic	Intrinsic	Quest	SEI-R	BA	Proviolence	Vile World	Divine Power	SSM
Extrinsic	**358.784**	295.458	254.460	347.230	62.308	86.815	42.360	56.363	75.787
Intrinsic	.735**	**450.067**	247.395	481.015	28.524	89.664	53.248	61.032	81.161
Quest	.762**	.661**	**311.148**	315.276	70.127	87.401	47.376	53.942	75.627
SEI-R	.719**	.890**	.701**	**649.247**	59.904	116.264	67.415	81.765	105.121
BA	.333**	.136**	.403**	.238**	**97.327**	42.335	14.695	31.767	21.757

Proviolence	.550**	.507**	.594**	.547**	.515**	**69.512**	31.146	32.036	30.923
Vile World	.367**	.412**	.440**	.434**	.244**	.612**	**37.203**	15.635	18.447
Power	.567**	.548**	.583**	.612**	.614**	.732**	.489**	**27.519**	17.907
SSM	.610**	.583**	.653**	.629**	.336**	.565**	.461**	.520**	**43.077**
M	61.755	45.934	63.499	85.763	43.379	28.156	18.499	24.333	16.277
SD	18.942	21.215	17.639	25.480	9.865	8.337	6.099	5.246	6.563
Cronbach α	.904	.961	.837	.949	.745	.819	.917	.622	.911
Skewness	-.177	-.229	.073	-.265	.977	1.034	.033	1.412	.219
Kurtosis	-.136	-.991	.300	-.378	1.465	.850	-.559	2.744	.177

Note. Variances are on the diagonal in bold, correlations are below the diagonal, and covariances are above the diagonal. SEI-R = Spiritual Experience Index-Revised, BA = Belief in Afterlife, Proviolence = Militant Extremist Mindset-Proviolence; Vile World = Militant Extremist Mindset-Vile World; Power = Militant Extremist Mindset-Divine Power; SSM = Spiritual Struggles Measure.
** $p < .01$.

Table 2

Descriptive Statistics for the Well-Being Variables (N = 763)

	HED	EUD	SWLS	PA	NA	MLQ-P	MLQ-S	physical	safe	belong	esteem	self	sleep	head	GI	respiratory
HED	**70.965**	41.561	28.286	35.615	28.244	19.626	21.974	45.105	50.242	51.081	45.708	40.989	9.400	16.830	24.199	20.088
EUD	.616**	**64.171**	23.234	35.077	12.767	20.169	21.168	35.706	36.846	45.364	43.223	42.605	3.471	9.407	15.894	10.405
SWLS	.485**	.419**	**47.972**	37.718	14.153	23.768	11.176	50.945	52.463	48.842	45.533	47.554	3.133	10.444	16.800	15.057
PA	.501**	.518**	.645**	**71.332**	24.283	28.258	20.172	49.862	53.871	55.684	55.709	55.867	3.887	14.497	22.003	18.048
NA	.330**	.157**	.201**	.283**	**102.937**	9.216	27.075	38.563	54.163	42.730	27.278	25.681	28.876	34.349	43.179	35.888
MLQ-P	.423**	.457**	.623**	.608**	.165**	**30.314**	13.786	31.917	35.666	36.028	34.150	36.137	1.941	7.899	12.302	10.409
MLQ-S	.394**	.399**	.243**	.360**	.403**	.378**	**43.932**	27.671	35.527	36.869	23.678	28.673	6.239	14.171	18.209	16.145
Physical	.537**	.447**	.737**	.592**	.381**	.581**	.418**	**99.595**	88.902	81.029	70.890	71.604	6.788	20.677	32.334	28.400
Safe	.550**	.424**	.699**	.588**	.492**	.598**	.494**	.822**	**117.508**	91.692	74.916	78.071	13.944	28.841	43.953	36.991
Belong	.577**	.539**	.672**	.628**	.401**	.623**	.530**	.773**	.806**	**110.270**	77.388	79.157	10.348	25.604	34.585	30.009
Esteem	.572**	.569**	.693**	.695**	.283**	.654**	.377**	.749**	.729**	.777**	**89.982**	72.316	8.331	18.402	25.600	21.576
Self	.516**	.564**	.728**	.702**	.269**	.696**	.459**	.761**	.764**	.800**	.809**	**88.867**	5.742	16.874	24.257	21.406
Sleep	.223**	.086*	.090*	.092*	.568**	.070	.188**	.136**	.257**	.197**	.175**	.122**	**25.090**	14.999	19.097	13.899
Head	.374**	.220**	.282**	.321**	.633**	.268**	.400**	.388**	.498**	.456**	.363**	.335**	.560**	**28.580**	27.362	21.086
GI	.419**	.290**	.354**	.380**	.621**	.326**	.401**	.473**	.592**	.481**	.394**	.376**	.557**	.747**	**46.893**	31.236
Respiratory	.441**	.240**	.402**	.395**	.654**	.350**	.450**	.526**	.631**	.528**	.421**	.420**	.513**	.729**	.844**	**29.240**
M	40.105	44.042	23.828	34.250	24.274	23.810	25.336	7.596	4.611	7.418	9.607	10.789	13.413	9.393	11.817	7.991
SD	8.424	8.011	6.926	8.446	10.146	5.506	6.628	9.980	10.840	10.501	9.486	9.427	5.009	5.346	6.848	5.407
Cronbach α	.883	.920	.910	.917	.941	.731	.919	.749	.798	.767	.776	.793	.625	.931	.917	.943

Skewness	-.070	-.791	-.484	-.261	.802	-.406	-.822	.086	.462	-.030	-.306	-.342	.233	.655	.861	1.023
Kurtosis	-.298	.920	-.423	-.327	-.035	.716	.505	-.005	-.182	.003	.529	.185	-.696	-.622	-.220	-.107

Note. Variances are on the diagonal in bold, correlations are below the diagonal, and covariances are above the diagonal. HED = BWBS-Hedonic; EUD = BWBS-Eudaimonic; SWLS = Satisfaction with Life Scale; PA = Positive Affect; NA = Negative Affect; MLQ-P = Meaning in Life, Present; MLQ-S = Meaning in Life, Searching; Physical = Needs Satisfaction Inventory-Physiological; Safe = Needs Satisfaction Inventory-Safety and Security; Belong = Needs Satisfaction Inventory-Belonging; Esteem = Needs Satisfaction Inventory-Esteem; Self = Needs Satisfaction Inventory-Self-Actualization; Sleep = Physical Heath Questionnaire-Sleep Disturbance; Head = Physical Health Questionnaire-Headaches; GI = Physical Health Questionnaire-Gastrointestinal Problems; Respiratory = Physical Health Questionnaire-Respiratory Infections.

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

Table 3

Means and Standard Deviations for Well-Being Variables by Religious Philosophy

	N	HED	EUD	SWLS	PA	NA	MLQ_P	MLQ_S	physical	safe	belong	esteem	self	sleep	Head	GI	respiratory
Atheist	80	37.725	42.325	21.625	32.163	20.925	22.850	23.913	3.925	.463	2.825	6.937	7.800	12.213	7.475	9.625	5.550
		8.746	8.663	6.801	8.215	8.034	5.727	6.112	8.354	8.158	8.354	8.680	9.332	4.543	3.886	4.575	3.201
Agnostic	83	38.482	42.988	22.795	32.205	21.072	21.542	20.807	4.747	.181	1.566	8.747	7.928	14.072	7.518	9.855	5.361
		6.857	7.177	6.943	7.315	8.381	3.841	6.158	7.697	7.546	8.180	6.602	7.397	5.103	4.195	4.787	3.642
Spiritual	57	37.474	44.842	20.263	31.175	20.596	21.491	24.105	2.702	-1.105	2.404	6.509	6.263	12.877	8.316	9.070	5.404
		5.912	6.672	6.732	7.346	6.153	5.759	6.005	7.620	7.487	6.586	7.411	8.388	4.735	4.066	4.287	2.790
Buddhist	74	39.811	43.257	24.541	32.973	23.432	24.351	26.446	8.203	5.527	8.959	8.757	10.811	12.122	7.878	10.324	7.770
		6.476	6.652	5.006	6.975	8.099	4.025	4.101	7.480	7.360	7.357	7.092	7.120	4.087	3.788	5.315	3.990
Christian	78	39.564	44.679	22.667	32.962	21.641	22.897	23.654	6.154	1.154	7.526	8.526	9.551	13.141	9.000	11.218	6.718
		8.676	7.290	6.763	8.405	7.832	5.375	8.212	9.046	8.684	8.400	8.312	8.904	4.474	4.365	5.690	4.009
Confucian	58	39.000	43.431	23.966	34.034	23.603	24.034	26.034	7.517	4.603	8.569	8.948	11.483	12.328	8.552	11.155	7.897
		7.318	8.238	6.237	7.129	8.931	4.781	5.232	8.022	8.927	8.367	9.271	7.089	4.648	4.231	5.508	4.071
Jewish	73	42.849	45.795	25.055	36.548	26.329	24.877	25.329	9.096	6.068	9.932	13.219	12.740	15.507	10.918	13.260	9.123
		8.300	7.050	6.997	8.740	12.861	5.160	7.600	10.523	12.314	10.560	8.810	9.238	4.780	6.074	7.947	6.447
Muslim	61	46.410	49.377	29.377	39.590	35.311	28.984	30.426	16.902	15.918	16.918	16.738	19.098	16.902	14.836	18.672	13.754
		8.871	5.119	5.493	8.618	11.610	5.152	4.870	10.442	11.431	10.464	10.034	7.985	5.647	6.138	8.787	6.733
Hindu	62	46.081	47.613	29.113	42.242	27.855	26.661	30.355	16.484	14.984	16.968	17.629	18.952	14.387	14.371	18.548	13.887
		8.900	9.328	5.674	6.465	12.674	4.826	4.850	10.344	11.690	10.460	9.450	8.624	5.455	5.723	7.459	5.826

Shinto	33	40.424	41.576	23.970	33.485	25.758	22.545	25.939	7.909	5.364	6.970	8.303	10.424	12.303	8.970	9.606	6.576
		8.113	9.699	6.645	8.265	8.528	5.511	5.303	9.643	10.954	10.461	9.830	10.331	4.324	4.951	5.726	4.459
Taoist	48	39.833	44.875	22.458	35.708	23.333	25.229	27.958	7.542	5.500	8.521	8.458	11.729	11.771	8.188	11.521	7.958
		7.824	6.854	7.059	6.639	8.449	4.579	4.439	8.758	9.682	9.902	9.372	7.923	4.199	4.280	5.366	4.349
Other	56	33.857	36.714	20.268	28.643	24.286	20.571	21.786	1.268	-.375	-.500	1.554	3.661	12.357	7.286	8.893	6.750
		5.313	6.397	5.118	7.142	7.502	5.532	5.538	8.247	8.319	8.220	8.240	8.311	4.886	4.547	5.450	4.360

Note. For all scales, higher means are indicative of the greater presence of the construct assessed. HED = BWBS Hedonic; EUD = BWBS Eudaimonic; SWLS = Satisfaction with Life Scale; PA = Positive affect; NA = Negative affect; MLQ = Meaning in life, present; MLQ-S = Meaning in life, searching; Physical = NSI Physiological; safe = NSI Safety and security; belong = NSI Belonging; esteem = NSI Esteem; self = NSI Self-actualization; sleep = PHQ Sleep disturbance; head = PHQ Headaches; GI = PHQ Gastrointestinal problems; respiratory = PHQ Respiratory infections.

Descriptive statistics for the outcome variables were calculated using SPSS. Results are reported in Table 2. All outcome variables were statistically significantly correlated (2-tailed). Factor analysis was completed on the outcome variables to find the most parsimonious number of uncorrelated factors. Descriptive statistics for the factor reduced mediator and outcome variables are reported in Table 11.

Descriptive statistics for the outcome variables by group were calculated. Simultaneous analysis of all groups provides more accurate statistical estimates than individual analysis (Arbuckle, 2012). Results are reported in Table 3.

Factor Analysis

Factor analysis (FA) is a data reduction technique that reduces the number of response items studied to a more limited number of underlying "factors." FA is based on a model that supposes that correlations between pairs of measured items can be explained by the connections of the measured items to a small number of non-measurable (latent), but meaningful, variables that are termed factors. The aims of FA are to: (a) identify the number of factors; (b) define the factors as functions of the measured variables; and (c) study the factors that FA defined (Muliak, 2009).

There are both exploratory and confirmatory factor analyses to use in data reduction (Muliak, 2009). For this study, all the questionnaires used to measure the mediators and outcome variables were already grounded in theory. Therefore, I used

Confirmatory Factor Analysis (CFA) to see if the factor structure of the constructs held together and to see which questions defined each construct under investigation.

CFA seeks to determine if the number of factors and the loadings of measured (indicator) variables on them conform to what is expected based on pre-established theory. Indicator variables are selected on the basis of prior theory and factor analysis is used to see if they load as predicted on the expected number of factors. The researcher's *a priori* assumption is that each factor (the number and labels of which may be specified *a priori*) is associated with a specified subset of response items. A minimum requirement of CFA is that one hypothesizes beforehand the number of factors in the model, but usually the researcher will also posit expectations about which items will load on which factors. The researcher seeks to determine, for instance, if measures created to represent a latent variable really belong together (Muliak, 2009).

Principal Components Factor Analysis (PCA) was done first to seek a linear combination of variables such that the maximum variance is extracted from the variables. It then removes this variance and seeks a second linear combination that explains the maximum proportion of the remaining variance, and so on. This is the principal axis method and results in uncorrelated factors (Muliak, 2009).

Question Factor Loadings

The factor loadings, also called component loadings in PCA, are the correlation coefficients between the response items (rows) and factors (columns). Similar to

Pearson's *r*, the squared factor loading is the percent of variance in that indicator variable explained by the factor. To get the percent of variance in all the variables accounted for by each factor, add the sum of the squared factor loadings for that factor (column) and divide by the number of items. (Note the number of items equals the sum of their variances as the variance of a standardized variable is 1.) This is the same as dividing the factor's eigenvalue by the number of response items (Muliak, 2009).

In CFA, loadings were interpreted by meeting the suggested criteria of .7 or higher to confirm that predictor items identified *a priori* are represented by a particular factor, on the rationale that the .7 level corresponds to about half of the variance (49%) in the indicator being explained by the factor. However, the .7 standard is a high one and real-life data may not meet this criterion, which is why some researchers, particularly for exploratory purposes, will use a lower level such as .4 for the central factor and .25 for other factors, calling loadings above .6 "high" and those below .4 "low". In any event, factor loadings must be interpreted in the light of theory, not by arbitrary cutoff levels (Muliak, 2009).

The eigenvalue for a given factor measures the variance in all the response items which is accounted for by that factor. The ratio of eigenvalues is the ratio of explanatory importance of the factors with respect to the survey items. If a factor has a low eigenvalue, then it is contributing little to the explanation of variances in the questionnaire items and may be ignored as redundant with more important factors. For

this study, all eigenvalues had to be 1 or higher to be considered a factor. Eigenvalues measure the amount of variation in the total sample accounted for by each factor (Muliak, 2009).

Rotation Method Used

The un-rotated PCA maximizes the variance accounted for by the first and subsequent factors, and forcing the factors to be uncorrelated. This data-compression comes at the cost of having most items load on the early factors, and, usually, of having many items load substantially on more than one factor. Rotation serves to make the output more understandable, by seeking so-called "Simple Structure": a pattern of loadings where items load most strongly on one factor, and much more weakly on the other factors. Rotations can be orthogonal or oblique, allowing the factors to correlate. Oblique, or what is also known as Direct Oblimin Rotation, was used on all factors to better understand their loadings since they were all correlated to some significant degree (George & Mallery, 2013; Muliak, 2009).

Mediator Factor Analysis

The three study mediators of extrinsic, intrinsic, and quest were analyzed using Principal Components Analysis and Direct Oblimin. The analysis confirmed that these constructs were three separate factors. The results are presented in Table 4.

Table 4

Factor Analysis Loadings for Mediators Extrinsic, Intrinsic, and Quest

Factor	Question	Factor Loading
Extrinsic	Although I believe in my religion, I feel there are many more important things in my life.	0.788
	It does not matter so much what I believe so long as I lead a moral life.	0.712
	The synagogue, church, cathedral, monastery, mosque, madrasah, mandir, Dacheng Hall, Confucian ...	0.748
	What religion offers me most is comfort when sorrows and misfortune strike.	0.758
Intrinsic	It is important for me to spend periods of time in private religious thought and meditation.	0.866
	If not prevented by unavoidable circumstances, I attend Friday Prayers, Catholic Mass, Protestant...	0.881
	I try hard to carry my religion over into all my other dealings in life.	0.858
	The prayers I say when I am alone carry as much meaning and personal emotion as those said by me ….	0.776
	Quite often, I have been keenly aware of the presence of Allah, Amaterasu, Brahmā, Buddha, Christ...	0.876
	I read literature about my faith.	0.841

	If I were to join a religious group, I would prefer to join a Torah, Bible, Koran, Veda, Tipitaka...	0.817
	My religious beliefs are what really lie behind my whole approach to life.	0.862
	Religion is especially important to me because it answers many questions about the meaning of life…	0.904
Quest	It might be said that I value my religious doubts and uncertainties.	-.797
	For me, doubting is an important part of what it means to be religious.	-.796

Dependent Variables Factor Analysis

The outcome variables are nine total: Beliefs About Well Being (BWBS) with two factors hedonic and eudemonic well-being; Satisfaction with Life Scale (SWLS); Meaning of Life Questionnaire with two factors, MLQ-P (Present) and MLQ-S (Seeking); Positive and Negative Affect Scale (PANAS) with two factors, PA (Positive Affect) and NA (Negative Affect); Needs Satisfaction Inventory (NSI) with the three unnamed factors that held; and Physical Health Questionnaire (PHQ). Results are summarized in Tables 5 through 10.

Table 5

Beliefs about Well Being Scale Results

Questions	Factor
BWBS 3. Living in ways that benefit others	0.840
BWBS 4. Not experiencing hassles	0.751
BWBS 5. Making the world a better place	0.863
BWBS 6. Working to achieve one's true potential	0.795
BWBS 7. Not experiencing negative emotions	0.840
BWBS 8. The identification and cultivation of one's	0.738
BWBS 10. Being a positive influence within the	0.831
BWBS 11. The exertion of effort to meet life's	0.769
BWBS 13. Contribution to society	0.881
BWBS 14. A lack of unpleasant experiences	0.908
BWBS 15. A high degree of self-knowledge	0.702
BWBS16. A lack of painful experiences	0.873

Table 6

Satisfaction with Life Scale Results

Question	Factor Loading
SWLS 1. In most ways, my life is close to my ideal.	0.885
SWLS 2. The conditions of my life are excellent.	0.887
SWLS 3. I am satisfied with my life.	0.901
SWLS 4. So far, I have gotten the important things I want in life.	0.844
SWLS 5. If I could live my life over, I would change almost nothing.	0.779

Table 7

The Meaning of Life Questionnaire Results

Question	Factor Loading
MLQ 1. I understand my life's meaning.	0.868
MLQ 2. I am looking for something that makes my life feel meaningful.	0.853
MLQ 3. I am always looking to find my life's purpose.	0.880
MLQ 4. My life has a clear sense of purpose.	0.918
MLQ 5. I have a good sense of what makes my life meaningful.	0.907
MLQ 6. I have discovered a satisfying life purpose.	0.900
MLQ 7. I am always searching for something that makes my life feel	0.869
MLQ 8. I am seeking a purpose or mission for my life.	0.879
MLQ 10. I am searching for meaning in my life.	0.865

Table 8

Positive and Negative Affect Scale Results

Question	Negative	Positive
PANAS 1. Interested		0.744
PANAS 2. Distressed	0.792	
PANAS 3. Excited		0.769
PANAS 4. Guilty	0.818	
PANAS 5. Scared	0.848	
PANAS 6. Upset	0.808	
PANAS 7. Strong		0.819

PANAS 8. Hostile	0.740	
PANAS 9. Enthusiastic		0.795
PANAS 10. Proud		0.781
PANAS 11. Irritable	0.782	
PANAS 13. Ashamed	0.827	
PANAS 14. Inspired		0.810
PANAS 15. Nervous	0.829	
PANAS 16. Determined		0.767
PANAS 17. Attentive		0.704
PANAS 18. Jittery	0.794	
PANAS 19. Active		0.768
PANAS 20. Afraid	0.851	

Table 9

Needs Satisfaction Inventory Results

Question	Factor
NSI-4. I feel dissatisfied with myself much of the time	0.790
NSI-6. I have an income that is adequate to satisfy my needs	0.782
NSI-12. My anxiety level is high	0.718
NSI-13. I feel rootless	0.803
NSI-14. I seldom have fears that my actions will cause my friends to have a	-0.690
NSI-15. I am uncertain about my goals in life	0.759
NSI-17. I feel secure about the amount of money I have and earn	0.793
NSI-23. I feel somewhat socially isolated	0.733
NSI-24. I feel confident in my present field of endeavor	0.728
NSI-28. I have a few intimate friends on whom I can rely	0.695
NSI-30. I find my work challenging	0.665
NSI-31. I eat enough to satisfy my physiological needs	0.690
NSI-39. I do not spend much time worrying about what people think of me	-0.788
NSI-48. I am able to confide my innermost thoughts and feelings to at least	0.732
NSI-49. In groups, I usually feel that my opinions are inferior to those of	0.688

Table 10

Physical Health Questionnaire Results

PHQ 4. How often has your sleep been peaceful and undisturbed?	0.795

PHQ 5. How often have you experienced headaches	0.811
PHQ 6. How often did you get a headache when there was a lot of pressure	0.836
PHQ 7. How often did you get a headache when you were frustrated because	0.833
PHQ 8. How often have you suffered from an upset stomach (indigestion)?	0.865
PHQ 9. How often did you have to watch that you ate carefully to avoid	0.789
PHQ 10. How often did you feel nauseated ("sick to your stomach")?	0.894
PHQ 11. How often were you constipated or did you suffer from diarrhea?	0.827
PHQ 12. How often have you had minor colds (that made you feel	0.869
PHQ 13. How often have you had respiratory infections more severe than	0.891
PHQ 14. If you had a bad cold or the flu, how often did it last longer than it	0.868

Post Factor Analysis Descriptive Statistics

After each factor was analyzed using Principal Components Analysis and Direct Oblimin Rotation, the remaining questions were retained. The global score or mean was calculated for each of the mediators and the outcome variables used in the mediator hypothesis testing. The predictor variable was coded into an individual variable for each religion with 1 = that religion and 0 = not that religion. The descriptive statistics are presented in Table 11.

Table 11

Descriptive Statistics for Mediator and Outcome Variables

			95% CI					
Variable	*M*	*SD*	*LL*	*UL*	Variance	Skewness	Kurtosis	α
Extrinsic	6.08	1.65	5.96	6.20	2.74	-.400	.069	.680
Intrinsic	45.94	21.21	44.43	47.44	450.07	-.229	-.991	.961
Quest	5.55	2.08	5.40	5.70	4.35	-.458	-.225	.791
HED	4.70	1.32	4.60	4.79	1.75	-.157	-.333	.886
EUD	5.51	1.00	5.43	5.58	1.00	-.791	.920	.920
SWLS	4.77	1.39	4.67	4.86	1.92	-.484	-.423	.910
PA	3.46	.86	3.40	3.52	.737	-.323	-.319	.917
NA	2.53	.95	2.46	2.59	.896	.871	.138	.941
MLQ-P	5.09	1.34	5.00	5.19	1.79	-.778	.330	.920
MLQ-S	5.07	1.33	4.97	5.16	1.76	-8.22	.505	.919

NSI	.59	.94	.52	.66	.891	.630	.427	.813
PHQ	2.95	1.48	2.85	3.06	2.19	.915	-.106	.937

Note. HED = BWBS Hedonic; EUD = BWBS Eudaimonic; SWLS = Satisfaction With Life Scale; PA = Positive affect; NA = Negative affect; MLQ = Meaning in life, present; MLQ-S = Meaning in life, searching; Physical = NSI Physiological; safe = NSI Safety and security; belong = NSI Belonging; esteem = NSI Esteem; self = NSI Self-actualization; sleep = PHQ Sleep disturbance; head = PHQ Headaches; GI = PHQ Gastrointestinal problems; respiratory = PHQ Respiratory infections; CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

Hypothesis Testing

The research question was, does religious motivation mediate the relationship between religious philosophy and well-being? The alternative and null hypotheses were:

H_a: Religious motivation will mediate the effect of religious philosophy on well-being.

H_o: Religious motivation will NOT mediate the effect of religious philosophy on well-being.

Statistical Tests for a Mediator Effect using Baron and Kenny with Reverse Analysis

Equation 1

The first equation should show that the predictor variable is a significant predictor of the mediator (Baron & Kenny, 1986). In this case, that religion is a significant predictor of the proposed mediator extrinsic. Buddhist, Christian, Confucian, Shinto, Jewish, Muslim, Hindu, Taoist, and other were significant predictors of extrinsic as a mediator. Atheist, spiritual-but-not–religious, and agnostic were not significant, and therefore were dropped from further mediation analysis.

Equation 2

The second equation should show that the predictor variable is a significant predictor of the outcome variable (Baron & Kenny, 1986). The outcome variables are the Beliefs About Well Being with two factors hedonic and eudemonic well-being;

Satisfaction With Life Scale; Meaning of Life Questionnaire with two factors, MLQ-P (Present) and MLQ-S (Seeking); Positive and Negative Affect Scale (PANAS) with two factors, PA (Positive Affect) and NA (Negative Affect); Needs Satisfaction Inventory; and Physical Health Questionnaire.

Equation 3

The third equation should contain both the predictor and mediator variables entered simultaneously with the outcome variable. Two conditions must be met in the third equation if a mediator effect is present: (a) the mediator is a significant predictor of the outcome variable and (b) the direct relationship of the predictor variable to the outcome variable is less significant than it was in the second equation (Baron & Kenny, 1986).

Reverse Causal Effects

The mediator effect may be caused by the outcome variable, which would be the path Y to M. Kenny (2013) refers to this as the feedback model and advises to examine the Y-M path. If M-Y and Y-M and X-M and M-X are the same in the model, then this may be causal and not mediational. However, if M-Y and Y-M and X-M and M-X are different and Y-M and M-X are closer to zero, then there is a definite mediator effect in the model. The reverse causal effects were examined in the models.

Bonferroni Alpha Adjustment

The Bonferroni correction is used to adjust alpha when several comparisons of predictor variables are being made simultaneously (Schaffer, 1995). Given that 80 final comparisons were entered into the third equation, the alpha was adjusted for familywise error to $p = .0006$ in order for a mediator relationship to be significant.

Extrinsic, Intrinsic, and Quest Entered as Mediators at the Same Time

When there are multiple mediators, they can be tested together or separately. One advantage of testing the mediators together is being able to determine if the mediation is independent of the effect of the other mediators. This can be done if the mediators have been found to be distinct from one another and not too highly correlated (Kenny et al., 1998). This was found to be true in the factor analysis run on the mediators.

The three mediators of extrinsic, intrinsic, and quest were entered into multiple regressions at the same time in order to look at their mediation possibilities on the relationships between the predictor variable of religion and outcome variables of well-being (Baron & Kenny, 1986). Atheist, agnostic, Christian, Jewish, Muslim, Hindu, Shinto, Tao, Confucian, Buddhist, spiritual-but-not–religious, and other were the predictor variables of religion. The outcome variables of well-being were Beliefs About Well Being with two factors, hedonic and eudemonic well-being; Satisfaction With Life Scale; Meaning of Life Questionnaire with two factors, MLQ-P (present) and MLQ-S (seeking); Positive and Negative Affect Scale (PANAS) with two factors, PA (Positive

Affect) and NA (Negative Affect); Needs Satisfaction Inventory; and Physical Health Questionnaire. Table 12 shows the significant mediator relationships at alpha = .0006 using guidelines from Kenny et al. (1998).

Table 12

The Relationships between Religion and Outcome Variables where Extrinsic, Intrinsic, and Quest are Mediators

Religion	Mediator	Outcome Variables	X-Y	X-M	M-Y	X-Y / M	Y-M	M-X
Other, Not Listed	Extrinsic	Eudemonic Beliefs about Well-Being	-0.989**	-1.508**	0.193**	-0.581**	0.797**	-0.038**
Muslim	Extrinsic	Mean Satisfaction with Life Scale	1.206**	1.614**	0.126**	1.041**	0.046**	0.044**
Hinduism	Extrinsic	Mean Satisfaction with Life Scale	1.150**	0.549**	0.126**	0.546**	0.046**	0.823**
Hinduism	Extrinsic	Mean Positive Affect	1.682**	0.246**	0.103**	0.443**	0.035**	1.152**
Muslim	Extrinsic	Mean Needs Satisfaction	0.978**	1.641**	0.129**	0.464**	0.046**	0.044**
Hinduism	Extrinsic	Mean Needs Satisfaction	1.048**	1.682**	0.129**	0.528**	0.046**	0.960**
Other, Not Listed	Intrinsic	Eudemonic Beliefs about Well-Being	-0.989**	-11.184**	0.010**	-0.752**	8.863**	0.019**
Hinduism	Intrinsic	Mean Positive Affect	0.823**	19.751**	0.140**	0.462**	12.073**	0.823**
Muslim	Intrinsic	Mean Negative Affect	1.152**	25.337**	0.120**	0.731**	9.872**	0.005**
Muslim	Intrinsic	Mean Physical Health	1.718**	25.337**	0.019**	0.907**	7.349**	0.004**
Hinduism	Intrinsic	Mean Physical Health	1.634**	19.751**	0.019**	0.992**	7.349**	0.003**
Hinduism	Intrinsic	Mean Needs Satisfaction	1.048**	19.751**	0.015**	0.557**	12.995**	0.003**
Hinduism	Quest	Mean Negative Affect	0.424**	1.508**	0.083**	1.178**	0.169**	0.026**
Muslim	Quest	Mean Negative Affect	1.152**	1.157**	0.083**	0.980**	0.169**	0.020**
Muslim	Quest	Mean Physical Health	1.718**	1.157**	0.139**	1.397**	0.304**	0.020**
Hinduism	Quest	Mean Physical Health	1.634**	1.508**	0.139**	1.223**	0.304**	0.026**
Hinduism	Quest	Mean Needs Satisfaction	1.150**	1.508**	0.106**	0.836**	0.230**	0.026**
Muslim	Quest	Mean Needs Satisfaction	0.978**	1.157**	0.106**	0.726**	0.230**	0.020**

Note. The beta weights of X-Y, X-M, M-Y, Y-M and X-Y controlling for M are reported. X=Religion, M= Mediator, Y = Outcome Variable
** $p < .0006$..

Mediational Relationships with Extrinsic, Intrinsic, and Quest.

Extrinsic is a significant predictor of Mean Satisfaction with Life Scale and is a mediator for Muslim and Hinduism. Extrinsic is a significant predictor of Mean Positive Affect and is a mediator for Hinduism. Extrinsic is a significant predictor of Mean Needs Satisfaction Inventory and is a mediator for Muslim and Hinduism. The null hypothesis is rejected for Mean Satisfaction with Life Scale, Mean Positive Affect, and Mean Needs Satisfaction Inventory. The null hypothesis is not rejected for Beliefs about Well Being with two factors, hedonic and eudemonic well-being; Meaning of Life Questionnaire with two factors, MLQ-P (present) and MLQ-S (seeking); NA (Negative Affect); and Physical Health Questionnaire.

Intrinsic is a significant predictor for Eudemonic Beliefs about Well-Being and is a mediator for Other. Intrinsic is a significant predictor for Mean Positive Affect and is a mediator for Hinduism. Intrinsic is a significant predictor for Mean Negative Affect and is a mediator for Muslim. Intrinsic is a significant predictor for Mean Physical Health Questionnaire and is a mediator for Muslim and Hinduism. Intrinsic is a significant predictor of Mean Needs Satisfaction Inventory for Hinduism. The null hypothesis is rejected for Eudemonic Beliefs about Well-Being, Mean Positive Affect, Mean Negative Affect, Mean Physical Health Questionnaire, and Needs Satisfaction Inventory. The null hypothesis is not rejected for Beliefs about Well Being-Hedonic and Meaning of Life Questionnaire with two factors, MLQ-P (present) and MLQ-S (seeking).

Quest is a significant predictor of Mean Negative Affect and is a mediator of Muslim and Hinduism. Quest is a significant predictor of Physical Health and is a mediator of Muslim and Hinduism. Quest is a significant predictor of Mean Needs Satisfaction and is a mediator for Muslim and Hinduism. The null hypothesis is rejected for Mean Negative Affect, Physical Health, and Mean Needs Satisfaction. The null hypothesis is not rejected for Mean Positive Affect; Meaning of Life Questionnaire with two factors, MLQ-P (present) and MLQ-S (seeking); and Beliefs about Well Being-Hedonic and Eudemonic.

Bootstrapping for Confirmatory Analysis

Bootstrapping is an analysis method based on resampling with replacement (Shrout & Bolger, 2002). From the samples taken, the indirect effect is computed and a sampling distribution is empirically generated. The mean of the bootstrapped sample will not equal the indirect effect, so a correction for bias is usually made. From this analysis, a distribution, confidence interval, *p* value, and the standard error were determined. If zero is not within the confidence interval, then one can be sure the indirect effect is different from zero (Hayes, 2013; Jose, 2013).

Preacher and Hayes (2008) developed an SPSS macro that estimates the path coefficients in a multiple mediator model and generates bootstrap confidence intervals (percentile, bias-corrected, or bias-corrected and accelerated) for total and specific indirect effects of *X* on *Y* through one or more mediator variable(s) *M*. The macro allows

for more than one mediator in the model (Preacher & Hayes, 2008). This macro was used to analyze the data. Bootstrapping was done at a recommended 1000 iterations (N = 763). The three mediator analysis results confirmed 10 of the 18 mediated relationships found in Kenny et al. (1998) and the biased corrected 95% confidence intervals are presented in Table 13.

Table 13

Preacher and Hayes (2008) Macro Confidence Intervals for the Significant Mediator Models

				95% CI	
Religion	Mediators	Outcome		*LL*	*UL*
Muslim	Extrinsic, Intrinsic,	Mean NSI	TOTAL	.5597	.8509
			Mean Extr	.1712	.3325
			Mean Intr	.2521	.4066
			Mean	.0669	.2130
Hinduism	Extrinsic, Intrinsic,	Mean NSI	TOTAL	5430	.7970
			Mean	.1805	.3269
			Mean Intr	.1853	.3339
			Mean	.1168	.2353
Muslim	Extrinsic, Intrinsic,	Mean PHQ	TOTAL	.5430	.7970
			Mean	.1805	.3269
			Mean Intr	.1853	.3339
			Mean	.1168	.2353
Hinduism	Extrinsic, Intrinsic,	Mean PHQ	TOTAL	.5430	.7970
			Mean Ext	.1805	.3269
			Mean Intr	.1853	3339
			Mean	.1168	.2353
Muslim	Extrinsic, Intrinsic,	Mean NA	TOTAL	.5430	.7970
			Mean	.1805	.3269
			Mean Intr	.1853	.3339
			Mean	.1168	.2353
Hinduism	Extrinsic, Intrinsic,	Mean NA	TOTAL	.5430	.7970
			Mean	.1805	.3269
			Mean Intr	.1853	.3339
			Mean	.1168	.2353

Hinduism	Extrinsic, Intrinsic,	Mean PA	TOTAL	.3882	.5760
			Mean	.1182	.2937
			Mean Intr	.1476	.3129
			Mean	.0050	.1041
Muslim	Extrinsic, Intrinsic,	Mean SWLS	TOTAL	.7185	1.0507
			Mean	.1173	.4018
			Mean Intr	.4022	.7003
			Mean	.0260	.1786
Hinduism	Extrinsic, Intrinsic,	Mean SWLS	TOTAL	.6284	.9678
			Mean	.1204	.4209
			Mean Intr	.3029	.5928
			Mean	.0285	.2033
Other, Not	Extrinsic, Intrinsic,	BWBS-Eud	TOTAL	.6284	.9678
			Mean	.1204	.4209
			Mean Intr	.3029	.5928
			Mean	.0285	.2033

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit; Mean Extr = Extrinsic Motivation; Mean Intr = Intrinsic Motivation; Mean Quest = Quest Motivation; NSI = Needs Satisfaction Inventory; PHQ = Physical Health Questionnaire; NA = PANAS-Negative Affect; PA = PANAS-Positive Affect; Mean SWLS = Satisfaction with Life Scale; BWBS-Eud = Beliefs about Well-Being Scale-Eudaimonic. All relationships were significant at $p < .0006$.

Summary

Factor analysis is a data reduction technique that reduces the number of response items studied to a more parsimonious number of underlying "factors." Factor analysis is based on a model that supposes that correlations between pairs of response items can be explained by the connections of the response items to a small number of non-measurable (latent), but meaningful, variables that are termed factors. The aims of factor analysis are to: (a) identify the number of factors; (b) define the factors as functions of the measured

survey items; and (c) study the factors which have been defined (Muliak, 2009). This was done on all the questionnaire items that were tested in the study analyses.

The main research question is does religious motivation mediate the relationship between religious philosophy and well-being? The alternative and null hypotheses are:

H_a: Religious motivation will mediate the effect of religious philosophy on well-being.

H_o: Religious motivation will NOT mediate the effect of religious philosophy on well-being.

Null Hypothesis Rejected

Using Baron and Kenny (1986) four equation mediator analysis, reverse feedback analysis, and Kenny et al. (1998) multiple mediator analysis, the null hypothesis was rejected for 18 relationships. These findings were followed up by Preacher and Hayes (2008) with bootstrapping for multiple mediators for the indirect effect. Extrinsic, intrinsic, and quest motivation were found to be significant mediators for these religions Muslim: 61 (8.0%), Hindu: 62 (8.1%) and Other: 56 (7.3%) and for the following the dependent variables: Beliefs About Well Being-Eudaimonic; Satisfaction With Life Scale; Meaning of Life Questionnaire with two factors, MLQ-P (Present) and MLQ-S (Seeking); Positive and Negative Affect Scale (PANAS) with two factors, PA (Positive Affect) and NA (Negative Affect); Needs Satisfaction Inventory; and Physical Health Questionnaire.

Fail to Reject Null Hypothesis

The religions that were not significantly mediated by extrinsic, intrinsic, and quest motivation were atheist: 80 (10.5%), agnostic: 83 (10.9%), spiritual-but-not-religious: 57 (7.5%), Buddhist: 74 (9.7%), Christian: 78 (10.2%), Confucian: 58 (7.6%), Jewish: 73 (9.6%), Shinto: 33 (4.3%), and Taoist: 48 (6.3%). The outcome variables not mediated by extrinsic, intrinsic, and quest motivation were Beliefs About Well Being-Hedonic and Meaning of Life Questionnaire with two factors, MLQ-P (Present) and MLQ-S (Seeking).

In this chapter, data collection and response rates were described. I reported baseline descriptive and demographic characteristics of the sample and described how representative the sample is to the population of interest. I reported descriptive statistics, test of statistical assumptions, factor analyses for my constructs, and the tests for mediators. I will discuss the findings in Chapter 5 by looking at interpretation of findings, implications for social change, recommendations for action, recommendations for further study, and summarizing the research.

Chapter 5: Discussion, Conclusions, and Recommendations

This quantitative, quasi-experimental research design used a self-report questionnaire to examine the direct and indirect effects of religious philosophy and motivation on the perception of well-being. Its purpose was to examine whether intrinsic, extrinsic, and quest motivations influence the strength of the relationship between religious philosophy (the predictor) and the well-being of believers (the outcome). The predictor variable, religion, was self-designated religious philosophy as defined by each participant indicating his or her philosophical view as being (a) atheist, (b) agnostic, (c) spiritual-but-not-religious, (d) Christian, (e) Buddhist, (f) Hindu, (g) Jew, (h) Muslim, (i) Confucian, (j) Shinto, (k) Taoist, or (l) other. The categories used in this study proportionally represent the major categories of the world religions (Brandon, 1970; CIA, 2013; Pew Research Center, 2012). The mediating variable, religious motivation, was defined as intrinsic spirituality (religion for its own sake), extrinsic religiosity (religion for an ulterior motive), and quest (religious uncertainty and seeking answers). The outcome variable was well-being as measured by hedonic and eudemonic well-being, satisfaction with life, affect (positive and negative), satisfaction of basic needs, meaning in life (present and searching), and physical health.

Discussion

Intrinsic religion is associated with a strong belief in God, Scriptures, and the efficacy of religion with an aim to connect with God (e.g., Gorsuch, 1984; Hood, 2013;

Kirkpatrick, 2005; Kirkpatrick & Hood, 1990; Paloutzian & Park, 2005; Pargament, 2013). Extrinsic religion is associated with moderate belief in God, Scriptures, and the efficacy of religion with a desire to get something in return (Allport & Ross, 1967, Grubbs et al., 2013; Hayward & Krause, 2013; Pargament, 2013; Schafer, 2013; Schnitker & Emmons, 2013). Quest is associated with uncertainty and doubts concerning God, Scriptures, and the efficacy of religion accompanied by a search for answers (Batson & Schoenrade, 1991; Batson et al., 1982; Batson & Venis, 1982). Based on a review of the literature, the intrinsic, extrinsic, and quest constructs appear to measure a continuum of belief in, and reliance on, religion as a means to an end.

The intrinsic, extrinsic, and quest constructs have had theoretical, conceptual, and psychometric difficulties since they were introduced (Allport & Ross, 1967, Batson & Schroder, 1991; Burris, 1994; Donahue, 1985; Genia, 1993, 1996; Gorsuch, 1984; Kirkpatrick & Hood, 1990; Neyrinck, Lens, Vansteenkiste, & Soenens, 2010). The intrinsic construct measures religious commitment and correlates with little more than other measures of religiousness (Donahue, 1985b). Extrinsic religion measures attitudes towards religion in which religion is used as a source of comfort and support (Allport & Ross, 1967; Genia, 1993, 1996, 1997). Quest measures religious skepticism and correlates with anxiety (e.g., Batson et al., 1989; Lavrič & Flere, 2008). Measuring religious motivation continues to be the major obstacle in the psychology of religion (Edwards et al., 2011; Granqvist, 2012; Hall et al., 2008; Hill et al., 2000; Hood, 2013;

Kapuscinski & Masters, 2010; McIntosh & Newton, 2013). If measuring religious motivation has been a problem in the psychology of religion, then correlating questionable measures of religious motivation with measures of well-being has been no less problematic and has tended to produce inconsistent findings. I was able to mitigate this problem by using multiple measures of religion and well-being with a religiously and geographically diverse sample of the population.

Whereas Allport (1963) argued that different religious motivations have different mediating effects on beliefs, behaviors, and well-being, research results using the ROS and Quest scales have often been inconsistent and even contradictory (e.g., Flere et al., 2008; Flere & Lavrič, 2008; Francis, Jewell et al., 2010; Francis, Robbins et al., 2010; Lavrič & Flere, 2008; Lavrič & Flere, 2010; Mavor & Gallois, 2008; Neyrinck et al., 2010; Pirutinsky et al., 2011; Ross & Francis, 2010). Using path coefficients to examine the direct effects of religion and the mediating effects of religious motivation on satisfaction with life, satisfaction of basic needs, meaning in life, positive and negative affect, physical health, and eudaimonic well-being among a diverse sample of religious philosophies addressed a meaningful gap in the research literature.

Religious Motivation as a Three-Factor Model

Allport (1963) proposed two types of achievement motivation as mediators between religion and the desired goals of believers. Intrinsic motivation is elicited by an interest in the activity itself and the desire to perform a behavior for its own sake as an

end goal. Extrinsic motivation is elicited by the desire for secondary gains, such as gaining tangible rewards or avoiding negative consequences.

To test this theory Allport and Ross (1967) developed the Religious Orientation Scales (ROS). Allport's (1963) claim that there are intrinsically and extrinsically motivated Christians, Jews, and Muslims has been partially verified by using the ROS on mixed samples of participants from some of the world's major religions in various combinations with mixed results.

Batson and Ventis (1982) saw deficiencies in Allport's two-factor solution for religious motivation and developed a third factor, which they called Quest. Batson and colleagues, likewise, have had mixed results using convenient samples. However, based on a review of the literature, the ROS and Quest scales have not been tested on a stratified, purposeful sample of the major world religions in a single study.

The research question of interest was "Do religious motivations mediate the relationship between religious identification and well-being across the major world religions?" In this study, the three study mediators of extrinsic, intrinsic, and quest were analyzed using Principal Components Analysis and Direct Oblimin rotation. The analysis confirmed that these three constructs were three separate factors, thus confirming Allport's original two factor model and Batson's three factor model. This study filled a gap in the literature by demonstrating, in a single study, that intrinsic, extrinsic, and quest motivations do exist across the major world religions.

Religious Motivation and Well-Being

Allport (1963) predicted that mental health varies according to religious motivation; but, based on a review of the literature, the predictive validity of the ROS and Quest scales has not been tested with a stratified purposeful sample of members of the world religions to examine the effects of religious motivation on a battery of well-being measures. For example, Steger et al. (2010) found that existential seeking was associated with different levels of well-being among Protestants and Catholics and wondered whether the results would generalize to Buddhists, Muslims, Hindus, and other religious people. Likewise, Steger and Frazier (2005) found that meaning in life was a primary mediator through which religion was associated with well-being, but acknowledged that their study was limited by not including demographics and other variables as potentially important mediators of religion's relationship with well-being. Moreover, Rosmarin et al. (2009) identified spiritual struggles as a significant risk factor for poorer physical and mental health among Jews and suggested that spiritual struggles are a potential risk factor for other theists, including Christians, Muslims, and Hindus. This study made an important contribution to understanding how religious motivation sometimes facilitates or enhances, and other times inhibits or depresses, the effects of the world religions on well-being, depending on which religion, mediator, and measure of well-being are used in the mediation triangle.

The well-being outcome variables confirmed by factor analysis were nine total: Beliefs About Well Being (BWBS) with two factors, hedonic and eudaimonic well-being; Satisfaction with Life Scale (SWLS); Meaning of Life Questionnaire with two factors, MLQ-P (Present) and MLQ-S (Seeking); Positive and Negative Affect Scale (PANAS) with two factors, PA (Positive Affect) and NA (Negative Affect); Needs Satisfaction Inventory (NSI) with the three unnamed factors that held; and Physical Health Questionnaire (PHQ). The findings confirm the claim by social science researchers that unobserved variables, such as religious motivation and well-being, can be conceptualized, analyzed, and interpreted in meaningful ways.

Even though Allport and Ross (1967) concluded that religious orientation was a third factor, a mediating variable, researchers have misused the scales as a measure of the independent variable rather than a mediating variable as intended by Allport (1963). This study filled a second gap in the literature by demonstrating in a single study the effects of religious motivation as a mediating variable on the relationship between religion and well-being across a stratified, purposeful sample of participants from the major religions.

Religion, Motivation, Well-Being, and Mediation Effects

The research question was does religious motivation mediate the relationship between religious philosophy and well-being?

Using Baron and Kenny (1986) four-equation mediator analysis, reverse feedback analysis, and Kenny et al. (1998) multiple mediator analysis, the null hypothesis was

rejected for 18 relationships using three mediators in stepwise entry. These findings were followed up by Preacher and Hayes (2008) using twelve religions, three mediators, and nine outcome variables entered simultaneously with bootstrapping for multiple mediators for the indirect effect. Extrinsic, intrinsic, and quest were found to be significant mediators for Muslims: 61 (8.0%), Hindus: 62 (8.1%), and others: 56 (7.3%) and for the outcome variables Eudaimonic Beliefs About Well-Being; Satisfaction With Life Scale; Meaning of Life Questionnaire with two factors, MLQ-P (Present) and MLQ-S (Seeking); Positive and Negative Affect Scale (PANAS) with two factors, PA (Positive Affect) and NA (Negative Affect); Needs Satisfaction Inventory; and Physical Health Questionnaire.

The religious philosophies that were not significantly mediated by extrinsic, intrinsic, and quest were atheists: 80 (10.5%), agnostics: 83 (10.9%), spiritual-but-not-religious individuals: 57 (7.5%), Buddhists: 74 (9.7%), Christians: 78 (10.2%), Confucians: 58 (7.6%), Jews: 73 (9.6%), Shinto: 33 (4.3%), and Taoists: 48 (6.3%). The outcome variables that were not mediated by extrinsic, intrinsic, and quest were Hedonic Beliefs about Well Being and Meaning of Life Questionnaire with two factors, MLQ-P (Present) and MLQ-S (Seeking).

Allport (1963) argued, even before developing the ROS (Allport & Ross, 1967), that there are intrinsic and extrinsic Jews, Muslims, and Hindus. This study supports his claim. Intrinsic, extrinsic, and quest religious motivation mediated the relationship

between different religious philosophies and well-being depending on which predictor and outcome variables were being examined in the mediation triangle. For example, extrinsic religious motivation was a mediator between Judaism and Hinduism and Hedonic Beliefs about Well Being; intrinsic religious motivation was a mediator for Muslim, Hinduism, Judaism and Hedonic Beliefs about Well Being; and quest religious motivation was a mediator of Muslim, Hinduism, and other and Hedonic Beliefs about Well Being. Religious motivation and Hedonic Beliefs about Well Being did not mediate the other religions included in the study. This study supports Allport's (1963) claim that different religious motivations have different effects on well-being.

Allport (1963) first proposed that intrinsic and extrinsic religious motivation are intervening variables that have different effects on the well-being of believers; thus, causal modeling techniques were appropriate to testing this hypothesis. This was true in this study in that intrinsic, extrinsic, and quest religious motivation all had different mediating effects between religious philosophies and the outcome variables of Beliefs About Well Being with two factors, hedonic and eudaimonic well-being; Satisfaction With Life Scale; Meaning of Life Questionnaire with two factors, MLQ-P (Present) and MLQ-S (Seeking); Positive and Negative Affect Scale (PANAS) with two factors, PA (Positive Affect) and NA (Negative Affect); Needs Satisfaction Inventory; and Physical Health Questionnaire. However, the mediation effects were not consistent across all

believers in that intrinsic, extrinsic, and quest religious motivation did not mediate all religious philosophies with the respective outcome variables.

Interpretation

One explanation for this finding may be that religious motivation and well-being are examples of latent or unobserved variables that can only be estimated by imperfect questionnaires (Aron et al., 2008; Hayes, 2013; Jose, 2013; Mertler & Vannatta, 2010). In contrast to this explanation, all of the following authors claim to measure determinants of religious motivation and are therefore appropriate to this study of religious motivation as a latent variable: the authors of the ROS (Allport & Ross, 1967), Quest scale (Batson & Schoenrade, 1991), Spiritual Experience Index –Revised (SEI-R, Genia, 1997), Religious Background and Behaviors (RBB; Connors et al, 1996), Behavioral and Faith Scale (Nielsen, 1995), Militant Extremist Mind-Set questionnaire (MEM, Stankov, Saucier et al., 2010), Belief in Afterlife scale (Oscarchuk & Tatz, 1973), Beliefs about God scale (Leondari & Gialamas, 2009), and Spiritual Struggles Measure (SSM, Rosmarin et al., 2009). Likewise, various authors consider the following scales to yield important indicators of the latent variable, well-being: the Beliefs about Well-Being Scale (BWBS; McMahan & Estes, 2010), the Satisfaction with Life Scale (SWLS; Diener et al., 1985), the Positive and Negative Affect Scale (PANAS; Watson et al., 1988), the Needs Satisfaction Inventory (NSI; Lester, 1990), the Meaning in Life Questionnaire (MLQ; Steger et al., 2006), and the Physical Health Questionnaire (PHQ; Schat et al., 2005).

Moreover, the percentage of intrinsically, extrinsically, and quest motivated believers may not have been equal within a given religious category. Furthermore, the religions that are most deeply integrated into social and cultural institutions, such as Judaism, Islam, and Hinduism, were often the strongest mediators, and therefore social support and cohesion may have been confounding factors.

The reduction from 18 significant relationships by entering one religion, stepwise entering three mediators, and one outcome at a time (Table 12) to 10 significant relationships by entering all 12 religions, three mediators, and nine outcomes simultaneously (Table 13) may be threefold. The reduction may be due to shared variance between the mediators. The reduction may be explained by the fact that some mediators are facilitators while others are inhibitors (Jose, 2013), thus canceling the effect of each other. Moreover, in some orthodox religions, especially Islam and Orthodox Christianity, to doubt is to sin; and therefore, at least theoretically, an individual is not simultaneously motivated by an intrinsic, extrinsic, and quest orientation in the pursuit of religion. Nevertheless, the reduction to 10 significant mediated relationships is in keeping with reductionism inherent in the scientific approach.

Bracketing the Question of Facticity

Both atheism and theism are theological philosophies, and neither assumption has been scientifically established in that they are both unproven and, as of yet, unprovable belief systems. Although individuals can provide arguments for either position, the fact

remains that both positions are metaphysical assumptions (Blum, 2012; Popkin & Stroll, 1993). Indeed, even scientific explanations are considered tentative hypotheses subject to change (Copi & Cohen, 1998). Therefore, the question of the factuality, the veracity of atheistic or theistic beliefs, must be bracketed, or set aside, for the purposes of data analysis and interpretation. However, the fact is that people have religious and nonreligious beliefs and, whether they are true or not, those beliefs have real and profound cognitive, emotive, and behavioral effects on individuals and their environments.

Interpretation in Theoretical Framework

Each of the world religions and their many different sects necessarily claim to have unique and true knowledge with benefits in this life and in an alleged afterlife. However, there are no money back guarantees in the world religions. The world religions exemplify the warning *caveat emptor*, or "Buyer beware!" because hearsay evidence, anecdotal stories, emotional responses, folklore, myths, and promises are all accepted without tangible proof (Copi & Cohen, 1998; Frazer, 1890/1981). The differences between scientific and unscientific beliefs are evidence, replication, and verification. Whereas science relies on evidence, verification, and replication to explain facts and make predictions, religion relies on the socially constructed phenomenon of divine revelation and largely dismisses evidence, replication, and verification (Copi & Cohen, 1998). As far back as the Greek philosopher Xenophanes, who argued that humans create

gods in their own image, and Socrates, who argued that prayers and sacrifices are intended to bribe and cajole the gods, philosophers and scientists have been attempting to apply logical reasoning and empiricism to religion. The psychology of religion is a relatively recent attempt to apply the principles of science to the beliefs and practices of religion (Hood et al., 2009; Piedmont, 2013).

Although the world religions rely on revelations and rationalism for claims of knowledge, I used the positivist and postpositivist views in this study. The postpositivist worldview, also known as the scientific research method, is a deterministic philosophy that seeks to determine the relationship between variables and, in some cases, a causal relationship between variables (Creswell, 2009). Galton (1872) used the scientific research method and statistical analyses to investigate the effects of prayer on health and well-being. Contrary to the claim that science and religion have no common ground (e.g., Valdecasas et al., 2013), this study demonstrated that the scientific approach, or postpositivist worldview, is appropriate for quantifying, explaining, and interpreting the effects of religious beliefs and practices on well-being. The goal of science and research is to explain and predict phenomena based on objective measurement and statistical analysis (Copi & Cohen, 1998). The results of this study may be used to predict similar outcomes for individuals of similar religions with similar religious motivations and similar demographics.

From a theoretic perspective for studying the similarities and differences among the world religions, behaviorism and social learning theories are best suited to explain the cause of beliefs and behaviors that operationally define religion and spirituality. According to behaviorism, certain stimuli in the environment elicit specific behaviors, behaviors that are operant conditioned through reinforcement by the consequences that follow the behavior (Skinner, 1990). Religion may be operant conditioned by priests, parents, peers, and other environmental influences through response-reinforcement contingencies. Any behavior that is rewarded or reinforced is likely to occur again (Skinner, 1998). On the other hand, if unorthodox behaviors are punished by parents, priests, peers, or other members of society, or are believed to be punished by the gods, then the behaviors are likely to fade. Many religious beliefs and behaviors are institutionalized patterns of behavior enforced by orthodoxy and organizational expectations. Thus, operant conditioning can explain the existence of religious and cultural beliefs and behaviors with fewer assumptions, inconsistencies, and contradictions than the hypotheses of theism and divine revelation, whether or not some or most religious beliefs are true.

Bandura (1977) argued that although environmental influences partly determine what people perceive, think, and do, individuals can adapt to the environment, change the environment, or move to a new environment. The more individuals change themselves or their environment, the more likely they are to survive in that environment. Humans use

observational learning to acquire knowledge, beliefs, behaviors, attitudes, and values that help them fit into a given society and increase their chances of survival. Therefore, most individuals adopt the religious habits of their parents and peers (Argyle, 2000; Spilka & Ladd, 2013). The social learning theory (Bandura, 1969, 1974, 1977, 2001, 2002, 2003, 2006; Bandura & McDonald, 1963) explains the great diversity of religions, cultures, ethnicities, ethics, and mores in the different geographic locations of the world with fewer assumptions than the claims of the world religions, even if some or most of the reported historical origins of world religions are true.

Within the broader logical positivist and empirical worldview, psychological hedonism, egoism, behaviorism, the social learning theory, social constructivism, and terror management theory complement each other in explanatory and predictive power concerning religion. Because religion is a multifaceted social psychological construct, each theory helps explain and predict certain religious beliefs and behaviors with its own theoretical lens, but it can be argued that survival or self-preservation is the true "master motive" (Allport & Ross, 1967, p. 434) of religion.

From a behaviorist perspective, intrinsic religion for its own sake is counterintuitive. All behavior is purposeful (Aristotle, *Ethics*), extrinsically motivated towards some other goal. From a behaviorist perspective, what a person believes or claims to believe is irrelevant unless and until that person acts upon the belief, and then it becomes a matter of behavioral psychology and sociology. Religion is socially

constructed by individuals and communities (Bandura, 1974, 2001, 2006; Davis et al., 2013; Gergen, 1985, 2001, 2002, 2011; Gorsuch, 2013; Schnitker & Emmons, 2013; Schwab, 2013; Spilka & Ladd, 2013), learned through operant conditioning (Skinner, 1963, 1984, 1990, 1998), used as a coping mechanism to meet basic human needs (e.g., Pargament & Hahn, 1986), especially for managing the debilitating fear of death (Jonas & Fischer, 2006; Vail et al., 2010; Van Tongeren et al., 2008), and is passed on to the next generation through social learning and operant conditioning (Bandura & McDonald, 1963; Bandura, 1969, 2002, 2003). However, without the *quid pro quo* promise of this-worldly goods, longevity, or life everlasting, religion is just another philosophy.

The search for religious motivation led to the terror management theory (Jonas & Fischer, 2006; Vail et al., 2010; Van Tongeren et al., 2008), which postulates that managing the terror of inevitable death is the prime motivation of religion. Because death is universal and because death is antithetical to the evolutionary drive of self-survival; therefore, religion serves as an antidote to death. The theory that religion is a terror management defense mechanism is simpler and more elegant, has greater compatibility with previously well-established theories of human motivation, is more relevant to the observable realities of life, is more testable, and has both greater explanatory and predictive power (Copi & Cohen, 1998) than intrinsic religion for its own sake in explaining the “mysterious primacy” (Allport, 1963, p. 191) of religion, even if one or

more of the world religions are true. In this study, belief in an afterlife and spiritual struggles were significantly positively correlated (Table 1).

The positivist, postpositivist worldview is a deterministic philosophy in which causes are viewed as possible determinants of effects or outcomes (Creswell, 2009). I used linear regressions to determine the possible direct, indirect, and total effects of religious philosophy and religious motivation on well-being. The positivist, postpositivist worldview is reductionistic in that the intent of the researcher is to determine the fewest number of variables that describe a causal relationship. I used bivariate correlations, confirmatory factor analysis, and linear regressions to determine inter-correlations and the fewest number of items that influence the mediating and outcome variables. The positivist, postpositivist assumptions concerning the need for empirical observations and measurement as a basis for probable knowledge are best supported by the quantitative approach of numerical data collection, data analysis, and interpretation of the findings. I used a non-experimental qualitative approach of collecting numerical data through a closed-question questionnaire and the statistical procedures of linear regression to determine the path coefficients between religious philosophy, religious motivation, and well-being variables. The positivists, postpositivist worldview with a nonexperimental quantitative strategy of inquiry was used to collect and analyze data to support or refute the hypothesis that religious motivation mediates the relationship between religious philosophy and well-being.

Implications for Social Change

Readers outside the field of the psychology of religion may be unaware that there are different religious motivations and that these religious motivations have different effects on one's well-being. The potential positive social change implications of this study for laypersons, counselors, therapists, psychologists, religious laypersons, and religious leaders is in knowing that both religious philosophy and religious motivation can have positive or negative effects on the emotional, psychological, and physical well-being of believers. Positive social change is possible at the individual, organizational, and cultural level through knowing which religious beliefs, motivations, and practices are associated with positive affect, satisfaction with life, fulfilment of basic human needs, eudaimonic well-being, and better physical health. Thus, developing best practices in religion based on evidence-based solutions could have not only individual well-being benefits, but social wellness benefits as well.

This study contributed to the field of the psychology of religion by examining the relationship between some of the numerous variables influencing religious philosophy, religious motivation, and well-being. A potential contribution that advances practice in the psychology of religion may be drawing attention to Maslow's hierarchy of basic human needs as a predictor of religion and well-being. Indeed, human needs may be the *raison d'être* of both religion and religious motivation. Another potential contribution of this study may be a shift in focus to evidence-based religion by comparing and

contrasting the efficacy of religious beliefs and practices to the promises made to believers in the texts of the world religions to satisfy basic human needs. A further potential contribution to the psychology of religion may be drawing attention away from Allport's (1963) construct of intrinsic religion, especially since some researchers (e.g., Kirkpatrick & Hood, 1990) have recommended abandoning the intrinsic, extrinsic, and quest paradigm.

The world religions attract believers by promising rewards in this life and promising an eternal afterlife for qualifying believers. Although these promises are written in the texts of the world religions, there is little or no empirical evidence concerning which religious beliefs and practices are most effective at delivering on the promise of intrinsic and extrinsic rewards in this life. A potential contribution of this study to the psychology of religion is the practice of examining the cost-benefits of religious beliefs and practices to individuals, communities, and cultures (Pargament, 2002). Individual believers and non-believers may become better informed concerning which religions, motivations, beliefs, and practices are more effective at ensuring the conditions favorable for eudaimonic well-being, positive affect, satisfaction with life, satisfaction of basic needs, meaning in life, and physical health. Moreover, believers may become better informed concerning which religious beliefs, motivations, and behaviors foster dissatisfaction with life, negative affect, lack of meaning in life, and poor physical health. The results of this study support positive social change by highlighting the

combination of religions and religious motivations that have a positive influence on the happiness and well-being of individuals. Helping individuals understand the link between religion, religious motivation, and well-being may have individual as well as societal benefits.

The potential positive social change implications of this study is knowing that the world religions and religious motivation have different effects on the emotional, psychological, and physical well-being of believers. Adherents of the different religions are consumers of religious goods and services. Truth in advertising laws, right to know laws, and other consumer protection laws have been applied to many goods and services, including banking, medical practice, pharmaceuticals, television commercials, and household products. Perhaps the time has come to think about extending truth in advertising and right to know laws to religion and politics, both of which rely heavily on rhetoric and emotional appeals with little or no evidence. Positive social change is possible for individuals and organization through knowing which religious beliefs, motivations, and practices are associated with positive affect, satisfaction with life, the fulfilment of basic human needs, eudaimonic well-being, and better physical health. Helping members of the world religions become better-informed consumers of religious goods and services promotes positive social change.

Recommendations for Action

Based on the mediated effects found in the present study, I recommend that counselors, therapists, psychologists of religion, religious leaders, and laypersons consider the actual costs and benefits of religious beliefs and practices (Pargament, 2002) based on empirical results. It is not good enough to merely claim that one god is greater than all other gods (Exodus 18:11), that one god is the way and the truth and the life (John 14:6), or that one religion is the true religion of God (Koran 3:19) without producing empirical proof (Koran 2:11, 27:64). Consumers of religious beliefs and practices have a right to know which beliefs and practices are supported by positive outcomes and which claims are merely rhetorical claims based on emotional appeal. Therefore, I recommend that religious organizations voluntarily adopt the principles embedded in right to know laws, truth in advertising laws, and a code of ethics similar to that of the American Psychological Association (2010). The ethical principles (APA, 2010) of beneficence and nonmaleficence (Principle A), fidelity and responsibility (Principle B), integrity (Principle C), justice (Principle D), and respect for people's rights and dignity (Principle E) are clearly violated by some religions some of the time.

A set of basic spiritual and religious competencies have been proposed for psychologists, including identifying religious beliefs, practices, and experiences that may have negative consequences for clients (Vieten et al., 2013). The goal of best practices can only be achieved by empirically testing the efficacy and facticity of religious beliefs

and practices *before* incorporating them into clinical practice. Therefore, I recommend that psychologists adopt into practice and training guidelines for using and assessing religious beliefs and practices based on empirical evidence. Ethically, therapists and counselors must provide only evidence-based answers to questions of faith.

Because psychologists are encouraged to seek consultation and collaboration with spiritual and religious sources, such as priests, pastors, rabbis, and imāms (e.g., Shonin, Van Gordon, & Griffiths, 2014; Vieten et al., 2013); therefore, I recommend that religious leaders share responsibility with psychologists in developing best practices based on empirical testing of religious beliefs and practices. Religion has a lot to offer science (Hill, 1999), and science has a lot to offer religion. Therefore, I further recommend the establishment of a join Interreligious Forum and Scientific Study of Religion Conference held annually where psychologists, priests, pastors, rabbis, imāms, bhikkhus, swamis, and laypersons meet in mutual respect to learn from each other. Scientists and religious leaders share similar goals to understand, describe, and predict; but they have different epistemological, ontological, and methodological approaches to those ends. Religious leaders and scientists working together to solve common social problems would have significant implications for positive social change.

I will disseminate the results of this study by publishing this dissertation in Walden's database of thesis and dissertations. I also hope to publish this study in the

Journal for the Scientific Study of Religion, the International Journal for the Psychology of Religion, or the Journal of the Society for Psychology of Religion and Spirituality.

Recommendations for Further Study

This study used cross-sectional data and the homogeneity of variances of measures cannot be assumed. Therefore, the results are only tentative and suggestive. Moreover, with any three concurrent variables six different mediation triangles are possible (Jose, 2013). Furthermore, the relationship between some variables were bidirectional, as for example, wants and needs affect religious motivation and religious motivation in turn affects wants and needs. Because this study used cross-sectional data, causal relationships cannot be established. This study should be replicated with other samples of members of the world religions, and preferably with a longitudinal study design.

The data collected for this study contains a wealth of information. The interaction or conditional effect (Hayes, 2013; Jose, 2013) of religious motivation on well-being was not tested to determine under what conditions or which levels of religious motivation have the greatest effect on well-being. Hayes (2013) argued that because human behavior is so complex, virtually all outcomes are mediated or moderated by some variable, and therefore the linear function of one variable on two other variables is more interesting. The graphic depiction of three variables interacting at different points on the continuum of response anchors typically produces one of four basic patterns—a fan shape, triangle,

funnel, or cross-over pattern (Jose, 2013), that clarifies the effects of a mediator on the relationship between the predictor and outcome. Secondary analysis of the current data set to establish the boundary conditions within which religious motivation produces the greatest effect on the relationship between religious philosophy and well-being variables would further extend this study.

We know that the frequency of prayer and church attendance are U-shaped, declining in adolescence and increasing throughout adulthood (e.g. Argyle, 2000; Spilka & Ladd, 2013). We also know that the expectation that prayers will be fulfilled declines with age. We further know that religious motivation increases during times of personal crises. Future research should focus on when intrinsic, extrinsic, and quest motivation begin, peak, decline, and change in priority.

Empirically testing the efficacy of religion and prayer is an indirect test of the efficacy of the gods, saints, and other divine intercessors. Indeed, gods, saints, and other divine intercessors are assumed to be mediators, moderators, or both, who affect the relationship between the individual and her or his environment. Although priests and scriptures may claim that one god or religion is greater than all the other gods and religions (e.g., Exodus 18:11, Koran 3:19, 5:3), these claims have not been systematically evaluated through empirical data. Social scientists regularly test the effects of latent variables (Hayes, 2013; Jose, 2013). Examining the efficacy of religion, prayers, and divine intercessors is central to our evolving understanding of the psychology of religion

and will provide new opportunities for researchers. If theology is the study of God, as the name implies, then all the tools of science should be applied to theology and the psychology of religion. Whereas some argue that religion and science have no common ground (Valdecasas et al., 2013) and others argue that we must maintain the classic separation of religion and science (Spilka & Ladd, 2013), I would argue that religion and science are merely two different means to the same end, and that end being knowledge of, and control over, the environment. Therefore, a Kuhn style revolutionary change in paradigm would occur if all the tools of social science were applied to the study of the efficacy of the gods, saints, and other divine intercessors. An epistemologically justified and empirically-based faith would produce positive social change by reducing the strife between individuals of opposing faiths.

The scientific study of religion has been approached from different disciplines. Sociologists find social explanations for religion, cognitive psychologists find cognitive explains for religious beliefs, evolutionary psychologists find evolutionary explanations for the evolution and development of religion, neuropsychologists find bio-neurological causes for religion, and so forth (e.g., Barrett, 2011; Jonas & Fischer, 2006; Kavan, 2013; Schjoedt, 2009; Spilka & Ladd, 2013). A coordinated, multidisciplinary approach to the study of religion and theology would produce a significant contribute to our understanding of religion and theology. Sharing research findings during

multidisciplinary conferences and joint multidisciplinary research projects would benefit researchers and layperson in the fields of religion and science.

Conclusion

Researchers and the practitioners of each of the world religions define religion differently. How religion is defined seems far less relevant than understanding the actual effects of religion on emotional, psychological, and physical well-being. The promise of tangible benefits in the form of health and well-being in this world and the hope of a posthumous life afterwards seem to be the mysterious primacy that attracts followers to religion worldwide. The literature suggests that religion is a relative-subjective social construct driven by Maslow's (1943) hierarchy of needs for well-being, that believers practice religion largely for its extrinsic value in meeting individual and communal needs, and those worshipers expect tangible results. Religion appears to be a coping mechanism used to satisfy basic human needs for physiological sustenance, safety and security, love and belonging, meaning and purpose in this life, and a path to perpetual self-survival. A crucial test of the claims of the world religions is the actual effect of beliefs and practices on the health and well-being of believers.

This study found that intrinsic, extrinsic, and quest religious motivations exist across the major world religions and that the different religious motivations mediate the relationship between religious philosophies and well-being differently. Adherents of the world religions are consumers of religious goods and services who have a right to know

which religious beliefs and practices correlate with eudaimonic well-being, satisfaction with life, meaning in life, positive affect, satisfaction of basic human needs, and better health. Individuals come to religion mainly during times of personal crises as a way of coping, expecting urgent results, and they deserve to know *a priori* the effectiveness of their chosen coping strategy.

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Appendix A: Permission to Use Assessments

Original E-mail
From: Dan Batson <dbatson@ku.edu>
Date: 09/11/2011 04:00 PM
To: 'Wayne Gilbey' <wayne.gilbey@waldenu.edu>
Subject: RE: using the Quest Factor items

Dear Wayne (if I may assume a first-name basis):

I have attached a copy of the current version of the Religious Life Inventory, which contains items for the six scales I used to compute scores on the Means, End, and Quest dimensions. Items for the External, Internal, and Quest scales are in Part I; items for Allport & Ross's Extrinsic and Intrinsic scales are in Part II; items for the Orthodoxy scale are in Part III. Conceptual basis for the scales, items on each scale, scoring, reliability information, and validity information are all provided in Chapter 6 of Batson, Schoenrade, & Ventis, *Religion and the Individual* (Oxford Univ. Press, 1993). You are welcome to use the scales in the RLI that I developed in any not-for-profit research; you can reference the book as a source. As for permission for the Extrinsic and Intrinsic scales, I cannot provide much help. Allport died a number of years ago; I do not know about Ross (I have not been in touch with him since around 1970, when I initially got permission to use the scales). If I were you, I would not worry about permission as long as your research is not for profit.

Hope this provides you with the information you need.

Best wishes,
Dan Batson

Original E-mail
From: Vicky <vgenia@aol.com>
Date: 08/21/2011 01:11 PM
To: Wayne Gilbey <wayne.gilbey@waldenu.edu>
Subject: Re: Spiritual Experience Index (Genia, 1997)

Sorry for the delay in response. I just returned from vacation. You may use the SEI-R for your study. The subscales and items are provided in the appendix of the article that you referenced. I have attached a scoring guide for your convenience.

I am interested in receiving the results of your study when completed. Best wishes for your dissertation project!

P.S. I am currently at Counseling & Psychological Services, University of Nevada, Las Vegas.

Vicky

Original E-mail

From : connors@ria.buffalo.edu
Date : 08/18/2012 03:57 PM
To : Wayne Gilbey [wayne.gilbey@waldenu.edu]
Subject : Re: [No Subject]

Hi Wayne. Very happy to provide permission for you to use our measures in your dissertation. best wishes on the project.
Gerard Connors

Hello, Wayne,

Yes, you may use the Behavior and Faith scales I developed long ago. They appear at the end of the article (text file) attached. Although the items were developed in a specific sectarian context, the items would seem to apply to many monotheistic faith traditions.

Best wishes

Mike

Michael Nielsen
Chair of Psychology
Georgia Southern University
mnielsen@georgiasouthern.edu
mikepsych@gmail.com
912-478-5122
Psych of Religion: http://www.psyrel.com

"The remarkable thing is that we really love our neighbour as ourselves: we do unto others as we do unto ourselves. We hate others when we hate ourselves. Weare tolerant toward others when we tolerate ourselves. We forgive others when we forgive ourselves. We are prone to sacrifice others when we are ready to sacrifice ourselves." -- Eric Hoffer

---

Original E-mail

From : ediener@cyrus.psych.illinois.edu
Date : 10/28/2012 07:45 AM
To : Wayne Gilbey [wayne.gilbey@waldenu.edu]
Subject : Re: the Satisfaction with Life Scale (Pavot & Diener, 1993)

The scale is free and in the public domain and so all are free to use
it. Please see my website.
Ed Diener

9/13/12
Wayne Gilbey

Dear Mr. Gilbey,

I gladly grant you permission to use the questionaire in the Osarchuk and Tatz article. I am including a reprint of the article, of which you may already have a copy.

There are no reliability or validity data other than those presented in the results of the study.

I wish you luck in your research, and would appreciate seeing the final product.

Best Regards,

Sherman J. Tatz

Dr. Sherman J. Tatz
34 Fairview St.
Huntington, NY
11743

Original E-mail
From : Lazar Stankov [lazondi@rocketmail.com]
Date : 09/17/2011 08:42 PM
To : Wayne Gilbey [wayne.gilbey@waldenu.edu]
Subject : Re: 24 item Militant Extremist Scales

Hi Wayne,

thank you for showing interest in our work on militant extremist mindset.

You can use the 24 items scale that is reproduced in the table in our 2010 paper - there is no need to receive a specific permission to use it. We employed an online, not paper-and-pencil version in our work. You can do the same. Simply add a 5-points Likert scale to each item as it is described it in our paper.

As for the 9-point scale, you are referring to the the items from the Schwartz' Value Survey (SVS). This is not ours. You can ask Shalom Schwartz or some of his collaborators for the most recent version of his scales.

Good luck with your PhD work.

All the best,
Lazar

Original E-mail
From: Aggeliki Leontari <leontari@uth.gr>
Date: 01/17/2012 04:05 AM
To: Wayne Gilbey <wayne.gilbey@waldenu.edu>
Subject: Re: your single-item measure of belief salience (Leondari & Gialamas, 2009)

Dear Wayne,
of course you can use the single-item measure of belief salience. I think that all the information needed about it is included in the article by Leondari & Gialamas (2009).
Best regards

Angeliki Leondari
Professor of School Psychology
University of Thessaly
Argonafton & Filellinon
Volos 382 21, Greece
tel.: +24210-74744

Original E-mail
From: "Rosmarin, David H." <drosmarin@mclean.harvard.edu>
Date: 01/14/2012 05:27 PM
To: Wayne Gilbey <wayne.gilbey@waldenu.edu>
Subject: RE: your five-item Spiritual Struggles Measure (Rosmarin, Pargament, & Flannelly, 2009)

Dear Wayne,
Thanks for your email. Feel free to use the measure and please keep me posted.
One piece of advice I have is to use God instead of "G-d" unless you're sampling
only within a Jewish community.

Please keep me posted with your results!
David
--
David H. Rosmarin, Ph.D.
Instructor, Department of Psychiatry
McLean Hospital/Harvard Medical School
115 Mill Street, Belmont, MA 02478
Telephone: 617 910 7790
Email: drosmarin@mclean.harvard.edu

Original E-mail

From :	"Lester, David" [David.Lester@stockton.edu]
Date :	10/23/2012 10:08 AM
To :	"wayne.gilbey@waldenu.edu" [wayne.gilbey@waldenu.edu]
Subject :	From David Lester

Hi Wayne:

Yes, you have my permission to use my scale to measure Maslow's needs.

best wishes

David

David Lester, Ph.D.
Distinguished Professor of Psychology
The Richard Stockton College of New Jersey
101 Vera King Farris Drive
Galloway, NJ 08205-9441
USA

www.drdavidlester.net

Original E-mail
From: Ethan McMahan <mcmahane@mail.wou.edu>
Date: 10/06/2011 11:35 AM
To: Wayne Gilbey <wayne.gilbey@waldenu.edu>
Subject: Re: the Beliefs about Well-Being Scale

Hi Wayne,
You can certainly use the BWBS for your dissertation. I have attached two articles. In the JHS article, the BWBS is in the appendices and psychometric information on the scale is presented. The SIR article is the one you mention having difficulty obtaining.

I should point out that the BWBS is not a measure of hedonic and eudaimonic well-being per se. Rather, it is a measure of individuals' conceptions of well-being. To illustrate the difference, one may define well-being in terms of pleasure (hedonic conception dimension), but this does mean that he/she actually experiences a high degree of pleasure (hedonic well-being).
Concerning your online testing system question, I used an online survey administration program provided by my graduate institution. However, I have also used and recommend SurveyMonkey.

Finally, for emotional well-being, I recommend the Positive and Negative Affective Schedule (PANAS; Watson, Clark, & Tellegen, 1988) and/or the Intensity and Time Affect Scale (ITAS; Diener, Smith, & Fujita, 1995). I like these measures, but there are several other acceptable measures of emotional well-being, so I

would also encourage you to explore your options and see which measure(s) will work the best for your particular study.

Good luck with your research!

Best,
EM
On Thu, Oct 6, 2011 at 12:38 AM, Wayne Gilbey <wayne.gilbey@waldenu.edu> wrote:

Dr. Ethan A. McMahan
Western Oregon University
Psychology Division
345 N. Monmouth Ave.
Monmouth OR 97361

Original E-mail

From : Michael Steger [michael_f_steger@yahoo.com]

Date : 09/28/2012 02:46 PM

To : Wayne Gilbey [wayne.gilbey@waldenu.edu]

Subject : Re: Permission to use the 10 item MLQ (Steger et al.,2006) in my dissertation

Hi Wayne, no problem, you have permission to use the MLQ.

Good luck,

Michael F. Steger, Ph.D.
Associate Editor, *Journal of Personality*
Counseling Psychology & Applied Social Psychology
Director, Laboratory for the Study of Meaning and Quality of Life
Colorado State University

michael_f_steger@yahoo.com
Website: http://michaelfsteger.com
Check out our new book: Designing Positive Psychology, from Oxford University Press!

Original E-mail

From : Aaron Schat [schata@mcmaster.ca]

Date : 10/10/2011 08:18 PM

To : 'Wayne Gilbey' [wayne.gilbey@waldenu.edu]

Subject : RE: The Physical Health Questionnaire (PHQ; Schat, Kelloway, & Desmarais, 2005)

Dear Wayne,
You are welcome to use the PHQ for your research. It should be fine to use in an online survey. Regarding the time period you specify, it would depend on the time frame you are trying to cover in your study. The instructions of the PHQ can be readily adapted to cover different time periods. For scoring the measure, we've simply averaged the items (unweighted).
I hope this is helpful. All the best with your research.
Take care,
Aaron
Aaron Schat, Ph.D.
Associate Professor of Organizational Behaviour and Human Resource Management
DeGroote School of Business
McMaster University
Hamilton, Ontario Canada L8S 4M4
P: (905) 525-9140, Ext. 23946
E: schata@mcmaster.ca

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Date: October 13, 2011

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Wayne Gilbey
Walden University

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- Appendix, p. 1070, from Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. Journal of Personality and Social Psychology, 54(6), 1063-1070. doi:10.1037/0022-3514.54.6.1063

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File: Gilbey, Wayne (author)

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ACCEPTED AND AGREED TO BY:

Wayne Lilley

Applicant

October 14, 2011

Date

PERMISSION GRANTED ON ABOVE TERMS:

for the American Psychological Association

October 13, 2011

Date

_____ I wish to cancel my request for permission at this time.

Appendix B: The Religious Motivation and Well-Being Questionnaire

Introduction

You are invited to take part in a research study helping to examine the validity, reliability, and generalizability of six assessments of well-being and eight assessments of religion and spirituality, and any relationship between the variables. Your input will be helpful in obtaining meaningful results. This form is part of a process called "informed consent" to allow you to understand this study before deciding whether to take part.

This study is being conducted by Wayne Gilbey, who is a doctoral student at Walden University. He is collecting data in order to complete his dissertation and invites your participation in this study.

Background Information: The purpose of this study is to better understand the concepts of wellness, religion, and spirituality and any influence of one upon the other. Your responses will help in understanding how these concepts combine and affect other individuals and their well-being.

Procedures: If you agree to be in this study, you will be asked to:

• Review and complete an online survey that will take 60 – 75 minutes

• Return the survey to the researcher by clicking the submit button at the end of the survey

Voluntary Nature of the Study: Your participation in this study is voluntary. This means that everyone will respect your decision of whether or not you want to be in the study. No one will treat you differently if you decide not to participate in the study. The only requirement for participation is that you must be 18 years of age or older, have internet access, and are invited to participate. If you decide to join the study now, you can still change your mind during the study. If you feel stressed during the study, you may stop at any time unconditionally. If you feel that the questions are too personal and wish to skip any questions that you feel are too personal, then you should discontinue your participation and the information will not be saved.

Risks and Benefits of Being in the Study: There are no known risks associated with participating in this study; however, some people may feel anxious in responding to some of the questions concerning health, well-being, religion, or death. The benefits of participation include the opportunity to help others understand emotional well-being, psychological well-being, physical well-being, religion, spirituality, and any possible relationship between these concepts.

Compensation: There is no tangible compensation being offered by the researcher for participation.

Confidentiality: Any information you provide will be kept anonymous. Your consent to participate will be implied through completion of the survey. The researcher will not use your information for any purposes outside of this research project. Further, the researcher will not include your name or anything else that could identify you in any reports of the study.

Contacts and Questions: You may ask any questions you have now or if you have questions later, you may contact the researcher via email at wayne.gilbey@waldenu.edu. If you want to talk privately about your rights as a participant, you can call Walden University's representative, Dr. Leilani Endicott, at 001-612-312-1210.

Walden University's approval number for this study is **05-16-13-0164381** and it expires on **May 15, 2014**.

You may print this form for your records. The results of the study will be available in the dissertation archives at Walden University and other databases.

Statement of Consent: I have read the above information and I feel I understand the study well enough to make a decision about my involvement. I am at least 18 years of age, by clicking on the submit button below, my consent is implied and I am agreeing to the terms described above.

NOTE: You may be automatically locked or logged out after 15 - 20 minutes of inactivity, so please keep this in mind when completing lengthy sections.

Would you like to participate in the survey?

Beliefs about Well-Being Scale (BWBS; McMahan & Estes, 2011)

Instructions: Different people have different beliefs about what factors are involved in the experience of high well-being and 'the good life'. Please indicate the degree to which you agree with each of the items as being a necessary and required aspect of the experience of high well-being and living the good life by clicking on the appropriate number.

The experience of well-being and the good life necessarily involves:

BWBS 1. A great amount of pleasure

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

BWBS 2. Experiencing a great deal of sensual [exciting] pleasure

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

BWBS 3. Living in ways that benefit others

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

BWBS 4. Not experiencing hassles

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

BWBS 5. Making the world a better place

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

BWBS 6. Working to achieve one's true potential

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

BWBS 7. Not experiencing negative emotions

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

BWBS 8. The identification and cultivation of one's strengths

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

BWBS 9. Experiencing euphoria [extreme happiness] and pleasure

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

BWBS 10. Being a positive influence within the community

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

BWBS 11. The exertion of effort to meet life's challenges

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

BWBS 12. Pleasurable experiences

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

BWBS 13. Contribution to society

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

BWBS 14. A lack of unpleasant experiences

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

BWBS 15. A high degree of self-knowledge

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

BWBS 16. A lack of painful experiences

Strongly Disagree			Neutral			Strongly Agree
1	2	3	4	5	6	7

Satisfaction with Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985).

Instructions: Below are five statements with which you may agree or disagree. Using the 1 – 7 scale below, indicate your agreement with each item by clicking on the appropriate number. Please be open and honest in your responding.

SWLS 1. In most ways, my life is close to my ideal.

strongly, disagree	disagree	slightly, disagree	neither agree, nor disagree	slightly agree	agree	strongly agree
1	2	3	4	5	6	7

SWLS 2. The conditions of my life are excellent.

strongly, disagree	disagree	slightly, disagree	neither agree, nor disagree	slightly agree	agree	strongly agree,
1	2	3	4	5	6	7

SWLS 3. I am satisfied with my life.

strongly, disagree	disagree	slightly, disagree	neither agree, nor disagree	slightly agree	agree	strongly agree,
1	2	3	4	5	6	7

SWLS 4. So far I have gotten the important things I want in life.

strongly, disagree	disagree	slightly, disagree	neither agree, nor disagree	slightly agree	agree	strongly agree,
1	2	3	4	5	6	7

SWLS 5. If I could live my life over, I would change almost nothing.

strongly, disagree	disagree	slightly, disagree	neither agree, nor disagree	slightly agree	agree	strongly agree,
1	2	3	4	5	6	7

Need Satisfaction Inventory (NSI, Lester, 1990)

NSI-1. I never have trouble getting to sleep at night

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-2. I think the world is a pretty safe place these days

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-3. I know my family will support me and be on my side no matter what

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-4. I feel dissatisfied with myself much of the time

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-5. I have a good idea of what I want to do with my life

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-6. I have an income that is adequate to satisfy my needs

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-7. I would not walk alone in my neighborhood at night

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-8. I am involved in a significant love relationship with another

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-9. I feel respected by my peers

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-10. My life has meaning

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-11. I get an adequate amount of rest

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-12. My anxiety level is high

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-13. I feel rootless

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-14. I seldom have fears that my actions will cause my friends to have a low opinion of me

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-15. I am uncertain about my goals in life

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-16. I have a satisfactory sex life

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-17. I feel secure about the amount of money I have and earn

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-18. I have a group of friends with whom I do things

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-19. I can stand on my own two feet

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-20. I feel I am living up to my potential

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-21. In general, my health is good

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-22. I feel safe and secure

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-23. I feel somewhat socially isolated

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-24. I feel confident in my present field of endeavor

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-25. I am seeking maturity

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-26. In winter, I always feel too cold

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-27. I am afraid to stay in my home/house/apartment alone at night

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-28. I have a few intimate friends on whom I can rely

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-29. I would describe myself as a self-confident person

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-30. I find my work challenging

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-31. I eat enough to satisfy my physiological needs

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-32. My life is orderly and well-defined

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-33. I feel close to my relatives

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-34. I have earned the respect of others

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-35. I know what my capabilities are and what I cannot do

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-36. I get an adequate amount of exercise

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-37. I can depend on others to help me when I am in need

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-38. I am interested in my ethnic roots and feel a kinship with others in my ethnic group

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-39. I do not spend much time worrying about what people think of me

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-40. I feel I am doing the best I am capable of

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-41. There's usually some part of my body that is giving me trouble

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-42. I am often worried about my physical health

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-43. I am religious and consider myself to be a member of a religious group

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-44. I feel that I am a worthy person

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-45. I feel that I am growing as a person

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-46. The summers are too hot for me ever to feel comfortable

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-47. My life has a nice routine to it

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-48. I am able to confide my innermost thoughts and feelings to at least one close and intimate friend

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-49. In groups, I usually feel that my opinions are inferior to those of other people

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

NSI-50. My educational achievements are appropriate given my ability

Strong Disagreement	Moderate Disagreement	Slight Disagreement	Slight Agreement	Moderate Agreement	Strong Agreement
-3	-2	-1	+1	+2	+3

The Meaning in Life Questionnaire (MLQ; Steger, Frazier, Oishi, Kaler 2006)

Please take a moment to think about what makes your life feel important to you. Please respond to the following statements as truthfully and accurately as you can, and also please remember that these are very subjective questions and that there are no right or wrong answers.

MLQ 1. I understand my life's meaning.

Absolutely Untrue	Mostly Untrue	Somewhat Untrue	Can't Say True or False	Somewhat True	Mostly True	Absolutely True
1	2	3	4	5	6	7

MLQ 2. I am looking for something that makes my life feel meaningful.

Absolutely Untrue	Mostly Untrue	Somewhat Untrue	Can't Say True or False	Somewhat True	Mostly True	Absolutely True
1	2	3	4	5	6	7

MLQ 3. I am always looking to find my life's purpose.

Absolutely Untrue	Mostly Untrue	Somewhat Untrue	Can't Say True or False	Somewhat True	Mostly True	Absolutely True
1	2	3	4	5	6	7

MLQ 4. My life has a clear sense of purpose.

Absolutely Untrue	Mostly Untrue	Somewhat Untrue	Can't Say True or False	Somewhat True	Mostly True	Absolutely True
1	2	3	4	5	6	7

MLQ 5. I have a good sense of what makes my life meaningful.

Absolutely Untrue	Mostly Untrue	Somewhat Untrue	Can't Say True or False	Somewhat True	Mostly True	Absolutely True
1	2	3	4	5	6	7

MLQ 6. I have discovered a satisfying life purpose.

Absolutely Untrue	Mostly Untrue	Somewhat Untrue	Can't Say True or False	Somewhat True	Mostly True	Absolutely True
1	2	3	4	5	6	7

MLQ 7. I am always searching for something that makes my life feel significant.

Absolutely Untrue	Mostly Untrue	Somewhat Untrue	Can't Say True or False	Somewhat True	Mostly True	Absolutely True
1	2	3	4	5	6	7

MLQ 8. I am seeking a purpose or mission for my life.

Absolutely Untrue	Mostly Untrue	Somewhat Untrue	Can't Say True or False	Somewhat True	Mostly True	Absolutely True
1	2	3	4	5	6	7

MLQ 9. My life has no clear purpose. (Reverse coded)

Absolutely Untrue	Mostly Untrue	Somewhat Untrue	Can't Say True or False	Somewhat True	Mostly True	Absolutely True
7	6	5	4	3	2	1

MLQ 10. I am searching for meaning in my life.

Absolutely Untrue	Mostly Untrue	Somewhat Untrue	Can't Say True or False	Somewhat True	Mostly True	Absolutely True
1	2	3	4	5	6	7

Positive Affect Negative Affect Scale (PANAS, Watson Clark Tellegan 1988)

This scale consists of a number of words that describe different feelings and emotions. Read each item and then mark the appropriate answer in the space next to that word. Indicate to what extent you have felt this way during the past 30 days.

1. interested

very slightly or not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

2. distressed

very slightly or not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

3. excited

very slightly or not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

4. guilty

very slightly or not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

5. scared

very slightly or not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

6. upset

very slightly or not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

7. strong

very slightly or not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

8. hostile

very slightly or not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

9. enthusiastic

very slightly or not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

10. proud

very slightly or not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

11. irritable

very slightly or not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

12. alert

very slightly or not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

13. ashamed

very slightly or not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

14. inspired

very slightly or not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

15. nervous

very slightly or not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

16. determined

very slightly or not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

17. attentive

very slightly or not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

18. jittery

very slightly or not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

19. active

very slightly or not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

20. afraid

very slightly or not at all	a little	moderately	quite a bit	extremely
1	2	3	4	5

Physical Health Questionnaire (PHQ; Schat, Kelloway, & Desmarais, 2005)

The following items focus on how you have been feeling *physically* during ***the past 30 days***. Please respond by clicking on the appropriate number.

Over the past 30 days … Not at all	rarely	Once in a while	Some of the time	Fairly often	Often	All of the time
PHQ1. How often have you had difficulty getting to sleep at night?						
1	2	3	4	5	6	7
PHQ2. How often have you woken up during the night?						
1	2	3	4	5	6	7
PHQ3. How often have you had nightmares or disturbing dreams?						
1	2	3	4	5	6	7
PHQ4. How often has your sleep been peaceful and undisturbed?						
1	2	3	4	5	6	7

Over the past 30 days … Not at all	rarely	Once in a while	Some of the time	Fairly often	Often	All of the time
PHQ5. How often have you experienced headaches?						
1	2	3	4	5	6	7
PHQ6. How often did you get a headache when there was a lot of pressure on you to get things done?						
1	2	3	4	5	6	7
PHQ7. How often did you get a headache when you were frustrated because things were not going the way they should have or when you were annoyed at someone?						
1	2	3	4	5	6	7

Over the past 30 days … Not at all	rarely	Once in a while	Some of the time	Fairly often	Often	All of the time

PHQ8. How often have you suffered from an upset stomach (indigestion)?

1	2	3	4	5	6	7

PHQ9. How often did you have to watch that you ate carefully to avoid stomach upsets?

1	2	3	4	5	6	7

PHQ10. How often did you feel nauseated ("sick to your stomach")?

1	2	3	4	5	6	7

PHQ11. How often were you constipated or did you suffer from diarrhea?

1	2	3	4	5	6	7

Over the past 30 days …		Once in a	Some of the	Fairly		All of
Not at all	rarely	while	time	often	Often	the time

PHQ12. How often have you had minor colds (that made you feel uncomfortable but didn't keep you sick in bed or make you miss work/school)?

1	2	3	4	5	6	7

PHQ13. How often have you had respiratory infections more severe than minor colds (such as bronchitis sinusitis, etc.) that "laid you low"?

1	2	3	4	5	6	7

PHQ14. If you had a bad cold or the flu, how often did it last longer than it should?

1	2	3	4	5	6	7

Extrinsic, Intrinsic, and Quest (Allport & Ross, 1967; Batson & Schoenrade, 1991).

Extrinsic Items

How strongly do you agree or disagree with the following statements?

E1. Although I believe in my religion, I feel there are many more important things in my life.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

E2. It does not matter so much what I believe so long as I lead a moral life.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

E3. The primary purpose of prayer is to gain relief and protection.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

E4. The synagogue, church, cathedral, monastery, mosque, madrasah, mandir, Dacheng Hall, pagoda, stupa, honden, haiden, tori, or other places of worship are most important as places to form good social relationships.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

E5. What religion offers me most is comfort when sorrows and misfortune strike.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

E6. I pray chiefly because I have been taught to pray.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

E7. Although I am a religious person, I refuse to let religious considerations influence my everyday affairs.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

E8. A primary reason for my interest in religion is that worship at my temple, mosque, synagogue, church, mandir, Confucian temple, pagoda, stupa, honden, haiden, or torii is a congenial social activity.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

E9. Occasionally I find it necessary to compromise my religious beliefs in order to protect my social and economic well-being.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

E10. One reason for my being a member of my mandir, pagoda, stupa, honden, haiden, tori, temple, mosque, synagogue, church, or other religious organization is that such membership helps to establish a person in the community (e.g., make friends, establish social contacts).

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

E11. The purpose of prayer is to secure a happy and peaceful life.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

Intrinsic Items

How strongly do you agree or disagree with the following statements?

i1. It is important for me to spend periods of time in private religious thought and meditation.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

i2. If not prevented by unavoidable circumstances, I attend Friday Prayers, Catholic Mass, Protestant church service, Jewish Shabbot morning service, the Hindu Sunday evening Puja, or other worship services.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

i3. I try hard to carry my religion over into all my other dealings in life.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

i4. The prayers I say when I am alone carry as much meaning and personal emotion as those said by me during public services.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

i5. Quite often, I have been keenly aware of the presence of Allah, Brahmā, Christ, God, the Holy Spirit, Holy Immortals, Krishna, Śiva, Vishnu, a higher power, or other diving being.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

i6. I read literature about my faith.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

i7. If I were to join a religious group, I would prefer to join a Torah, Bible, Koran, Veda, Tipitaka, Tao Tê Ching, Gospel, Taiping Jing, or other religious text study group rather than a social fellowship.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

i8. My religious beliefs are what really lie behind my whole approach to life.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

i9. Religion is especially important to me because it answers many questions about the meaning of life.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

Quest Items

How strongly do you agree or disagree with the following statements?

Q1. I was not very interested in religion until I began to ask questions about the meaning and purpose of my life.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

Q2. I have been driven to ask religious questions out of a growing awareness of the tensions in my world and in my relation to my world.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

Q3. My life experiences have led me to rethink my religious convictions.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

Q4. God was not very important for me until I began to ask questions about the meaning of my own life.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

Q5. It might be said that I value my religious doubts and uncertainties.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

Q6. For me, doubting is an important part of what it means to be religious.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

Q7. (-) I find religious doubts upsetting.

strongly disagree				neutral				strongly agree
9	8	7	6	5	4	3	2	1

Q8. Questions are far more central to my religious experience than are answers.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

Q9. As I grow and change, I expect my religion also to grow and change.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

Q10. I am constantly questioning my religious beliefs.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

Q11. (-) I do not expect my religious convictions to change in the next few years.

strongly disagree				neutral				strongly agree
9	8	7	6	5	4	3	2	1

Q12. There are many religious issues on which my views are still changing.

strongly disagree				neutral				strongly agree
1	2	3	4	5	6	7	8	9

The Spiritual Experience Index - Revised (Genia, 1997).

Spiritual Support

SS1. I often feel strongly related to a power greater than myself.

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
1	2	3	4	5	6

SS2. My faith gives my life meaning and purpose.

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
1	2	3	4	5	6

SS3. My faith is a way of life.

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
1	2	3	4	5	6

SS4. I often think about issues concerning faith.

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
1	2	3	4	5	6

SS5. My faith is an important part of my individual identity.

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
1	2	3	4	5	6

SS6. My relationship to God, Allah, Jesus, Brahmā, Shiva, Krishna, Buddha, Tao, or other Higher Power is experienced as unconditional love.

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
1	2	3	4	5	6

SS7. My faith helps me to confront tragedy and suffering.

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
1	2	3	4	5	6

SS8. I gain spiritual strength by trusting in a higher power.

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
1	2	3	4	5	6

SS9. My faith is often a deeply emotional experience.

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
1	2	3	4	5	6

SS10. I make a conscious effort to live in accordance with my spiritual values.

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
1	2	3	4	5	6

SS11. My faith enables me to experience forgiveness when I act against my moral conscience.

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
1	2	3	4	5	6

SS12. Sharing my faith with others is important for my spiritual growth.

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
1	2	3	4	5	6

SS13. My faith guides my whole approach to life.

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
1	2	3	4	5	6

Spiritual Openness Subscale

SO1. I believe that there is only one true faith. (responses are reverse-coded for this item)

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
6	5	4	3	2	1

SO2. Ideas from faiths different from my own may increase my understanding of spiritual truth.

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
1	2	3	4	5	6

SO3. One should not marry someone of a different faith. (responses are reverse-coded for this item)

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
6	5	4	3	2	1

SO4. I believe that the world is basically good.

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
1	2	3	4	5	6

SO5. Learning about different faiths is an important part of my spiritual development.

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
1	2	3	4	5	6

SO6. I feel a strong spiritual bond with all of humankind.

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
1	2	3	4	5	6

SO7. I never challenge the teachings of my faith. (responses are reverse-coded for this item)

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
6	5	4	3	2	1

SO8. My spiritual beliefs change as I encounter new ideas and experiences.

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
1	2	3	4	5	6

SO9. Persons of different faiths share a common spiritual bond.

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
1	2	3	4	5	6

SO10. I believe that the world is basically evil. (responses are reverse-coded for this item)

strongly disagree	moderately disagree	slightly disagree	slightly agree	moderately agree	strongly agree
6	5	4	3	2	1

The Religious Background and Behaviors Questionnaire (Connors, Tonigan, & Miller, 1996).

RBBQ1. Which of the following best describes you at the present time? (check one)

0 Atheist: I do not believe in God, Buddha, or a Higher Power
1 Agnostic: I believe we can't really know about God, Buddha, or a Higher Power
2 Unsure: I don't know what to believe about God, Buddha, or a Higher Power
3 Spiritual: I believe in God, Buddha, or a Higher Power, but I am not religious
4 Religious: I believe in God, Buddha, or a Higher Power and practice religion

For the past 30 days, how often have you done the following? (Click on one number for each line.)

RBB2. Thought about God, Buddha, or a Higher Power

Never	Rarely	Once a month	Twice a month	Once a week	Twice a week	Almost daily	More than once a day
0	1	2	3	4	5	6	7

RBB3. Prayed

Never	Rarely	Once a month	Twice a month	Once a week	Twice a week	Almost daily	More than once a day
0	1	2	3	4	5	6	7

RBB4. Meditated

Never	Rarely	Once a month	Twice a month	Once a week	Twice a week	Almost daily	More than once a day
0	1	2	3	4	5	6	7

RBB5. Attended worship service

Never	Rarely	Once a month	Twice a month	Once a week	Twice a week	Almost daily	More than once a day
0	1	2	3	4	5	6	7

RBB6. Read-studied Scriptures, holy writings

Never	Rarely	Once a month	Twice a month	Once a week	Twice a week	Almost daily	More than once a day
0	1	2	3	4	5	6	7

RBB7. Had direct experiences of God

Never	Rarely	Once a month	Twice a month	Once a week	Twice a week	Almost daily	More than once a day
0	1	2	3	4	5	6	7

Have you ever in your life:

RBB8. Believed in God, Buddha, or a Higher Power

Never	Yes, in the past but not now	Yes, and I still do
0	1	2

RBB9. Prayed

Never	Yes, in the past but not now	Yes, and I still do
0	1	2

RBB10. Meditated

Never	Yes, in the past but not now	Yes, and I still do
0	1	2

RBB11. Attended worship services regularly

Never	Yes, in the past but not now	Yes, and I still do
0	1	2

RBB12. Read Scriptures or holy writings regularly?

Never	Yes, in the past but not now	Yes, and I still do
0	1	2

RBB13. Had direct experiences of God?

Never	Yes, in the past but not now	Yes, and I still do
0	1	2

Behavioral and Faith Scale (Nielson, 1995).

Personal Religious Behavior

PRB1. Before a serious decision, I pray or meditate for inspiration.

strongly disagree								strongly agree
1	2	3	4	5	6	7	8	9

PRB2. I read inspirational writings often.

strongly disagree								strongly agree
1	2	3	4	5	6	7	8	9

PRB 3. I spend time in prayer or meditation every day.

strongly disagree								strongly agree
1	2	3	4	5	6	7	8	9

PRB 4. I read about religion often.

strongly disagree								strongly agree
1	2	3	4	5	6	7	8	9

PRB 5. God, Buddha, or a Higher Power is in my thoughts daily.

strongly disagree								strongly agree
1	2	3	4	5	6	7	8	9

PRB 6. I am interested in religion.

strongly disagree								strongly agree
1	2	3	4	5	6	7	8	9

PRB 7. I often pray or meditate, even in public.

strongly disagree								strongly agree
1	2	3	4	5	6	7	8	9

Church Behavior

CB1. I am a member of a mosque, synagogue, church, pagoda, stupa, honden, haiden, tori, or other spiritual organization.

strongly disagree								strongly agree
1	2	3	4	5	6	7	8	9

CB2. I attend a synagogue, mosque, church, pagoda, stupa, honden, haiden, tori, or other spiritual place.

strongly disagree								strongly agree
1	2	3	4	5	6	7	8	9

Science Behavior

SB1. I read about science.

strongly disagree								strongly agree
1	2	3	4	5	6	7	8	9

SB2. I am interested in science.

strongly disagree								strongly agree
1	2	3	4	5	6	7	8	9

SB3. I talk with other people about science.

strongly disagree								strongly agree
1	2	3	4	5	6	7	8	9

Faith

F1. Faith is central to my life.

strongly disagree								strongly agree
1	2	3	4	5	6	7	8	9

F2. Trust in God, Brahmā, Shiva, Krishna, Vishnu, Buddha, Tao, or a Supreme Being is more important than skepticism.

strongly disagree								strongly agree
1	2	3	4	5	6	7	8	9

F3. Every day, faith gives meaning to my life.

strongly disagree								strongly agree
1	2	3	4	5	6	7	8	9

F4. I have better things to do than "being religious." (responses are reverse-coded for this item)

strongly disagree								strongly agree
9	8	7	6	5	4	3	2	1

F5. Faith is more important than anything else.

strongly disagree								strongly agree
1	2	3	4	5	6	7	8	9

F6. I have a friend who would benefit from having more faith in God, Brahmā, Shiva, Krishna, Vishnu, Buddha, Tao, or a Higher Power.

strongly disagree								strongly agree
1	2	3	4	5	6	7	8	9

F7. Faith in God, Brahmā, Shiva, Krishna, Vishnu, Buddha, Tao, or a Higher Power can improve one's relationships with other people.

strongly disagree								strongly agree
1	2	3	4	5	6	7	8	9

F8. My faith in God, Buddha, or a Higher Power has helped me to deal effectively with other people.

strongly disagree								strongly agree
1	2	3	4	5	6	7	8	9

F9. My faith and beliefs are the best way to understand eternal truth.

strongly disagree								strongly agree
1	2	3	4	5	6	7	8	9

F10. My faith in God, Brahmā, Shiva, Krishna, Vishnu, Buddha, Tao, or a Higher Power does not benefit me in my work. (responses are reverse-coded for this item)

strongly disagree								strongly agree
9	8	7	6	5	4	3	2	1

F11. I have learned more through faith than through experience.

strongly disagree								strongly agree
1	2	3	4	5	6	7	8	9

Militant Extremist Mind Set (Stankov, Saucier, & Knežević, 2010)

MEM1. We should never use violence as a way to try to save the world. (-)

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
5	4	3	2	1

MEM2. Armed struggle is the only way that youths can redeem themselves and their society.

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
1	2	3	4	5

MEM3. All problems can be solved through negotiations and compromise. (-)

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
5	4	3	2	1

MEM4. Killing is justified when it is an act of revenge.

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
1	2	3	4	5

MEM5. If violence does not solve problems, it is because there was not enough of it.

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
1	2	3	4	5

MEM6. The only way to teach a lesson to our enemies is to threaten their lives and make them suffer.

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
1	2	3	4	5

MEM7. Our enemy's children are like scorpions; they need to be squashed before they grow up.

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
1	2	3	4	5

MEM8. War is the beginning of salvation.

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
1	2	3	4	5

MEM9. Those who claim to be against the use of any form of force are on their way to becoming slaves.

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
1	2	3	4	5

MEM10. A good person has a duty to avoid killing any living human being. (-)

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
5	4	3	2	1

MEM11. Today the human race is on the edge of an enormous calamity.

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
1	2	3	4	5

MEM12. Modern governments have overstepped moral bounds and no longer have a right to rule.

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
1	2	3	4	5

MEM13. Evil has been re-incarnated in the cult of markets and the rule of multinational companies.

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
1	2	3	4	5

MEM14. The world is headed for destruction.

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
1	2	3	4	5

MEM15. Our people are in danger, everybody is trying to divide us and hurt us.

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
1	2	3	4	5

MEM16. The present-day world is vile and miserable.

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
1	2	3	4	5

MEM17. Only an idiot would go into a challenging situation expecting help from a divine power. (-)

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
5	4	3	2	1

MEM18. Those who obey heaven will receive beautiful rewards.

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
1	2	3	4	5

MEM19. I do not believe in life after death. (-)

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
5	4	3	2	1

MEM20. Martyrdom is an act of a true believer in the cause, not an act of terrorism.

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
1	2	3	4	5

MEM21. All suffering in this life is small in comparison to the eternal pleasures one will receive after death.

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
1	2	3	4	5

MEM22. Our civilian or secular government leaders are decent people.

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
1	2	3	4	5

MEM23. If you believe you have received commands from God, Buddha, or a Higher Power you are certainly crazy. (-)

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
5	4	3	2	1

MEM24. At a critical moment, a divine power will step in to help our people.

Strongly and Completely Disagree	Moderately or mostly disagree	neither agree nor disagree	Moderately or mostly agree	Strongly and Completely agree
1	2	3	4	5

Belief in Afterlife scale (Osarchuk & Tatz, 1973).

Instructions: Below are ten statements which you may believe to be true or false. Indicate the level of your belief or disbelief of each item by clicking on the appropriate circle. Please be open and honest in your responding.

BA1. Earthly existence is the only existence we have. (-)

Absolutely Untrue	Mostly likely Untrue	Probably Untrue	Can't Say True or False	Probably True	Mostly Likely True	Absolutely True
7	6	5	4	3	2	1

BA2. In the premature death of someone close some comfort may be found in knowing that in some way the deceased is still existing.

Absolutely Untrue	Mostly likely Untrue	Probably Untrue	Can't Say True or False	Probably True	Mostly Likely True	Absolutely True
1	2	3	4	5	6	7

BA3. Humans die in the sense of "ceasing to exist." (-)

Absolutely Untrue	Mostly likely Untrue	Probably Untrue	Can't Say True or False	Probably True	Mostly Likely True	Absolutely True
7	6	5	4	3	2	1

BA4. The idea of there existing somewhere some sort of afterlife is beyond my comprehension. (-)

Absolutely Untrue	Mostly likely Untrue	Probably Untrue	Can't Say True or False	Probably True	Mostly Likely True	Absolutely True
7	6	5	4	3	2	1

BA5. We will never be united with those deceased whom we knew and loved. (-)

Absolutely Untrue	Mostly likely Untrue	Probably Untrue	Can't Say True or False	Probably True	Mostly Likely True	Absolutely True
7	6	5	4	3	2	1

BA6. There must be an afterlife of some sort.

Absolutely Untrue	Mostly likely Untrue	Probably Untrue	Can't Say True or False	Probably True	Mostly Likely True	Absolutely True
1	2	3	4	5	6	7

BA7. Some existentialists claim that when man dies he ceases to exist: I agree (-)

Absolutely Untrue	Mostly likely Untrue	Probably Untrue	Can't Say True or False	Probably True	Mostly Likely True	Absolutely True
7	6	5	4	3	2	1

BA8. The following statement is true: "There is no such thing as a life after death." (-)

Absolutely Untrue	Mostly likely Untrue	Probably Untrue	Can't Say True or False	Probably True	Mostly Likely True	Absolutely True
7	6	5	4	3	2	1

BA9. Millions of people believe in a life after death: they are correct in so believing.

Absolutely Untrue	Mostly likely Untrue	Probably Untrue	Can't Say True or False	Probably True	Mostly Likely True	Absolutely True
1	2	3	4	5	6	7

BA10. Enjoy yourself on earth, for death signals the end of all existence. (—)

Absolutely Untrue	Mostly likely Untrue	Probably Untrue	Can't Say True or False	Probably True	Mostly Likely True	Absolutely True
7	6	5	4	3	2	1

Belief about God (Leondari & Gialamas, 2009).

Which one of the three descriptions of God most closely reflected your own beliefs:

0. I don't believe in God, Brahmā, Shiva, Krishna, Vishnu, Buddha, Tao, or a Higher Power.

1. God, Brahmā, Shiva, Krishna, Vishnu, Buddha, Tao, or a Higher Power is an abstract and/or impersonal force in the universe

2. God, Brahmā, Shiva, Krishna, Vishnu, Buddha, Tao, or a Higher Power is a living, personal being who is interested and involved in human lives and affairs

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Spiritual Struggles Measure (Rosmarin, Pargament, & Flannelly, 2009).

SSM1. I get mad at God, Brahmā, Shiva, Krishna, Vishnu, Buddha, Tao, or a Higher Power.

N/A	Never	Hardly Ever	Sometimes	Most of the Time	Always
0	1	2	3	4	5

SSM2. I argue with God, Brahmā, Shiva, Krishna, Vishnu, Buddha, Tao, or a Higher Power.

N/A	Never	Hardly Ever	Sometimes	Most of the Time	Always
0	1	2	3	4	5

SSM3. I question whether God, Brahmā, Shiva, Krishna, Vishnu, Buddha, Tao, or a Higher Power can really do anything

N/A	Never	Hardly Ever	Sometimes	Most of the Time	Always
0	1	2	3	4	5

SSM4. I wonder if God, Brahmā, Shiva, Krishna, Vishnu, Buddha, Tao, or a Higher Power cares about me

N/A	Never	Hardly Ever	Sometimes	Most of the Time	Always
0	1	2	3	4	5

SSM5. I question my religious beliefs, faith, and practices

N/A	Never	Hardly Ever	Sometimes	Most of the Time	Always
0	1	2	3	4	5

Demographics

Finally, the next few questions are included to collect some crucial but anonymous demographic information. The information concerning age, religion, nation of origin, ethnicity, family structure, family income, education level, type of government, and so forth are helpful to statistical analysis and generalizability. Any missing data may reduce the reliability, validity, and generalizability from a selected sample to a larger population. Therefore, please answer each question and to the best of your ability. Thank you.

D1. Please indicate your age.

a. 18
b. 19
c. 20
d. 21
e. 22
f. 23
g. 24
h. 25
i. 26 - 30
j. 31 - 35
k. 36- 40
l. 41 - 50
m. 51 – 60

D2. Please indicate your gender.

a. Male
b. Female

D3. Please indicate your mother's religious affiliation at the time of her birth.

a. Atheist
b. Agnostic
c. Spiritual-but-not-religious
d. Buddhist
e. Christian
f. Confucian
g. Jewish
h. Muslim
i. Hindu
j. Shinto
k. Taoist
l. Other - not listed

D4. Please indicate your father's religious affiliation at the time of his birth.

a. Atheist
b. Agnostic
c. Spiritual-but-not-religious
d. Buddhist

e. Christian
f. Confucian
g. Jewish
h. Muslim
i. Hindu
j. Shinto
k. Taoist
l. Other - not listed

D5. Please indicate your own current religious affiliation.

a. Atheist
b. Agnostic
c. Spiritual-but-not-religious
d. Buddhist
e. Christian
f. Confucian
g. Jewish
h. Muslim
i. Hindu
j. Shinto
k. Taoist
l. Other - not listed

D6. Please type in your religious denomination, sect, school of thought, or religious philosophy that you most identify with, for example, Baptist, Catholic, Episcopalian, Hare Krishna, Mormon, Jehovah's Witness, Methodist, Orthodox Jew, Pentecostal, Presbyterian, Reform Jew, Shia Muslim, Shaivism, Shaktism, Sunni Muslim, Vaishnavism, Smartism, Shaktism, Theravāda, Mahāyāna, Vajrayāna, Zhengyi, Quanzhen, or other sect and denomination

_____

D7. Life is sometimes accompanied by tragedy or personal crisis and misfortune. Have you ever experienced a personal crisis, such as the sudden and tragic loss of a loved one or a traumatic life-threatening event, which caused you to suddenly turn towards God for understanding, comfort, or solace?

Yes or No

D8. Have you ever experienced a personal crisis, such as the sudden and tragic loss of a loved one or a traumatic life-threatening event, which caused you to doubt the existence, justice, mercy, or power and ability of God?

Yes or No

D9. Please indicate your primary race or ethnicity.

a. Black African or Negro
b. Black, African-American
c. Arab
d. Arab-American
e. Asian
f. Asian-American
e. Caribbean

f. Hispanic, Hispanic-American, Latino, Mexican, Mexican-American, Puerto Rican, or Spanish origin
g. Native American Indian or Alaskan Native
h. Japanese
i. Chinese
j. White / Caucasian
k. Other – Type in primary race or ethnicity below. For example, Hmong, Laotian, Thai, Pakastani, Somoan, Native Hawaiian, Korean, Asian Indian, Filipino, Vietnamese, Guamanian or Chaorro, Israeli, and so on.

D10. How strongly do you identify with the ethnic group you have just indicated?
1. not at all
2. slightly
3. somewhat
4. moderately
5. strongly
6. completely

D11. Please indicate where you were born (i.e., where you spent most of your childhood).
a. Midwest USA
b. Northeast USA
c . South USA
d. West, Southwest or West Coast USA
e. Africa
f. Caribbean
g. Central / South America
h. Europe
i. Asia
j. Australia
K. Middle East
l. Far East

D12. What is your current family's combined yearly income before taxes?
a. $0 - $14,999
b. $15,000 - $29,999
c. $30,000 - $44,999
d. $45,000 - $59,999
e. $60,000 - $74,999
f. $75,000 - $89,999
g. $90,000 - $100,000
h. $100,000+

D13. What is the highest level of education you achieved?
a. some high school
b. high school diploma or equivalent GED
c. junior college or technical college
d. Bachelor's degree
e. Some graduate school
f. Master's Degree
g. Doctoral Degree

D14. What is your current employment status? (If more than one category applies, think in terms of your main status.)

a. working full-time
b. working part-time
c. temporarily not working
d. unemployed/laid off
e. retired
f. school
g. home-maker
h. other

D15. Your current marital status

a. single
b. married
c. divorced
d. widowed
e. cohabitating (sharing a home with a significant other to whom you are not married)

D16. Your current family structure

a. nuclear family biological mother father married and living together
b. extended family, aunts, uncles, grandparents, or grandchildren living together.
c. parents divorced but both biological parents are or were very important figures in your life.
d. step family in which a stepparent or stepchild lives in the household.
e. you are the single head of household.
f. your mother is, or was, the single head of household.
g. your father is, or was, the single head of household.
h. family in which you or your parents are not married
i. some other family arrangement

D17. What type of government best describes your current form of government?

_____

D18. Do you believe this questionnaire accurately captures and reflects your subjective sense of well-being?

strongly disagree			neutral			strongly agree
1	2	3	4	5	6	7

D19. Comment: Please type in any question concerning well-being that should have been asked but was not, and then type in your answer that would make his survey of well-being more meaningful.

D20. Do you believe this questionnaire accurately captures and reflects your true level of religiousness or spirituality?

strongly disagree			neutral			strongly agree
1	2	3	4	5	6	7

D21. Comment: Please type in any question concerning religion or spirituality that should have been asked but was not, and then type in your answer that would make this survey of religion more meaningful.

[ ]

The end. Thank you for participating in this survey. You have made a contribution to eudaimonic well-being by selflessly engaging in an altruistic activity that helps others rather than oneself.

Thank You

Curriculum Vitae

Wayne Gilbey
wayne.gilbey@waldenu.edu

Education

1978-1992 University of Wisconsin at Superior (UWS):
Master of Science in Education Degree in Psychological Services awarded May 22, 1992.

1974-1975 University of Maryland (European Division):
Degree of Bachelor of Science in Sociology awarded May 25, 1975.

1974 University of Nebraska at Omaha (European Division):
30 Semester Hour Certificate in Criminal Justice.

1974 Hartford Community College (European Division):
12 Semester Hour Certificate in Law Enforcement and a 24 Semester Hour Certificate in Criminal Justice

seminars Grant Writing (1995); Zenith City Arts Writers' Workshop (1991); and Adventures in Attitudes (1979).