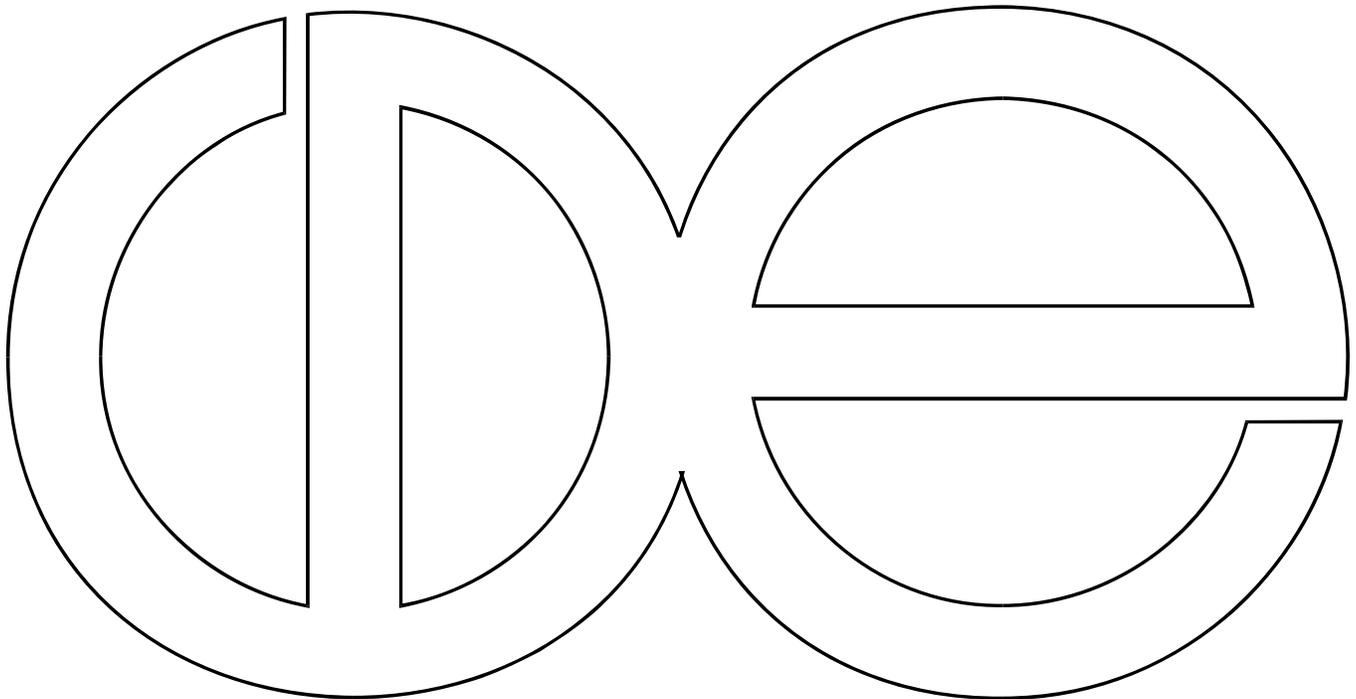


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**Formal Religious Participation and Daily Spiritual
Experiences: Separate, but Equal, Linkages
with Psychological Well-Being?**

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RUNNING HEAD: RELIGI-SPIRITUALITY AND PSYCHOLOGICAL WELL-BEING

Formal Religious Participation and Daily Spiritual Experiences:
Separate, but Equal, Linkages with Psychological Well-Being?

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Abstract

Building on the idea that religiosity and spirituality are related yet distinct phenomena, this study examined whether formal religious participation and daily spiritual experiences are independently and equally associated with diverse dimensions of psychological well-being (negative affect, positive affect, purpose in life, positive relations with others, personal growth, self-acceptance, environmental mastery, and autonomy). Data came from 1,801 respondents in the 2005 National Survey of Midlife in the U.S. (MIDUS). Results indicated that more frequent daily spiritual experiences were independently and consistently associated with better psychological well-being; three salutary associations were stronger among women than men. Although more frequent formal religious participation was independently associated with higher purpose in life, positive relations with others, and (among older adults) personal growth, it was also linked with lower autonomy and environmental mastery. Overall, results suggest that daily spiritual experiences and formal religious participation are linked in separate and non-equal ways with psychological well-being.

Formal Religious Participation and Daily Spiritual Experiences:
Separate, but Equal, Linkages with Psychological Well-Being?

The implications of religion and spirituality for individual well-being captured the attention of many foundational social theorists, including Karl Marx ([1844] 1970), Sigmund Freud (1928), Emile Durkheim (1912 [1995]), William James ([1902] 1912), Max Weber ([1904] 1958), and Abraham Maslow (1954). Over the past decades, there has been renewed interest in systematically exploring the interface between religi-spirituality and psychological well-being. Drawing across studies from this body of research, several recent review articles have concluded that there is a modest salutary association between various aspects of religi-spirituality and psychological well-being (Hackney and Sanders 2003; Koenig and Larson 2001; Sawatzky, Ratner, and Chiu 2005; Smith, McCullough, and Poll 2003).

Although scholars have noted methodological and conceptual improvements in studies on religi-spirituality and individual well-being over the past several years (Hill and Pargament 2003; Miller and Thoresen 2003; Weaver et al. 2005), important gaps in understanding remain within this area. The purpose of this study was to address one primary gap by examining the extent to which religiosity and spirituality—as phenomena that are related yet distinct from one another—have unique influences on individuals' psychological well-being. To accomplish this aim, we drew on data from the 2005 National Survey of Midlife in the U.S. (MIDUS) and investigated whether frequency of formal religious participation and daily spiritual experiences are independently and equally associated with diverse and theoretically-derived dimensions of psychological well-being. We also examined the extent to which associations between formal

religious participation, daily spiritual experiences, and psychological well-being differ by gender and age.

Theoretical Background

Although the terms *religiosity* and *spirituality* are often used interchangeably, and although religious and spiritual phenomena often overlap in people's lived experiences, many scholars have posited that religiosity and spirituality can be conceptually distinguished from each other. Integrating across previous conceptualizations of religiosity and spirituality (Berry 2005; Fetzer Institute/National Institute on Aging Working Group 1999; Hill and Pargament, 2003; James 1902[1912]; Miller and Thorensen 2003; Prasinis 1992; Underwood and Teresi 2002; Vaillant Forthcoming), we use the term *religiosity* to refer to the interpersonal and institutional aspects of religi-spirituality that are derived from engaging with a formal religious group's doctrines, values, traditions, and co-members. By contrast, we use the term *spirituality* to refer to the psychological experiences of religi-spirituality that relate to an individual's sense of connection with a transcendent (be it a single deity, multiple deities, an unnamed force, or anything else considered to be larger than one's self), integration of self, and feelings of awe, gratitude, compassion, and forgiveness. To further clarify this distinction between religiosity and spirituality, we offer as an example the related-yet-distinct spiritual and religious components of an individual reciting a formal prayer in a religious/spiritual service. The religious aspects of this behavior include the fact that the prayer is derived from and recited with a larger social group to which the individual might feel belonging. The spiritual aspects of this behavior include the sense of transcendence and awe that the individual might feel when reciting the prayer.

Although religiosity and spirituality can be considered two related-yet-distinct dimensions of a broad domain of human experience, it is important to recognize that religiosity

and spirituality—even when focusing on aspects of the phenomena that can be distinguished from one and other—can be considered multidimensional constructs in their own right. For example, whereas one person might experience institutional religious life by belonging to a congregation, another person might experience religiosity through identifying with a particular religious affiliation. Similarly, while one person might experience spirituality through their feelings of awe in the presence of nature, others might experience spirituality by their feelings of connection with a higher power while engaging in a community service.

The multidimensional nature of religious and spiritual phenomena poses a challenge to examinations of the interface between religiosity, spirituality, and individual well-being. As Pargament (2002) stated, “Questions about the general efficacy of religion are no more helpful than questions about the general efficacy of medicine, psychotherapy, or graduate education. They should give way to the more difficult but more appropriate question, How helpful or harmful are particular kinds of religious expressions for particular people dealing with particular situations in particular social contexts according to particular criteria of helpfulness and harmfulness?” (p. 178). Recognizing the importance of scholarship that examines associations between particular aspects of religiosity, spirituality, and psychological well-being, this study specifically investigated linkages between formal religious participation as a manifestation of institutional/interpersonal religious behavior (i.e., religiosity), daily spiritual experiences as a manifestation of psychological spiritual behavior (i.e., spirituality), and eight different dimensions of psychological well-being.

Formal social scientific theorizing on religion, spirituality, and individual well-being provide a strong foundation for positing that formal religious participation and daily spiritual experiences would exhibit separate, but equal, linkages with psychological well-being. For

example, Emile Durkheim's ([1897] 1951) classic theorizing on the importance of social integration for individuals' well-being suggests how religious participation—net of its potential association with individuals' spiritual experiences—might lead to individuals' better psychological well-being. First, Durkheim postulated that social institutions like religion can protect individuals from *egoism*—a state in which an individual is insufficiently connected to the broader social groups to which he or she belongs. Durkheim posited that social institutions can promote well-being by providing individuals a sense of purpose and meaning through collective goals, as well as by allowing them access to group resources in times of need. Durkheim also identified the potential utility of institutions like religion as a resource to help people avoid *anomie*—a state in which an individual is insufficiently structured and constrained by social institutions. Durkheim posited that without society to discipline individual passions, individuals desire more than they can attain and that this excessive desire can “condemn oneself to a state of perpetual unhappiness” (p. 248). Therefore, engagement with institutions like religion can serve to temper individuals' desires and thereby help them to achieve better psychological well-being.

Much of the contemporary theorizing on mechanisms through which religiosity affects health and well-being is congruent with Durkheim's perspectives on the salutary effects of social institutions like religion. For example, scholars have suggested that religious involvement promotes individuals' well-being by providing them access to social support, a source from which to cultivate social identity, as well as a factor that encourages individuals to avoid negative health behaviors (George, Ellison, and Larson 2002; Greenfield and Marks, Forthcoming). Some scholars, however, have criticized such theorizing for its predominant focus on biopsychological processes that have little to do with the more spiritual aspects of religion (see Pargament 2002, for a discussion).

Building on the idea that religiosity might promote psychological well-being through processes that are somewhat unique from those of secular life, scholars have advanced other theories focusing on how spiritual experiences—net of their potential association with formal religious participation—can promote individuals' well-being. Vaillant (Forthcoming), for example, has discussed spirituality as the experiences of positive emotions that result from a sense of connection with others and a transcendent. Such emotions include faith, hope, love, forgiveness, gratitude, and compassion—all which suggest strong linkages between individuals' spiritual experiences and their psychological well-being. Vaillant recognizes that spiritual experiences oftentimes intricately overlap with aspects of institutional religious life. Nevertheless, conceptualizing spiritual experiences as being uniquely rooted in humans' neurobiology, Vaillant suggests that spiritual experiences, regardless of the degree to which they are derived from more culturally based forms of religiosity, can promote psychological well-being.

In sum, theorizing on the particular ways through which religiosity as an institutional-interpersonal experience and spirituality as a phenomenological-psychological experience affect well-being suggests that formal religious participation and daily spiritual experiences might have separate, but equally important, linkages with better psychological well-being.

Empirical Background

Building on the large number of empirical studies that have examined linkages between religiosity, spirituality, and well-being over the past several decades, scholars have integrated across findings to provide a summary understanding of the extent to which religiosity and spirituality are associated with psychological well-being. For example, Smith, McCullough, and Poll (2003) conducted a meta-analysis across 147 investigations of the associations between

religi-spirituality and depressive symptoms and found a modest, but robust, inverse association. Similarly, Sawatzky, Ratner, and Chiu (2005) conducted a meta-analysis across 51 studies on associations between religi-spirituality and quality of life. Results from this study also indicated a moderately salutary effect of religi-spirituality on psychological well-being. In both meta-analyses, the authors observed that much of the variance among estimates from each of the studies was partly attributable to their use of different measures of religiosity and spirituality. Moreover, neither meta-analysis distinguished between studies that examined the potentially unique psychological implications of religious participation in contrast to spiritual experiences.

Recognizing the need for “a new generation of studies...to examine the link to health of different domains of religious engagement as well as to compare different groups of people for whom the strength of the religion-health association seems to vary” (p. 2848), Maselko and Kubzansky (2006) used data from respondents in the 1998 General Social Survey (with a mean age of 44.67 years) to investigate the potentially independent linkages of formal religious participation, private religious participation, and spiritual experiences with several aspects of psychological well-being. Results indicated that among both men and women, reporting weekly religious participation and having a daily spiritual experience (“feeling God’s love directly or through others, feeling inner peace, feeling God’s presence, and/or feeling touched by the beauty of creation”) were both independently associated with higher levels of global happiness. Also among both men and women, weekly religious participation—but not daily spiritual experience—was associated with lower levels of psychological distress; and among men only, weekly religious participation was associated with higher levels of life satisfaction.

This study aimed to expand upon the suggestive population study of Maselko and Kubzansky (2006) by augmenting the exploration of linkages between religiosity, spirituality,

and psychological well-being to include a wider array of outcomes that more fully address the multidimensionality of psychological well-being. Findings from previous studies that simultaneously have examined multiple dimensions of psychological well-being suggest that different patterns of associations between religiosity, spirituality, and well-being are likely to emerge across diverse dimensions of psychological well-being (e.g., Frasier, Mintz, and Mobley 2005; Krause et al. 1999; Maselko and Kubzansky 2006). Therefore, building on research that has established that negative and positive affect are not two ends of a linear, bipolar continuum (Bradburn, 1969), this study investigated both positive affect and negative affect. In addition to these aspects of well-being that focus on individuals' moods and emotions, we also examined six other dimensions of psychological well-being that address experiences of well-being derived from fruitful engagement with one's psychosocial world. Ryff posited these dimensions by integrating across theoretical insights from developmental, clinical, and social psychological theorizing on optimal states of well-being (see Ryff and Keyes, 1995, for a discussion). The six dimensions she proposed, and for which she validated scales, include autonomy (sense of self-determination), environmental mastery (the capacity to manage effectively one's life and surrounding world), purpose in life (the belief that one's life is purposeful and meaningful), positive relations with others (having quality relations with others), personal growth (feelings of continued growth and development as a person), and self-acceptance (positive evaluations of oneself and one's past life). Recent empirical work on the multidimensionality of psychological well-being has indicated that Ryff's proposed dimensions of positive psychosocial functioning are empirically related to, yet still distinct from, positive and negative affect (Keyes, Ryff, and Shmotkin, 2002).

In addition to extending previous work on religiosity, spirituality, and psychological well-being by considering diverse and theoretically-derived dimensions of psychological well-being, this study also aimed to advance understanding in this area by examining whether associations between religiosity, spirituality, and psychological well-being vary across particular subgroups—including men and women, as well as older and younger adults. Previous research suggests that in the U.S., women report being more religious on a variety of measures than men, and older adults report being more religious than younger adults (Beit-Hallahmi and Argyle 1998; de Vaus and McAllister 1987). Nevertheless, few studies have examined empirically whether the associations between religiosity, spirituality, and psychological well-being differ across gender and/or age, and studies that have investigated subgroup differences have yielded inconsistent results. For example, Maseko and Kubzanky (2006) reported that more frequent religious service attendance was associated with fewer depressive symptoms among both men and women, but particularly among men; Mirola (1999) found that a higher level of religious involvement was associated with fewer depressive symptoms among women, but not among men; and Norton and colleagues (2006) found that a higher level of religious involvement was associated with decreased likelihood of depression among women, but increased likelihood of depression among men.

Drawing on theoretical and empirical work regarding men's and women's, as well as older and younger adults', experiences of religiosity, spirituality, and psychological well-being, we predicted that spiritual experiences and religious participation would be more powerful predictors of women's and older adults' psychological well-being than men's and younger adults' psychological well-being. First, both theory and previous empirical findings suggest that religious involvement is most beneficial for those who face social disadvantages (e.g., Marx

1844 [1970]; Schieman, Nguyen, and Elliott 2003). Because women and older adults, on average, occupy positions of lower social status than do their counterparts, religi-spirituality might be particularly important for their psychological well-being. Second, differences in how women and older adults' experience their sense of self in relation to others might also make formal religious participation and daily spiritual experiences especially important for these groups' psychological well-being. Many scholars have suggested that women, more than men, define themselves in terms of their relationships with others (e.g., Gilligan 1983; Miller 1976), and that women's psychological well-being may be more sensitive to interpersonal relationships than men's (Brizendine 2006; Nolen-Hoeksema 2001). Because religiosity and spirituality both involve individuals' connection with others, religiosity and spirituality might be particularly important for women's psychological well-being. Regarding age, it has been theorized that as people progress through adulthood, they are more likely to experience losses in physical health and are therefore faced with the developmental challenges of having to transcend their physical self and accept the inevitability of death (Havighurst 1972; Peck 1968). Religiosity and spirituality might mark important processes that aid in the accomplishment of these age-graded tasks. Finally, associations between religiosity, spirituality, and psychological well-being might be larger for older adults than younger adults because of a cohort effect, specifically, the tendency for adults born earlier in the 20th century to have been socialized to value religiosity and spirituality more than adults born later in the century (Levin and Taylor 1997).

Hypotheses

In brief, building from previous theory and empirical findings on religiosity, spirituality, gender, age, and psychological well-being, we posited the following hypotheses:

Hypothesis 1 (H1): Higher levels of formal religious participation and daily spiritual experiences will have separate, but equal, associations with adults' better psychological well-being.

Hypothesis 2 (H2): The associations between formal religious participation, daily spiritual experiences, and psychological well-being will be stronger for women than men.

Hypothesis 3 (H3): The associations between formal religious participation, daily spiritual experiences, and psychological well-being will be stronger for older adults than younger adults.

Method

Data

This study used data from the 2005 National Survey of Midlife in the U.S. (MIDUS). These data were collected as part of a 10-year follow-up study of a U.S. national sample of English-speaking, non-institutionalized adults ages 25 through 74 when first interviewed in 1995. (This study did not use data collected in 1995 because measures of key analytic variables were not included in the survey at that time.) The original MIDUS national probability sample was obtained through random digit dialing, with an oversampling of older respondents and men to ensure the desired distribution on the cross-classification of age and gender. In 1995, 3,485 individuals responded to a telephone survey (70% response rate), and in 2005, 1,801 respondents (approximately 55% of the Time 1 respondents who were still alive at Time 2) completed both a telephone survey and self-administered questionnaire.

Measures

Positive affect and negative affect. Two separate six-item scales new to the 1995 MIDUS (Mroczek and Kolarz 1998) were used to assess respondents' positive and negative affect. To

assess positive affect, respondents were asked how frequently in the last 30 days they felt (a) cheerful, (b) in good spirits, (c) extremely happy, (d) calm and peaceful, (e) satisfied, and (f) full of life. Similarly, to assess negative affect, respondents were asked how frequently in the last 30 days they felt (a) so sad nothing could cheer them up, (b) nervous, (c) restless or fidgety, (d) hopeless, (e) that everything was an effort, and (f) worthless. Respondents answered each of the affect items on a five-point scale (1 = *All of the time*, 5 = *None of the time*). Items were reverse coded and summed such that higher scores indicated more negative or more positive affect. Cronbach's alphas were .89 and .86 for the positive affect and negative affect indexes, respectively.

To ease comparison across models estimated for different well-being outcomes (refer to the data analytic sequence described below), we standardized participants' scores on the dependent variables before estimating statistical models. Standardizing participants' scores on the outcome variables allows for more readily determining the relative size of associations between the independent variables and different aspects of psychological well-being. Table 1 displays descriptive statistics and correlations for all analytic variables.

Purpose in life, positive relations with others, personal growth, environmental mastery, self-acceptance, and autonomy. This study used respondents' scores on Ryff's six subscales to assess psychological well-being (Ryff and Keyes 1995). Respondents were asked to indicate the degree to which they agree or disagree (1 = *Strongly disagree*; 7 = *Strongly agree*) with statements indicating each dimension of psychological well-being, including Purpose in Life (e.g., "I have a sense of direction and purpose in life"), Positive Relations with Others (e.g., "Most people see me as loving and affectionate"), Personal Growth (e.g., "For me, life has been a continuous process of learning, changing, and growth"), Environmental Mastery (e.g., "In

general, I feel I am in charge of the situation in which I live”), Self-Acceptance (e.g., “When I look at the story of my life, I am pleased with how things have turned out”), and Autonomy (“I judge myself by what I think is important, not by the values of what others think is important”). Cronbach’s alpha for each subscale was .74, .76, .78, .61, .84, and .72, respectively.

Daily spiritual experiences. Five items from Underwood and Teresi’s (2002) 16-item Daily Spiritual Experiences scale were adapted to assess respondents’ spiritual experiences in the 2005 MIDUS. To capture daily spiritual experiences from respondents regardless of their faith traditions, items in the MIDUS eliminated references to “God” and “creation,” which were included in the original index. Respondents were asked how often they experienced each of the following on a daily basis (1 = *Often*; 4 = *Never*): (a) a feeling of deep inner peace or harmony, (b) a feeling of being deeply moved by the beauty of life, (c) a feeling of strong connection to all life, (d) a sense of deep appreciation, and (e) a profound sense of caring for others. Responses to the item regarding “deep inner peace or harmony” were not used because of this item’s high degree of conceptual overlap to the index assessing positive affect; similarly, responses to the item regarding “a profound sense of caring for others” were also not used because of this item’s high degree of conceptual overlap with the index assessing positive relations with others. Accordingly, respondents were assigned a summary score on this measure by averaging their scores on items *b*, *c*, and *d* of the index. Cronbach’s alpha for the three-item index was .87.

Formal religious participation. A summary score based on two items was created to measure respondents’ formal religious participation. First, respondents were asked about their frequency of attending religious or spiritual services. Response categories included (a) once a day or more, (b) a few times a week, (c) once a week, (d) one to three times per month, (e) less than once per month, and (f) never. Using the same response categories, respondents also

reported on their frequency of attending/participating in church/temple activities (e.g., dinners, volunteer work, and church related organizations). For each of the two items, respondents who reported attending at least a few times a week were coded 4. Respondents who reported attending once a week or one to three times per month were coded 3. Respondents who reported attending less than once per month were coded 2, and respondents who reported never attending were coded 1. A summary score of respondents' participation in religious community was created by averaging their scores on these two items. The correlation between the two formal religious participation items was .76. The correlation between daily spiritual experiences and formal religious participation was .27 (see Table 1), which provides supports the idea that these constructs are related yet distinct from each other.

Sociodemographic and personality variables. Previous studies have indicated that a variety of sociodemographic and personality characteristics are associated with psychological well-being (e.g., Mroczek and Kolarz 1998), as well as with religiosity and spirituality (e.g., Peacock and Poloma 1999). To provide evidence for associations among formal religious participation, daily spiritual experiences, and psychological well-being independent of other factors, respondents' gender, age, race/ethnicity, education, marital status, parental status, functional health, extraversion, and openness to experience were controlled in all analyses. Dichotomous variables were created for gender (1 = female), marital status (1 = currently married), and parental status (1 = has at least one living biological or adopted child). A categorical variable was created to indicate respondents' educational attainment, including the categories of < 12 years, 12 years (reference group), 13-15 years, and \geq 16 years. A categorical variable was also created to indicate respondents' race/ethnicity, including the categories of non-Hispanic white (reference group), African American, Latina/o, and Other race/ethnicity. Age was

calculated as years since birth at the time of the telephone survey, and household income was assessed by combining respondents' annual income with that of their spouse (if applicable). To assess extraversion, participants were asked to indicate the extent to which the following adjectives described them on a four-point scale (1 = *A lot*; 4 = *Not at all*): (a) outgoing, (b) friendly, (c) lively, (d) active, and (e) talkative. To assess openness to experience, respondents were similarly asked to indicate the extent to which the following adjectives described them on the same four-point scale: (a) creative, (b) imaginative, (c) intelligent, (d) curious, (e) broad-minded, (f) sophisticated, and (g) adventurous. To assess functional limitations, participants were asked to indicate how much their health limits them on a four-point scale (1 = *a lot*; 4 = *not at all*) when: (a) lifting or carrying groceries, (b) climbing several flights of stairs, (c) walking more than a mile, (d) walking several blocks, (e) walking one block, and (f) engaging in moderate activity (e.g., bowling, vacuuming). To assign respondents summary scores on extraversion, openness to experience, and functional limitations, all scale items were reverse-coded, and responses were averaged such that higher scores indicated more on that measure. Cronbach's alpha for the extraversion, openness to experience, and functional health indices were .77, .64, and .94, respectively.

Data Analytic Sequence

The ordinary least squares method was used to estimate multivariate regression models to test the proposed linkages among the variables. To test H1, which posited that spiritual experiences and religious community participation would have independent and equal associations with adults' better psychological well-being, each of the dependent variables were regressed on the sociodemographic and personality variables, as well as the measures of daily spiritual experiences and formal religious participation. To examine H2 and H3, which posited

that the associations between daily spiritual experiences and formal religious participation would be stronger for women and older adults than men and younger adults, we added four interaction terms to each of the models, including daily spiritual experiences by female, formal religious community participation by female, daily spiritual experiences by age, and formal religious community participation by age. To interpret statistically significant interactions, we re-estimated the models that were previously estimated to test H1 for each of the subgroups separately (i.e., men and women; younger and older adults). Results are reported in terms of completely standardized coefficients such that the coefficients indicate the association between a one standard deviation increase in the independent variables and the standard deviation change in the dependent variables.

Results

Linkages between Formal Religious Participation, Daily Spiritual Experiences, and Psychological Well-Being

Models 1 in Tables 2, 3, 4, and 5 display results with respect to H1, which predicted that formal religious participation and daily spiritual experiences would have independent and equal linkages with psychological well-being. Results indicated that having more frequent daily spiritual experiences was consistently and independently associated with better psychological well-being across all outcomes, including lower levels of negative affect ($\beta = -.06, p \leq .01$) and higher levels of positive affect ($\beta = .20, p \leq .001$), purpose in life ($\beta = .16, p \leq .001$), positive relations with others ($\beta = .16, p \leq .01$), personal growth ($\beta = .19, p \leq .001$), environmental mastery ($\beta = .12, p \leq .01$), self-acceptance ($\beta = .21, p \leq .001$), and autonomy ($\beta = .07, p \leq .01$).

By contrast, although more frequent formal religious participation was associated with higher levels of purpose in life ($\beta = .08, p \leq .001$), positive relations with others ($\beta = .06, p \leq$

.01), and personal growth ($\beta = .04, p \leq .05$), frequency of formal religious participation was not associated with levels of positive affect ($\beta = .03, n.s.$), negative affect ($\beta = -.03, n.s.$), or self-acceptance ($\beta = -.01, n.s.$). Furthermore, more frequent formal religious participation was associated with lower levels of environmental mastery ($\beta = -.07, p \leq .01$) and autonomy ($\beta = -.06, p \leq .01$).

An *F*-test was conducted to examine whether the size of the association between daily spiritual experiences and purpose in life ($\beta = .16$) was significantly larger than that of the association between formal religious participation and purpose in life ($\beta = .08$). Results from this test suggested that this difference was statistically significant at a $p \leq .001$ level. An additional *F*-test was conducted to examine the relative size of the associations among daily spiritual experiences, formal religious participation, and positive relations with others. Results from this test likewise suggested that the association between daily spiritual experiences and positive relations with others ($\beta = .16$) was significantly larger than the association between formal religious participation and positive relations with others ($\beta = .06$). Another *F*-test was conducted to examine the relative size of the associations among daily spiritual experiences, formal religious participation, and personal growth. Results from this test also suggested that the association between daily spiritual experiences and personal growth ($\beta = .19$) was significantly larger than the association between formal religious participation and personal growth ($\beta = .04$).

In sum, these results provided only partial support for H1, which predicted that formal religious participation and daily spiritual experiences would have separate *and* equal linkages with better psychological well-being. Spiritual experiences were consistently and beneficially associated with all dimensions of psychological well-being. Only in the case of purpose in life, positive relations with others, and personal growth were both spiritual experiences and religious

participation independently linked to psychological well-being, and in each of these cases, the link between daily spiritual experiences and psychological well-being was stronger (i.e., unequal) than the link between formal religious participation and psychological well-being. Contrary to H1, formal religious participation was not independently associated with negative affect, positive affect, or self-acceptance; furthermore, formal religious participation was linked to lower levels of autonomy and less environmental mastery.

Gender and Age Differences in the Associations between Formal Religious Participation, Daily Spiritual Experiences, and Psychological Well-Being

To test H2 and H3—which predicted that the associations between more frequent formal religious participation, more frequent daily spiritual experiences, and better psychological well-being would be stronger among women and older adults—interaction variables were added to each of the previously estimated models. (Refer to Tables 2 and 3, Models 2.) Statistically significant interactions of gender by daily spiritual experiences were found in models estimated for positive affect, purpose in life, and self-acceptance ($\beta = .17, p \leq .05$; $\beta = .21, p \leq .01$; $\beta = .23, p \leq .01$, respectively). To interpret the significant gender by daily spiritual experiences interactions found in models for positive affect, purpose in life, and self-acceptance, we stratified the sample by gender and estimated regression models indicating the unique associations between daily spiritual experiences, formal religious participation, and each of these three outcomes separately for men and women. Although the coefficients for the associations between daily spiritual experiences and each of the outcomes were statistically significant and in the anticipated direction for both men and women, the coefficients were larger for women. Whereas the partial correlation for men between daily spiritual experiences and positive affect was $\beta = .16$ ($p \leq .001$), the partial correlation for women was about 50% larger with $\beta = .24$ ($p \leq .001$).

Similarly, whereas the partial correlation for men between daily spiritual experiences and purpose in life was $\beta = .09$ ($p \leq .01$), the partial correlation for women was more than twice that size with $\beta = .22$ ($p \leq .001$) among women. Finally, whereas the partial correlation for men between daily spiritual experiences and self-acceptance was $\beta = .17$ ($p \leq .001$), the partial correlation for women was 53% larger with $\beta = .26$ ($p \leq .001$).

Among age interactions tested, only the age by formal religious participation variable in the model for personal growth achieved robust statistical significance ($\beta = .06$, $p \leq .01$). To interpret this age by formal religious participation interaction for personal growth, we stratified the sample by age (i.e., < 56 years, ≥ 56 years) and estimated regression models indicating the associations between formal religious participation and personal growth separately for older and younger adults. Results from these analyses indicated that more frequent religious participation was associated with more personal growth among older adults ($\beta = .08$, $p \leq .01$), but was not associated with personal growth among younger adults ($\beta = -.01$, *n.s.*). Results from an *F*-test examining the equality in the size of associations between daily spiritual experiences, formal religious participation, and personal growth for older adults were consistent with results reported for H1. The association between daily spiritual experiences and personal growth ($\beta = .16$) was larger than the association between formal religious participation and personal growth ($\beta = .08$) at a robust level ($p < .001$) among older adults.

In sum, these results provided some evidence in support of H2, which predicted that associations between formal religious participation, daily spiritual experiences, and psychological well-being would be greater for women. Salutary linkages between daily spiritual experiences and positive affect, purpose in life, and self-acceptance were stronger among women than men. Results provided only limited support for H3, which predicted that associations

between formal religious participation, daily spiritual experiences, and psychological well-being would be greater for older adults. Robust evidence for older adults benefiting more than younger adults was found only in the case of linkages between formal religious participation and personal growth.

Discussion

This study aimed to contribute to the emerging literature on the extent to which different aspects of religiosity and spirituality are independently associated with various dimensions of individuals' psychological well-being. Overall, results suggest that institutional religious activity (as indicated by the frequency of individuals' participation in formal religious community) and psychological spiritual activity (as indicated by the frequency of individuals' daily spiritual experiences) are differentially associated with psychological well-being. Notably, higher levels of daily spiritual experiences were associated with better levels of psychological well-being across all eight dimensions examined, whereas associations between more frequent formal religious participation and psychological well-being were largely contingent upon the dimension of psychological well-being under examination.

Overall, results suggest the primacy of daily spiritual experiences over formal religious participation in promoting diverse aspects of individuals' psychological well-being. For dimensions of psychological well-being in which both daily spiritual experiences and religious participation were associated with better outcomes (i.e., personal growth for older adults, and purpose in life and positive relations with others for the entire sample), the associations for daily spiritual experiences were larger than the size of those for formal religious participation. Moreover, more frequent formal religious participation was associated with *worse* psychological well-being on two of the eight dimensions of psychological well-being—environmental mastery

and autonomy. These particular findings provide support for theoretical and empirical work on a “dark side” of religion (e.g., Krause and Wulff 2004; Miller and Thorensen 2003), which suggests that misuses within religion, as well as certain religious beliefs and coping styles, can have adverse effects on individual well-being. Considering that many religious traditions encourage members to adopt widely shared beliefs and to place faith in the control of an external deity, it is likely of substantive significance that this study found that more frequent formal religious participation was associated with less autonomy (i.e., lesser feelings of self-determination) and less environmental mastery (i.e., lesser feelings of being able to manage one's life and surrounding world).

Nevertheless, results of this study are not to be interpreted so as to minimize the potential psychological benefits of formal religious participation. First, although salutary associations between formal religious participation and several dimensions of psychological well-being were smaller than those for daily spiritual experiences, the independent salutary associations between formal religious participation and purpose in life, positive relations with others, and personal growth (among older adults) were still robustly significant. These findings suggest that in terms of these three dimensions of psychological well-being, formal religious participation and daily spiritual experiences exhibit independently important—although unequal—linkages with psychological well-being.

Also, because spiritual-psychological experiences are likely to be derived through formal engagement in religious communities, it is possible that formal religious participation promotes individuals' psychological well-being through enhancing their psychological-spiritual experiences. Findings from supplementary mediation analyses (not shown) support this interpretation with respect to positive affect (but not negative affect, self-acceptance, or personal

growth among younger adults). When formal religious participation was entered into a model that did not include the measure of daily spiritual experiences, formal religious participation was associated at a statistically significant level ($p \leq .01$) with higher levels of positive affect. This model, in conjunction with the primary results of this study (refer again to Table 2, Model 1a), suggests that having more frequent daily spiritual experiences mediates the association between formal religious participation and positive affect. In other words, daily spiritual experiences provide a mechanism through which formal religious participation promotes higher levels of positive affect. In this way, formal religious participation and daily spiritual experiences likely contribute to a single path toward higher levels of positive affect, rather than indicating two independent paths. (In addition to these post-hoc mediation analyses, we also conducted moderation analyses to investigate the extent to which having more frequent daily spiritual experiences enhances the associations between more frequent formal religious participation and psychological well-being and vice-versa. Results did not provide consistently robust evidence in support of multiplicative effects.)

In addition to providing evidence that linkages among spiritual experiences, formal religious participation, and psychological well-being vary across different dimensions of psychological well-being, this study also provides limited, but suggestive, evidence that linkages differ by sociodemographic subgroups. Analyses detected one age difference in the linkage between formal religious participation and personal growth specifically, and gender differences emerged across associations between daily spiritual experiences and three aspects of psychological well-being—positive affect, purpose in life, and self-acceptance. More exploratory work on the ways in which men and women, as well as older and younger adults, experience spirituality and formal religious activities would help to further elucidate the processes through

which sociodemographic differences emerged for these specific aspects of psychological well-being.

The overall conclusions from this study regarding the differential effects of various aspects of religiosity and spirituality—as well as their non-uniform effects across men and women—are congruent with those of Maselko and Kubzansky (2006), who also used U.S. national data to examine the potentially differential associations between daily spiritual experiences, formal religious participation, and several dimensions of psychological well-being. Nevertheless, several of the current study's particular empirical results are not consistent with those of Maselko and Kubzansky. For example, Maselko and Kubzansky found that formal religious participation was more strongly associated with lower levels of distress among men than women, and that daily spiritual experiences were important for both men's and women's happiness; this study, by contrast, found no evidence for gender differences in the associations between formal religious participation and psychological well-being, but did find evidence for gender differences in the associations between daily spiritual experiences and psychological well-being. Additional replication studies that draw on U.S. national data will be important for specifically determining the basis for these inconsistencies, which may include the studies' somewhat different measures, populations, and controlled covariates.

Although our study demonstrates several notable strengths, important limitations remain. First, although previous studies with more sophisticated designs have suggested that increased religious participation leads to enhanced well-being over time (Strawbridge, Shema, and Cohen 2001), given the dearth of longitudinal studies on spiritual experiences specifically, the extent to which daily spiritual experiences cause better psychological well-being or are caused by better psychological well-being remains uncertain. Second, while this study examined subgroup

differences in the associations among formal religious participation, daily spiritual experiences, and psychological well-being in terms of age and gender, this study did not address other potentially important subgroup differences, including differences by education (Schieman, Nguyen, and Elliott 2003) and denominational affiliation (Maselko and Kubzansky, 2006).

Third, while the multi-item index assessing spiritual experiences provides a measure of spirituality that closely fits with this study's theoretical treatment of spirituality, this index does not distinguish between highly spiritual individuals who have arrived at their spirituality through possibly very different means. For example, the current measure of spirituality does not allow for identifying individuals who are highly spiritual because they perceive themselves as having a close relationship with a religiously defined deity versus individuals who are highly spiritual because they feel a more secular or naturalistic sense of transcendence or unselfish love.

Additional studies are necessary to determine whether such divergent sources of spirituality have differential implications for psychological well-being. Fifth, this study examined dimensions of religiosity and spirituality that were purposely conceptually distinct from each other. Additional studies are necessary to examine other dimensions of religiosity and spirituality, such as individuals' frequency of private prayer, religious coping style, and denominational affiliation.

Despite these limitations, results of this study suggest that formal religious participation and daily spiritual experiences have non-equal linkages with psychological well-being; in contrast to formal religious participation, daily spiritual experiences demonstrate more robust and stronger positive associations with psychological well-being. By drawing on theoretically-derived measures of religiosity, spirituality, and psychological well-being, this study helps in contributing to a "next generation" of scholarship aimed at providing a more nuanced understanding of the religious and spiritual contexts for optimal adult psychological health.

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Table 1

Correlations and Descriptives for All Analytic Variables

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26		
1. White ^a	--																											
2. Black ^a	-.57	--																										
3. Latino ^a	-.46	-.05	--																									
4. Other Race/Ethn ^a	-.60	-.06	-.05	--																								
5. < 12 Yrs Ed ^a	.04	-.01	-.02	-.04	--																							
6. 12 Yrs Ed ^a	-.11	.10	.01	.06	-.17	--																						
7. 13-15 Yrs Ed ^a	-.02	.03	.01	-.02	-.31	-.14	--																					
8. 16+ Yrs Ed ^a	.02	-.05	-.00	.03	-.47	-.21	-.40	--																				
9. Income	.05	-.08	.02	-.01	-.13	-.16	-.08	.30	--																			
10. Married ^a	.13	-.15	-.01	-.03	-.06	.04	-.04	.06	.36	--																		
11. Has a Child ^a	.01	-.02	-.01	.01	.00	.10	.03	-.10	.05	.28	--																	
12. Funct Limits	-.01	.02	-.01	.00	.16	.12	.04	-.23	-.25	-.11	.05	--																
13. Extraversion	-.10	.12	.05	-.01	.03	.03	-.02	-.04	.04	-.03	.01	-.09	--															
14. Openness	-.09	.06	.01	.06	-.10	-.13	-.01	.16	.07	-.10	-.09	-.13	.52	--														
15. Female ^a	-.04	.08	.03	-.03	-.01	.08	.08	-.14	-.10	-.17	.07	.14	.09	-.07	--													
16. Age ^a	.06	-.04	-.04	-.02	.10	.02	.00	-.06	-.20	-.07	.11	.28	.05	.02	-.02	--												
17. Relig Partic	-.05	.10	-.02	-.01	-.01	-.01	-.01	.02	-.04	.09	.09	.02	.13	-.02	.10	.11	--											
18. Spirit Exper	-.10	.08	.07	.02	.00	-.05	.03	.03	-.06	-.05	.00	.03	.30	.30	.15	.16	.27	--										
19. Pos Affect	-.03	.05	.00	-.02	-.01	-.03	-.03	.06	.07	.04	.00	-.24	.41	.25	-.03	.16	.14	.32	--									
20. Neg Affect	-.05	.03	.04	.01	.09	.06	.04	-.13	-.10	-.07	-.01	.30	-.25	-.15	.09	-.16	-.00	-.14	-.61	--								
21. Purpose in Life	-.01	.03	-.01	-.01	-.13	-.06	-.05	.17	.19	.12	.04	-.25	.42	.40	-.01	.01	.16	.31	.46	-.43	--							
22. Pos Relations	.04	-.02	-.00	-.06	-.00	.01	.05	.04	.09	.13	.06	-.09	.52	.31	.12	.13	.19	.34	.49	-.39	.61	--						
23. Personal Growth	-.01	.01	.02	-.00	-.15	-.15	.01	.01	-.01	-.27	.45	.52	.04	.01	.12	.37	.43	-.37	.72	.60	.72	.60	--					
24. Envir Mastery	.04	-.01	-.01	-.04	-.07	-.04	-.06	.15	.10	.05	.01	-.22	.29	.31	-.14	.19	.02	.21	.55	-.52	.55	.46	.48	--				
25. Self-Accept	.02	.01	-.02	-.02	-.07	-.05	-.06	.17	.16	.12	.05	-.21	.44	.37	-.07	.15	.11	.34	.62	-.56	.72	.66	.65	.69	--			
26. Autonomy	-.06	.06	.02	.02	-.05	-.03	.01	.07	.01	-.04	-.01	-.08	.33	.41	-.17	.13	-.03	.18	.28	-.28	.43	.39	.44	.51	.50	--		
<i>M</i>	.85	.06	.04	.06	.07	.27	.21	.37	75.09	.67	.87	1.83	3.11	2.92	.55	.52	2.23	2.18	.00	.00	.00	.00	.00	.00	.00	.00	.00	
<i>S.D.</i>	.36	.23	.19	.24	.26	.45	.41	.48	54.99	.47	.34	.89	.58	.54	.50	.50	.95	.68	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	

Notes: Data from the 2005 National Survey of Midlife in the U.S. (MIDUS), $N = 1,801$.

^aMeans for dichotomous variables are reported as proportions.

Table 2

Regression Coefficient Estimates of the Effects of Formal Religious Participation and Daily Spiritual Experiences on Adults' Positive Affect and Negative Affect

	Positive Affect						Negative Affect					
	Model 1a			Model 2a			Model 1b			Model 2b		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β

Race ^a												
Black	.03	(.10)	.01	.04	(.10)	.01	.08	(.10)	.02	.10	(.10)	.02
Latina/o	-.15	(.11)	-.03	-.15	(.11)	-.03	.26	(.12)	.05*	.26	(.12)	.05*
Other Race/Ethn.	-.06	(.09)	-.02	-.06	(.09)	-.02	.06	(.10)	.01	.06	(.09)	.01
Education ^b												
< 12 years	.00	(.09)	.00	.01	(.09)	.00	.17	(.10)	.04 ⁺	.17	(.10)	.04 ⁺
13 - 15 years	-.02	(.06)	-.01	-.02	(.06)	-.01	.00	(.06)	.00	.00	(.06)	.00
≥ 16 years	-.00	(.09)	.00	-.01	(.05)	.00	-.12	(.05)	-.06*	-.12	(.06)	-.06*
Household Income	.00	(.00)	.03	.00	(.00)	.03	-.00	(.00)	-.05 ⁺	-.00	(.00)	-.04 ⁺
Married	.02	(.05)	.01	.02	(.05)	.01	.00	(.06)	.00	-.00	(.06)	-.00
Has Child	-.06	(.07)	-.02	-.06	(.07)	-.02	-.01	(.07)	-.01	-.01	(.07)	-.00
Functional Limit	-.29	(.03)	-.26***	-.30	(.03)	-.26***	.34	(.03)	.31***	.34	(.03)	.30***
Extraversion	.56	(.04)	.33***	.57	(.04)	.33***	-.36	(.05)	-.21***	-.37	(.05)	-.22***
Openness	-.03	(.05)	-.02	-.03	(.05)	-.02	.07	(.05)	.04	.07	(.05)	.04
Female	-.10	(.04)	-.05*	-.27	(.15)	-.13	.10	(.05)	.05**	.46	(.16)	.23**
Age	.36	(.04)	.18***	.28	(.15)	.14 ⁺	-.44	(.05)	-.22***	-.67	(.16)	-.34***
Daily Spiritual Experiences	.29	(.03)	.20***	.20	(.06)	.14	-.09	(.04)	-.06**	-.06	(.06)	-.04
Formal Religious Participation	.03	(.02)	.03	.06	(.04)	.06	-.03	(.03)	-.03	-.03	(.04)	-.03
Female X Daily Spiritual Experiences	--	--	--	.13	(.06)	.17*	--	--	--	-.10	(.07)	-.13
Female X Formal Religious Participation	--	--	--	-.05	(.05)	-.07	--	--	--	-.06	(.05)	-.08
Age X Daily Spiritual Experiences	--	--	--	.04	(.06)	.05	--	--	--	.04	(.07)	.05
Age X Formal Religious Participation	--	--	--	-.01	(.05)	-.01	--	--	--	.07	(.05)	.09
Constant	-1.97	(.16)		-1.84	(.20)		.82	(.18)		.75	(.21)	
R ²	.30			.30			.21			.21		
Valid N	1676			1676			1659			1659		

Source: 2005 National Survey of Midlife in the U.S. (MIDUS), N = 1,801.

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$ (two tailed).

^a Omitted category is non-Hispanic White.

^b Omitted category is 12 years.

Table 3

Regression Coefficient Estimates of the Effects of Formal Religious Participation and Daily Spiritual Experiences on Adults' Purpose in Life and Positive Relations with Others

	Purpose in Life						Positive Relations with Others					
	Model 1a			Model 2a			Model 1b			Model 2b		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β

Race ^a												
Black	.04	(.09)	.01	.04	(.09)	.01	-.24	(.09)	-.05***	-.23	(.10)	-.05***
Latina/o	-.23	(.11)	-.04*	-.23	(.11)	-.04*	-.22	(.11)	-.04*	-.22	(.11)	-.04*
Other Race/Ethn.	-.01	(.09)	-.00	-.01	(.09)	-.00	-.11	(.08)	-.03	-.11	(.09)	-.03
Education ^b												
< 12 years	-.23	(.09)	-.06	-.23	(.09)	-.06	-.10	(.09)	-.02	-.09	(.09)	-.02
13 - 15 years	-.04	(.06)	-.02	-.03	(.06)	-.01	.10	(.05)	.04	.10	(.06)	.04 ⁺
≥ 16 years	.12	(.05)	.06*	.12	(.05)	.06**	.11	(.05)	.06*	.12	(.05)	.06*
Household Income	.00	(.00)	.08***	.00	(.00)	.08***	.00	(.00)	.02	.00	(.00)	.02
Married	.21	(.05)	.10***	.21	(.05)	.10**	.30	(.05)	.14***	.31	(.05)	.14***
Has Child	.08	(.06)	.03	.07	(.06)	.02	.02	(.06)	.01	.02	(.05)	.01
Functional Limit	-.19	(.03)	-.17***	-.19	(.03)	-.17***	-.07	(.02)	-.06**	-.07	(.03)	-.06**
Extraversion	.42	(.04)	.25***	.43	(.04)	.25***	.76	(.04)	.44***	.75	(.04)	.44***
Openness	.36	(.05)	.20***	.35	(.05)	.19***	.07	(.0)	.04	.07	(.05)	.04
Female	.01	(.04)	.01	-.35	(.15)	-.18*	.19	(.04)	.09***	.16	(.15)	.08
Age	.08	(.04)	.04 ⁺	.05	(.15)	.02	.20	(.04)	.10***	-.03	(.15)	-.01
Daily Spiritual Experiences	.23	(.03)	.16***	.15	(.06)	.10**	.24	(.03)	.16***	.20	(.15)	.14***
Formal Religious Participation	.08	(.02)	.08***	-.07	(.04)	-.06	.06	(.02)	.06**	.04	(.10)	.04
Female X Daily Spiritual Experiences	--	--	--	.17	(.06)	.21**	--	--	--	.05	(.06)	.06
Female X Formal Religious Participation	--	--	--	-.00	(.04)	-.01	--	--	--	-.04	(.04)	-.05
Age X Daily Spiritual Experiences	--	--	--	-.01	(.06)	-.02	--	--	--	.03	(.00)	.04
Age X Formal Religious Participation	--	--	--	.03	(.04)	.04	--	--	--	.08	(.00)	.10 ⁺
Constant	-3.08	(.16)		-2.86	(.19)		-3.57	(.16)		-3.43	(.19)	
R ²	.33			.34			.36			.37		
Valid N	1699			1699			1692			1692		

Source: 2005 National Survey of Midlife in the U.S. (MIDUS), N = 1,801.

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$ (two tailed).

^a Omitted category is non-Hispanic White.

^b Omitted category is 12 years.

Table 4

Regression Coefficient Estimates for the Effects of Formal Religious Participation and Daily Spiritual Experiences on Adults' Personal Growth and Environmental Mastery

	Personal Growth						Environmental Mastery					
	Model 1a			Model 2a			Model 1b			Model 2b		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β

Race ^a												
Black	-.16	(.09)	-.04 ⁺	-.15	(.09)	-.03 ⁺	-.04	(.10)	-.01	-.06	(.10)	-.01
Latina/o	-.12	(.10)	-.02	-.11	(.10)	-.02	-.08	(.12)	-.01	-.07	(.12)	-.01
Other Race/Ethn.	-.06	(.08)	-.01	-.06	(.08)	-.02	-.16	(.09)	-.04 ⁺	-.16	(.09)	-.04 ⁺
Education ^b												
< 12 years	-.16	(.08)	-.04 ⁺	-.16	(.08)	-.04 ⁺	.02	(.09)	.01	.02	(.09)	.01
13 - 15 years	-.15	(.05)	.06 ^{**}	.15	(.05)	.06 ^{**}	-.05	(.06)	-.02	-.05	(.06)	-.02
≥ 16 years	.27	(.05)	.13 ^{***}	.28	(.05)	.14 ^{***}	.14	(.06)	.07 ^{**}	.14	(.06)	.07
Household Income	.00	(.00)	.05 ⁺	.00	(.00)	.05 ⁺	.00	(.00)	.04 ⁺	.00	(.00)	.04 ⁺
Married	.04	(.05)	.02	.04	(.05)	.02	.07	(.05)	.03	.07	(.05)	.03
Has Child	.08	(.06)	.03	.08	(.06)	.03	.04	(.07)	.01	.03	(.07)	.01
Functional Limit	-.20	(.02)	-.18 ^{***}	-.21	(.02)	-.18 ^{***}	-.24	(.03)	-.21 ^{***}	-.24	(.03)	-.21
Extraversion	.37	(.04)	.22 ^{***}	.37	(.04)	.22 ^{***}	.28	(.05)	.16 ^{***}	.28	(.05)	.16 ^{***}
Openness	.58	(.04)	.32 ^{***}	.57	(.04)	.31 ^{***}	.28	(.05)	.15 ^{***}	.27	(.05)	.15 ^{***}
Female	.13	(.04)	.07 ^{***}	-.10	(.14)	-.05	-.21	(.05)	-.10 ^{***}	-.61	(.16)	-.30 ^{***}
Age	.04	(.04)	.02	-.13	(.14)	-.06	.46	(.05)	.32 ^{***}	.49	(.16)	.24 ^{**}
Daily Spiritual Experiences	.27	(.03)	.19 ^{***}	.24	(.05)	.16 ^{***}	.18	(.04)	.12 ^{***}	.14	(.06)	.09 ⁺
Formal Religious Participation	.04	(.02)	.04 ⁺	-.02	(.04)	-.02	-.05	(.02)	-.06 ^{**}	-.12	(.04)	-.11 ^{**}
Female X Daily Spiritual Experiences	--	--	--	.11	(.06)	.23 ⁺	--	--	--	.11	(.07)	.13 ⁺
Female X Formal Religious Participation	--	--	--	.00	(.04)	.00	--	--	--	.08	(.05)	.10
Age X Daily Spiritual Experiences	--	--	--	-.05	(.06)	-.06	--	--	--	-.04	(.07)	-.04
Age X Formal Religious Participation	--	--	--	.12	(.04)	.06 ^{**}	--	--	--	.02	(.05)	.03
Constant	-3.50	(.15)		-3.27	(.18)		-1.79	(.17)		-1.58	(.21)	
R ²	.43			.43			.24			.24		
Valid N	1694			1694			1692			1692		

Source: 2005 National Survey of Midlife in the U.S. (MIDUS), N = 1,801.

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$ (two tailed).

^a Omitted category is non-Hispanic White.

^b Omitted category is 12 years.

Table 5

Regression Coefficient Estimates for the Effects of Formal Religious Participation and Daily Spiritual Experiences on Adults' Self-Acceptance and Autonomy

	Self-Acceptance						Autonomy					
	Model 1a			Model 2a			Model 1b			Model 2b		
	B	SE	β	B	SE	β	B	SE	β	B	SE	β

Race ^a												
Black	-.05	(.09)	-.01	-.05	(.09)	-.01	.17	(.10)	.04 ⁺	.18	(.10)	.04 ⁺
Latina/o	-.23	(.11)	-.04 [*]	-.22	(.11)	-.04 [*]	.04	(.12)	.01	.04	(.12)	.01
Other Race/Ethn.	-.09	(.09)	-.02	-.09	(.09)	-.02	.05	(.09)	.01	.05	(.09)	.01
Education ^b												
< 12 years	-.00	(.09)	.00	.00	(.09)	.00	-.08	(.09)	-.02	-.08	(.09)	-.02
13 - 15 years	.01	(.06)	.00	.01	(.06)	.00	.06	(.06)	.03	.07	(.06)	.03
> 16 years	.22	(.05)	.11 ^{***}	.22	(.05)	.11 ^{***}	.04	(.05)	.02	.04	(.05)	.02
Household Income	.00	(.00)	.08 ^{***}	.00	(.00)	.08 ^{***}	-.00	(.00)	-.01	-.00	(.00)	-.01
Married	.18	(.05)	.08 ^{***}	.18	(.05)	.08	-.06	(.05)	-.03	-.06	(.05)	-.03
Has Child	.12	(.06)	.04 ⁺	.11	(.06)	.04 ⁺	.10	(.07)	.03	.10	(.07)	.03
Functional Limit	-.18	(.02)	-.16 ^{***}	-.18	(.02)	-.16 ^{***}	-.04	(.03)	-.04	-.04	(.03)	-.04
Extraversion	.54	(.04)	.32 ^{***}	.55	(.04)	.32 ^{***}	.32	(.05)	.19 ^{***}	.32	(.05)	.19 ^{***}
Openness	.20	(.05)	.11 ^{***}	.19	(.05)	.10 ^{***}	.49	(.05)	.27 ^{***}	.49	(.05)	.26 ^{***}
Female	-.11	(.04)	-.05 ^{**}	-.50	(.15)	-.25 ^{***}	-.35	(.05)	-.18 ^{***}	-.50	(.16)	-.25 ^{**}
Age	.31	(.04)	.16	.22	(.15)	.11	.23	(.05)	.12 ^{***}	.07	(.16)	.04
Daily Spiritual Experiences	.32	(.03)	.21 ^{***}	.21	(.04)	.14 ^{***}	.10	(.04)	.07 ^{**}	.02	(.06)	.01
Formal Religious Participation	-.01	(.02)	-.01	-.03	(.05)	-.03	-.07	(.02)	-.07 ^{**}	-.06	(.04)	-.06
Female X Daily Spiritual Experiences	--	--	--	.19	(.06)	.23 ^{**}	--	--	--	.09	(.07)	.11
Female X Formal Religious Participation	--	--	--	-.00	(.04)	-.01	--	--	--	-.03	(.05)	-.03
Age X Daily Spiritual Experiences	--	--	--	.02	(.06)	.02	--	--	--	.07	(.07)	.09
Age X Formal Religious Participation	--	--	--	.02	(.04)	.03	--	--	--	-.00	(.05)	-.00
Constant	-3.10	(.16)		-2.84	(.19)		-2.40	(.17)		-2.24	(.21)	
R ²	.35			.36			.24			.24		
Valid N	1703			1703			1696			1696		

Source: 2005 National Survey of Midlife in the U.S. (MIDUS), $N = 1,801$.

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$ (two tailed).

^a Omitted category is non-Hispanic White.

^b Omitted category is 12 years.

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