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How Does Religiosity Enhance Well-Being? The Role of Perceived Control

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Abstract

Religiousness and spirituality (R/S) are consistently linked with positive indicators of well-being, but the mechanisms behind these associations remain largely unknown. We hypothesize that an individual's level of perceived control (PC) acts as a mediator of this relationship and that this effect is stronger in older adults. Participants were 529 adults from the Notre Dame Study of Health and Well-Being (aged 31–88). Regression analyses tested both mediating and moderating functions of PC for three different R/S components (religious practices, daily spiritual experiences, and religious/spiritual coping); composite variables were used for PC and subjective well-being (SWB) in all analyses. These effects were tested using the full sample, as well as separately by age group (early midlife, aged 31–49; late midlife, aged 50–59; and later life, aged 60 and over), in order to discover any age differences that may exist. Results revealed differences by both R/S dimension and age group: PC partially mediated the religious practices-SWB relationship in the full sample and in the later life group; the effects of religious/spiritual coping and spiritual experiences on SWB were partially mediated by PC in the full sample, the late midlife group, and the later life group; and none of the R/S-SWB relationships were mediated in the early midlife group. Moderating effects were indicated by significant interactions between PC and spiritual experiences in the full sample, PC and religious coping in the full sample, and PC and religious practices in the later life group.

Keywords

control; religiosity; spirituality; subjective well-being; age effects

Religion and spirituality have a substantial presence in the lives of Americans. Births, deaths, and marriages are often marked with religious ceremonies and traditions, and spiritual ideas and beliefs permeate our culture. In 2001, 80.4% of American adults reported an affiliation with some form of religious/spiritual group (U.S. Census Bureau, 2006). That religion and spirituality play such a substantial role for so many people makes it important to investigate the processes at work—when and how do religiosity and spirituality impact people's lives? Indices of religiousness and spirituality are robustly asso ciated with positive outcomes concerning happiness and well-being (Ellison, 1991; Koenig, 1994a; Pargament &

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Brant, 1998). Individuals who are more committed to their religious faith and spiritual convictions are happier, healthier, and have more coping resources at their disposal than those for whom religion and spirituality are less important (Ellison & Fan, 2008; Patrick & Kinney, 2003; Levin & Chatters, 1998; Myers & Diener, 1995). Religious and spiritual individuals also tend to report higher levels of perceived (internal) control than their less religious peers (Fiori, Brown, Cortina, & Antonucci, 2006; Pargament, 1997). One possible explanation for this relationship is that those higher in religiousness/spirituality (R/S) perceive themselves to share in the control wielded by the higher power with whom they affiliate (see chapter 1 of Hood, Hill, & Spilka, 2009, for discussion). The goals of the present project are to investigate whether perceived control mediates the relationship between R/S and subjective well-being (SWB); whether this function differs for different R/S dimensions; and whether age plays a role in the presence and strength of these effects.

Religiosity and spirituality are difficult constructs to investigate due to the lack of consistency among researchers in how they are defined and measured—the terms comprise a number of subdimensions (e.g., religious practices, religious beliefs, spiritual experience) and are often used interchangeably (John E. Fetzer Institute, 1999; Idler et al., 2003). A report by a working group of the John E. Fetzer Institute and the National Institute on Aging (1999) set out to address this issue by explicitly differentiating the constructs of religiosity and spirituality so that *religiosity* is conceptualized as having more organizational and behavioral connotations, whereas *spirituality* is considered to be oriented around personal experiences of the transcendent/divine. This same report also emphasized the multidimensional nature of religiousness and spirituality, identifying 12 “key domains” of religiousness and spirituality that may operate independently on well-being, including religious activities, religious beliefs, religious coping, and spiritual experiences.

Despite progress in definition and operationalization, it is still uncommon to find studies that simultaneously examine multiple dimensions of religiosity and spirituality with the goal of investigating their differential effects and processes. Many researchers look at a single dimension (Fitchett & Powell, 2009; Park, 2005) or combine multiple dimensions into a single “religiousness” construct (Fiori et al., 2006; McCullough, Friedman, Enders, & Martin, 2009); this makes it difficult to compare the functions and associations of individual R/S dimensions across studies. Examining a given process or mechanism for multiple R/S dimensions within a single study makes it possible to compare across domains more easily and to better understand how religiosity and spirituality operate as separate and multidimensional constructs.

Typically, previous researchers have investigated the impact of religiosity and spirituality on well-being within a *stress and coping* framework, which concerns the use of *coping resources* (e.g., social support network or belief in a higher power) in order to maintain functioning in the face of a *stressor* (e.g., losing a spouse or experiencing an illness; see Pargament, 1997, for discussion). In this context, the religious/spiritual resource provides a buffer against the negative impact of a stressor on well-being (Ellison, 1991). The current study expands this perspective using a resiliency framework, which goes beyond the specific context of coping with a stressor and emphasizes the building of adaptive resources that are available in times of need (Masten, 2001). *Resiliency theory* concerns the presence of *risk*

factors (e.g., low income, trauma or abuse, chronic stress) and *resilience resources* (e.g., social support, a hardy personality, a strong faith), and how the negative outcomes generally associated with vulnerabilities can be ameliorated or even eliminated by the presence of these protective factors (Masten, 2001). Although both religiousness/spirituality and perceived control can be conceptualized as either resiliency or coping resources, we consider them to be resiliency resources in the present context, because we are primarily interested in how these factors enhance well-being on a more global level, not just within the context of stress.

As stated previously, indices of R/S have consistently strong associations with positive outcomes, particularly indices of subjective well-being such as positive affect, happiness, and life satisfaction (Ellison & Fan, 2008; Patrick & Kinney, 2003; Koenig, 1994a; Levin & Chatters, 1998). Myers and Diener (1995) reported that highly religious people—those who consistently endorse statements such as “my religious faith is the most important influence in my life”—are twice as likely as those lowest in spiritual commitment to consider themselves “very happy.” Some have suggested that these positive well-being effects are a factor of the resources that religion makes available to the faithful, which serve to boost overall resiliency as well as to provide strategies for coping with specific life stressors Such resources include a broad social support network (Ellison, 1991), a sense of meaning and purpose (Park, 2005), a sense of hope and optimism (Koenig, 1994b), and enhanced perceptions of control (Fiori et al., 2006). The focus of the present project concerns the final resource—perceived control— and, specifically, whether it serves as a mediator of the positive relationship between R/S and subjective well-being. In light of the multidimensionality of religiousness and spirituality discussed herein, we will also investigate whether the impact of perceived control varies for different dimensions of R/S.

According to the control and competence theory outlined by Skinner (1995), *perceived control* (PC) encompasses beliefs about the self, and about the world in general, that determine the extent to which individuals feel that they have the opportunity, capacity, and efficacy to produce or prevent a given outcome. These perceptions of control have a strong and consistent positive relationship with subjective well-being across demographic variables (Bourque, Pushkar, Bonneville, & Beland, 2005; Lang & Heckhausen, 2001; Skinner, 1995). Additionally, perceived control beliefs are nested within the broader context of social structures and world-views—including religion and spirituality— which impact PC by providing an interpretive framework through which individuals understand their day-to-day experiences (Skinner, 1995). Because highly religious/spiritual individuals view the world through the lens of their faith, their perceived control beliefs tend to reflect their beliefs about the divine such as “all things are possible with God” and “God is in control” (Newton & McIntosh, 2009).

Hood, Hill, and Spilka (2009, chapter 1) reviewed findings suggesting that aligning oneself with a higher power through religion and spirituality creates the perception that one has a share in that higher power's control, allowing the faithful to view themselves as having a greater degree of control over their circumstances than they may actually have. Although this is just one explanation of the association between R/S and PC, there is substantial evidence to support this idea. Fiori et al. (2006) found that both internal and external forms

of control mediate the relationship between religiosity (measured with one item each for importance of spiritual beliefs, spiritual coping, religious attendance, and religious reading) and life satisfaction, and suggested that R/S may provide opportunities for "people to be agents in their own lives when things are otherwise out of their control" (p. 261), which, in turn, helps them to maintain higher levels of life satisfaction than those who are less religious. Qualitative studies have found similar themes—interviews with African American elders (Wallace & Bergeman, 2002) and hospitalized veterans (Koenig, 1994a) frequently contain phrases like "Things I can't control, I give over to God" and "I know everything will be all right because God is in control." So, as Aldwin (2007) put it, it seems that "religion can provide at least the illusion of control in the face of uncontrollable circumstances" (p. 124), thereby saving individuals from the hopelessness and discouragement that tends to accompany losses in control (Skinner, 1995).

Although secondary to the primary question, the effect of age will also be investigated because the subjective well-being benefits of both R/S and PC are more pronounced for older adults, even when health and other nonreligious well-being indicators are accounted for (Blazer & Palmore, 1976; Ellison, 1991; Markides, Levin, & Ray, 1987; McFadden, 1996; Myers & Diener, 1995). Some have suggested that psychological resources such as PC and R/S increase in salience with age because they are less affected by the physical declines associated with aging than are assets more contingent on physical health and activity (Hood et al., 2009, chapter 7); indeed, older adults report religion to be more integral to their lives than do younger adults (Pew Research Center, 2009). As a result, religious older adults should use their faith to enhance their sense of control, which produces more positive well-being outcomes. It follows, then, that the mediating role of perceived control on the R/S-SWB relationship will be stronger for older, compared with younger, adults. In support of this contention, empirical research shows that control is a stronger mediator of the relationship between religiosity and life satisfaction for older adults (aged 60–96) than for younger adults (aged 24–33; Fiori et al., 2006).

Our goal is to investigate the mediating function of perceived control on the R/S-SWB relationship, taking into account the multidimensional nature of religiousness and spirituality. This process will therefore be examined separately for three different indices of R/S: religious practices, religious coping, and spiritual experiences. The perceived control variable used is a composite comprised of three scales intended to assess different aspects of PC (control of oneself, control of social interactions, and control over the environment), in order to capture a broad perceived control construct rather than a single domain. In accordance with Diener's (1984) conceptualization, *subjective well-being* is comprised of positive affect, negative affect, and life satisfaction; this operationalization is commonly used in both religiosity and control research (Eid & Larsen, 2008).

We expect that the direct relationship between each of the R/S dimensions and SWB will be at least partially mediated by perceived control; we base this on the theory that higher degrees of religious practices, spiritual experiences, and religious coping lead to greater perceived control, which, in turn, serves to enhance subjective well-being. We do not, however, expect the mediating effect of PC to be identical for all three R/S dimensions being examined; thus, we tentatively hypothesize that the dimensions of religious practices

and religious coping, which are more behavioral and thus more directly under the control of the individual, will be more strongly mediated by perceived control than spiritual experience, which tends to be more internal and perhaps less associated with control.

Along with the primary mediational analysis, perceived control is tested as a moderator for each R/S domain in order to get a more complete picture of the role of perceived control. Although we have not developed formal hypotheses concerning the moderating effects due to their exploratory nature, one may expect that based on the rationale presented above, people high on both the R/S dimension and perceived control will have the highest subjective well-being, whereas those low in both dimensions will have the lowest subjective well-being; what is less clear, and what the results from the moderation tests will reveal, is whether the two interact and whether this effect differs based on the R/S dimension in question.

Because these associations may differ by age as well, we also examine them in three separate age groups: early midlife (aged 31–49), late midlife (aged 50–59), and later life (aged 60 and older). The split of the midlife participants at age 50 is based on the recommendation of Staudinger and Bluck (2001), who cite evidence that life's triumphs and challenges typically change in nature at this point in the life span. Specifically, those in their 40s are likely to be at the peak of their careers, have primary identifications as parents, and still be physically healthy, whereas those in their 50s are likely to begin experiencing the challenges of failing health, the “emptying of the nest,” and approaching retirement (Staudinger & Bluck, 2001). We expect both mediating and moderating effects to be least substantial in the early midlife group and most pronounced in the later life group.

Methods

Participants

Data for this study comes from the larger Notre Dame Study of Health & Well-Being (Bergeman et al., 2010). Participants were recruited from a list of middle-aged and older adults in the northern Indiana area based on multiple information sources, including census data and the Survey of Residential Households, supplied by a market research firm. Participants received a questionnaire packet in the mail that they completed and returned, at their convenience, in a postage-paid return envelope supplied by the researchers. Participants received a $20 gift card to an establishment of their choice for completing the 55-page questionnaire.

The sample used in the present project consists of 529 adults aged 31 to 88 years (mean age = 58.6, *SD* = 9.7), of whom 56% are women, 87% are Caucasian, 8% are African American, 2% are Hispanic, 1% are Asian American or Pacific Islander, 0.5% are Native American, and 1.5% marked “other.” Respondents are relatively well educated, with 97% having a high school diploma and 36% having a college degree. The income distribution of participants was as follows: 4% reported an annual income of less than $7,500; 11% between $7,500 and $14,999; 14% between $15,000 and 24,999; 22% between $25,000 and $39,999; 32% between $40,000 and $74,999; and 17% $75,000 or higher. As far as living situations, 53%

of participants were married, 24% were divorced or separated, 10% were widowed, and 13% were single.

One-way ANOVAs (for categorical variables) and *t* tests (for continuous variables) showed no differences for gender, race, or marital status between the participants used in the present study ($N = 529$) and those excluded based on incomplete data ($N = 249$); the samples did differ on age ($p = .006$), education ($p = .0004$), and income ($p = .016$), so that the participants included in the present analyses tend to be slightly younger (mean age 58.6 vs. 60.8 for those excluded), better educated, and better off financially than those who were excluded.

Measures

Religiosity/spirituality—All three R/S measures come from the Brief Multidimensional Measure of Religiousness and Spirituality (BMMRS; John E. Fetzer Institute, 1999). The BMMRS was altered to enhance the ease of administration. First, the items covering private religious practices and organizational religiousness originally included 5-point, 6-point, and 8-point response formats. To make it easier to combine these items into a single "religious practices" scale, they were converted to the most comprehensive 8-point scale (*never* to *more than once a day*). Second, the 4-point response format for the religious/spiritual coping subscale was altered from its original *a great deal*, *quite a bit*, *somewhat*, and *not at all* to the more general *always*, *often*, *seldom*, and *never* so that it could be integrated with other measures in the larger questionnaire. Finally, one of the religious/spiritual coping items phrased as a question in the original measure—"To what extent is your religion involved in understanding or dealing with stressful situations in any way?"—was converted to the statement "I feel that my faith impacts my understanding or dealings with stressful situations."

The BMMRS subscales used in the present study are Private Religious Practices, Organizational Religiousness, Daily Spiritual Experiences, and Religious/Spiritual Coping. The Private Religious Practices subscale consists of five questions assessing the frequency of various activities, such as private prayer and Bible reading, on an 8-point scale (*never* to *more than once a day*). The Organizational Religiousness subscale (short form) consists of two items, also on an 8-point scale, indexing the frequency of religious service attendance and organized religious activities. The items for Private Religious Practices and Organizational Religiousness were combined to form the Religious Practices measure ($\alpha = .88$) used in the analyses. The Daily Spiritual Experiences subscale ($\alpha = .93$) is made up of six items with a 6-point response format (*never or almost never* to *many times a day*); items include "I feel God's presence" and "I find strength and comfort in my religion." Finally, the Religious/Spiritual Coping subscale ($\alpha = .83$) consists of seven items on a 4-point scale (*never* to *always*), including "I look to God for strength, support, and guidance" and "I wonder whether God has abandoned me."

Perceived control—Three scales were used to index Perceived Control: the control subscale of the Dispositional Resilience measure (Bartone, Ursano, Wright, & Ingraham, 1989); the Environmental Mastery subscale of the Psychological Well-Being measure (Ryff

& Keyes, 1995); and the Perceived Social Control scale (Reid & Ziegler, 1981). The Perceived Control subscale of the Dispositional Resilience measure consists of 15 items, including “planning ahead can help me avoid most future problems” and “I cannot do much to prevent it if someone wants to harm me,” rated on a 4-point scale (*not at all true* to *completely true*); 10 of the 15 items are reverse scored, so that a higher score indicates greater control, α= .67. The Environmental Mastery scale consists of 15 items on a 4-point scale (*strongly disagree* to *strongly agree*); statements include “In general, I feel I am in charge of the situation in which I live” and “I often feel overwhelmed by my responsibilities.” Six items are reversed scored so that higher scores indicate a higher degree of control over one's environment, α= .91. The Perceived Social Control scale assess the extent to which participants feel that they have control over the social encounters in their lives. The scale consists of 12 items (6 of which are reversed scored) such as “People tend to ignore my advice” and “I find that if I ask my family (or friends) to visit me, they come,” rated on a 4-point scale (*strongly disagree* to *strongly agree*); higher scores indicate higher perceived social control, α= .80. Scores on the three scales were standardized ($M = 0$, $SD = 1$) and summed to form the composite PC variable, for which higher scores indicate higher perceived control (α= .88).

Subjective well-being—Scales measuring life satisfaction, positive affect (PA), and negative affect (NA) were used to operationalize Subjective Well-Being (Diener, 1984). The Life Satisfaction Index A (LSI-A; Neugarten, Havighurst, & Tobin, 1961) includes items such as “My life could be happier than it is now” and “I have gotten pretty much what I expected out of life,” rated on a 4-point scale (*strongly agree* to *strongly disagree*); 5 of the 18 items are reverse scored, and higher scores indicate higher life satisfaction, α= .87. Positive and negative affect were measured using the Positive and Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). The scale consists of a list of 10 NA descriptors (e.g., afraid, ashamed) and 10 PA descriptors (e.g., active, inspired), and the individual rates the extent to which they feel each emotion in general on a 5-point scale (*not at all* to *extremely*); α= .89 for PA and .88 for NA. In the original scoring, higher scores on each scale indicate higher PA or NA, respectively; but for the purposes of this study, the NA measure was reverse scored so that higher scores indicate lower NA. In this way, all three scales used to create the SWB composite variable (LSI-A, PA, and NA) are scored in the same direction, with higher scores indicating positive outcomes. Scores on the three scales were standardized ($M = 0$, $SD = 1$) and summed to form the composite SWB variable (α= .90).

Results

Descriptive Statistics

The means, standard deviations, and correlations for each of the scales and composite variables in the full sample are presented in Table 1. In order to investigate age effects, we divided the overall sample into an early midlife group (109 participants aged 31–49; mean age = 44.76, $SD = 3.25$), a late midlife group (162 participants aged 50–59; mean age = 54.82, $SD = 2.81$), and a later life group (258 participants aged 60–88; mean age = 66.92, $SD = 4.94$), and ran the mediation and moderation models separately for each age group.

Levene's test for homogeneity of variance showed that variance among the groups differed on the composite Control variable ($F = 30.61$, $p < .0001$), with the later life group having substantially more variance than the two younger age groups ($SD_{\text{early midlife}} = 1.23$; $SD_{\text{late midlife}} = 1.20$; $SD_{\text{later life}} = 2.32$); variances on the SWB composite and the R/S variables were not significantly different.

Analytic Procedure

Prior to testing the mediating and moderating models using regression analyses, all scale scores were standardized ($M = 0$, $SD = 1$), and the control and well-being scales were summed to form composite variables for PC and SWB, as described above. Because income and age were significant predictors of both PC and SWB (younger individuals with higher income tended to have higher levels of PC and greater SWB), both were included in the analyses as covariates. The mediating and moderating functions of PC were tested separately for religious practices, spiritual experiences, and religious coping, both in the full sample and separately by age group.

The 3-step regression procedure outlined by Baron and Kenny (1986) was used to test for the hypothesized mediating effects. The general regression models used in all of our analyses are presented below, in which b_{10}, b_{20}, and b_{30} reflect the respective intercepts; b_{11}, b_{21}, and b_{31} control for age effects; b_{12}, b_{22}, and b_{32} control for income effects; b_{13} is the slope of the R/S dimension on SWB controlling for age and income; b_{23} is the slope of the R/S dimension on Control controlling for age and income; and b_{33} is the slope of the R/S dimension on SWB with the effect of Control on SWB (b_{34}) accounted for. In all models, the e_{ij} term reflects the error (residual) left over in the DV after accounting for the effects of the IV's in the model:

Model 1 $\text{SWB}_{ij} = b_{10} + b_{11}\text{age} + b_{12}\text{income} + b_{13}\text{religiosity} + e_{ij}$

Model 2 $\text{Control}_{ij} = b_{20} + b_{21}\text{age} + b_{22}\text{income} + b_{23}\text{religiosity} + e_{ij}$

Model 3 $\text{SWB}_{ij} = b_{30} + b_{31}\text{age} + b_{32}\text{income} + b_{33}\text{religiosity} + b_{34}\text{control} + e_{ij}$

Significant mediation was indicated by a significant Sobel statistic (Preacher & Hayes, 2004), calculated using the online tool developed for the purpose by Preacher and Leonardelli (2006).

The moderating model was tested using the regression procedure recommended by Baron and Kenny (1986) to test for a linear moderator, so that a moderating effect is indicated by a statistically significant interaction term between the predictor variable and the moderator. We therefore used the following regression equation to test for moderating effects, in which the significance of the “religiosity × control” interaction term was of primary interest:

$$\text{SWB}_{ij} = b_0 + b_1\text{age} + b_2\text{income} + b_3\text{religiosity} + b_4\text{control} + b_4\text{religiosity} \times \text{control} + e_{ij}$$

In all regression models, the “SWB” and “control” terms reflect their respective composite variables, whereas the “religiosity” term represents the individual R/S dimensions—

religious practices, spiritual experiences, or religious coping—depending on the analysis being conducted.

The section below presents the mediating and moderating effects for the religious practices, daily spiritual experiences, and spiritual/religious coping scales separately. Within each set of results, the findings for the full sample are presented first, followed by the findings broken down by age group (early midlife, late midlife, and later life). A summary of the mediating and moderating effects across samples and R/S dimensions is presented in Table 2.

Mediating and Moderating Effects

Religious practices—The test for the mediating effect of PC on the relationship between Religious Practices and SWB in the full sample ($N = 539$) was significant (Sobel = 2.36, $p = .018$): the parameter estimate for Religious Practices on SWB in Model 1 was .39, $p < .0001$, decreasing to .26, $p = .0015$ when PC was included as a mediator (Model 3). PC did not mediate the impact of Religious Practices on SWB in either midlife sample, but there was a significant mediating effect in the later life group, with the parameter estimate for Religious Practices on SWB decreasing from .50 to .25 when PC is included as a mediator (Sobel = 2.57, $p = .01$). The moderating effect of PC on the Religious Practices-SWB relationship was not significant for the full sample or either of the midlife samples; however, the interaction term was significant in the later life sample, indicating a moderating effect (b_3RelPrac = .358, $p = .001$; $b_4$control = .696, $p < .0001$; b_5RelPrac × control = −.087, $p = .043$), so that older adults lower on PC experience greater SWB benefits from performing religious practices than do older adults with higher PC.

Daily spiritual experiences—PC significantly mediated the relationship between Daily Spiritual Experiences (DSE) and SWB in the full sample—the parameter estimate for DSE on SWB changed from .75 in Model 1 to .48 in Model 3 (Sobel = 5.20, $p < .0001$). When analyzed separately by age group, PC was only a significant mediator of DSE on SWB in the two older age groups: in the late midlife group, the parameter estimate decreased from .78 to .62 when PC was added as a mediator (Sobel = 2.43, $p = .015$), and in the later life group, the estimate decreased from .75 (Model 1) to .28 (Model 3; Sobel = 4.96, $p < .0001$). PC significantly moderated the DSE-SWB relationship in the full sample (b_3DSE = .455, $p < .0001$; $b_4$control = .639, $p < .0001$; b_5DSE × control = −.076, $p = .035$), so that individuals lower on perceived control experience more pronounced SWB benefits from DSE than those higher on perceived control. The moderating effect was not significant for any of the separate age group models.

Religious/spiritual coping—PC significantly mediated the relationship between Religious/Spiritual Coping (RSC) and SWB in the full sample, with the parameter estimate for RSC on SWB decreasing from .84 in Model 1 to .54 in Model 3 (Sobel = 5.87, $p < .0001$). By age group, PC was only a significant mediator in the older two age groups: the parameter estimate for RSC on SWB went from .87 to .70 in the late midlife sample (Sobel = 2.65, $p = .008$); in the later life sample, it decreased from .84 to .35 (Sobel = 5.32, $p < .0001$). In the full sample, PC significantly moderated the relationship between RSC and

SWB (b_3RSC = .509, $p < .0001$; $b_4$control = .618, $p < .0001$; b_5RSC × control = −.086, $p = .017$), so that the lower an individual is on perceived control, the more pronounced the benefits of religious coping on SWB will be. The moderating effect was not significant for any of the separate age group models.

Discussion

Life for middle-aged and older adults is naturally full of challenges: those in early midlife struggle to balance career, parenthood, and perhaps care of elderly parents; those in later midlife face empty nests and impending retirement; and those in later life are more likely to experience losses of loved ones and declines in physical health (Staudinger & Bluck, 2001). Despite facing a similar pattern of stresses over the course of adult development, some individuals are able to maintain high levels of well-being throughout, whereas others experience hopelessness or depression. The current study focused on the role that religiousness and spirituality play as resiliency resources, and, specifically, how R/S may impact these differential well-being outcomes through enhanced perceptions of control. The significant mediating effects (1) supported the hypothesis that enhanced control beliefs partially explain the positive relationship between indices of R/S and well-being, and (2) revealed distinct patterns of effects for each of the R/S dimensions examined. The hypothesis regarding age effects was also supported: perceived control was a stronger mediator of the R/S-SWB relationship for those in the later life group than in the late midlife group, and did not mediate at all for those in the young midlife group. Finally, the significant moderating effects revealed that dimensions of R/S have a more substantial positive impact on well-being when individuals rate lower on perceived control.

Mediating Effects: R/S Dimensions

In line with results from previous studies (Ellison & Fan, 2008; Patrick & Kinney, 2003; Levin & Chatters, 1998; Myers & Diener, 1995), all three R/S dimensions examined here (religious practices, spiritual experiences, and religious coping) were positively related to SWB; the exception to this was the young midlife group (<50 years), in which religious practices did not significantly impact subjective well-being. The youngest group was also the only group for whom the R/S indices were not positively related to perceived control. Fiori and colleagues (2006) found similar results when their “religiosity” variable significantly predicted internal control for older adults but not for young adults, and they suggested that older adults are more likely to interpret the relinquishment of control to a higher power as “a purposeful, control-inducing act” (p. 258) than are younger adults, who tend to favor more tangible ways of demonstrating their control. This trend of direct relationships resulted in a similar pattern for the mediation results: none of the R/S indicators were mediated by perceived control in the young midlife group, whereas they were mediated in the two older age cohorts (with the exception of religious practices in the late midlife cohort) and in the full sample.

The distinct pattern of results obtained for each of the R/S dimensions examined lends further support to the multidimensional conceptualization of religiosity and spirituality (John E. Fetzer Institute, 1999). The findings, however, did not support the hypothesis that

religious practices and religious/spiritual coping, which were considered to be more behavioral, would be more strongly mediated by perceived control than spiritual experience. In fact, religious/spiritual coping, rather than aligning with religious practices, showed a pattern of effects nearly identical to that of spiritual experience. In light of the theoretical and/or semantic differentiation of *religiosity* and *spirituality* discussed previously—in which "religiosity" is conceptualized as a more organizational, behavior-oriented construct, and "spirituality" is characterized as a construct defined by more subjective experiences and beliefs (Neff, 2006)—it may be that the Religious Practices scale is tapping "Religiosity" whereas the Daily Spiritual Experience and Religious/Spiritual Coping scales are more appropriate indices of "Spirituality," and that dimensions of religiosity and spirituality may impact well-being differently and through different processes.

It is important to note that, although religious coping has been discussed alongside religious practices and spiritual experiences throughout this paper, it is somewhat different in nature from most other dimensions of religiousness and spirituality because it explicitly implies a coping function. Whereas most R/S scales ask individuals to describe their experiences, beliefs, or practices in general, religious coping scales ask participants to think about times of challenge or struggle when responding to items. Referring back to the coping and resiliency theories discussed in the introduction, dimensions of religiousness and spirituality such as religious practices and spiritual experiences can thus be seen as *resiliency resources* contributing to well-being in a general, protective manner, whereas the religious/spiritual coping scale indexes whether, and to what extent, these resources are utilized and effective as *coping resources* in the face of stress. In light of this, the finding that religious/spiritual coping and spiritual experiences have almost identical patterns of results indicates that the coping function of faith is more closely affiliated with an individual's degree of "Spirituality" than his or her level of "Religiosity"; religious/spiritual coping is apparently less tied to religious behaviors and more contingent on subjective beliefs and experiences concerning the transcendent.

Age Differences

As mentioned above, perceived control was a significant mediator of the relationship between all three R/S variables and SWB for the later life group (aged 60 and over), and two of the three (spiritual experiences and religious coping) for the late midlife group (aged 50–59), but was not a significant mediator at all in the youngest group (aged 31–49). It therefore seems that, for the more "spiritual" R/S indices (spiritual experiences and religious coping), perceived control mediates the relationship with SWB beginning around age 50, whereas, for the more "religious" R/S indices (religious practices), perceived control does not become a salient mediator until later in life (age 60 or over). Before age 50, perceived control is not a significant player in the R/S-SWB relationship regardless of the dimension in question.

This pattern of age effects supports the hypothesis that perceived control is a more relevant mediator of the R/S-SWB relationship for older adults. Because adults aged 50 to 59 years are still relatively healthy and active, they may not be as reliant on the more behavioral "religious" R/S dimensions (e.g., religious practices) to enhance control as are those 60 and over; however, these individuals in later midlife are also likely to be facing social and

emotional challenges such as the empty nest, loss of parents and mentors, and impending retirement, which may make "spiritual" R/S dimensions, such as spiritual experiences and religious coping, more salient than they were when they were younger (Staudinger & Bluck, 2001). Adults under the age of 50, on the other hand, are still likely to be healthy and at the peak of their professional and family life, and therefore tend to experience a universally high level of perceived control. This means that younger adults— even those who are highly religious or spiritual—are less likely to turn to religion or spirituality when they are seeking control, instead favoring outlets that utilize their professional skills and/or physical prowess. It is therefore necessary to investigate other potential mediators of the R/S-SWB relationship that may be more relevant for adults under 50 years of age; perhaps the additional mechanisms mentioned in the introduction (social support, meaning/purpose, hope/optimism) are more relevant to the role of religion and spirituality in the lives of adults under 50 years of age than is perceived control.

It should be noted that because this analysis was cross-sectional rather than longitudinal—testing differences rather than change—these age differences may reflect *cohort effects* (factors associated with certain cultural, religious, and social climates of the generations) rather than aging per se. Religiousness in America has declined consistently over the past several decades, and those stating no religious preference climbed from 8.2% to 15% between 1990 and 2008 alone (Kosmin & Keysar, 2009). This cultural trend has likely impacted the degree to which different generations consider themselves to be "religious" and "spiritual," which could explain why those born earlier (when America was generally more religious) are higher on R/S indices than those born later. It is therefore important to recognize the results of the current study as denoting differences between age groups rather than reflecting developmental change.

Moderating Effects

The question of whether perceived control *moderates* the effect of R/S on well-being provides a counterpoint to the mediation question, as it presents a different framework through which to understand how R/S and perceived control relate to one another in their impact on well-being. Specifically, mediation focuses on the process by which the benefits of R/S are conferred on SWB (R/S→PC→SWB), whereas moderation assesses a buffering effect (e.g., the strength of the R/S effect on SWB depends on the level of PC). In the current study, the results of the moderation analyses supported the logical hypothesis that individuals lower on both the R/S variable and perceived control have the lowest SWB, whereas those higher on both have the highest levels of SWB. The significant moderating effects found for spiritual experiences and religious/spiritual coping in the full sample demonstrate that, although R/S indicators positively impact subjective well-being for all individuals, those lower on perceived control experience more pronounced well-being benefits from spiritual experiences and religious coping than those higher on perceived control. The lack of significant moderation within the individual age groups is likely due to the loss of power that results when the full sample is split into sub-samples by age. The only significant moderating effect found within a specific age group was for religious practices in the later life group; the direction of the interaction indicates that older adults perceiving themselves to have less control experience greater well-being benefits from religious

practices than do those who perceive themselves to have higher levels of control. These results support the theory that the exercise of religious practices is more salient for maintaining and enhancing perceived control for older adults who tend have fewer stable sources of control (e.g., physical ability, cognitive prowess, career) than younger adults (Hood et al., 2009, chapter 7; Skinner, 1995), and point to the increased salience of PC to the relationship between R/S and SWB that comes with age.

Limitations

There are a few limitations that should be taken into account when considering the implications of this study, all of which present opportunities for future investigation. First, although the mediational models represent directional effects in theory, we cannot determine causality with data collected at a single point in time; as additional waves of data become available, longitudinal analyses should alleviate this issue. Second, as mentioned previously, the cross-sectional nature of the data makes it impossible to differentiate age from cohort effects; the cross-sequential design of the larger Notre Dame Health & Well-Being should eventually permit us to address this issue as well. Third, because the majority of our results were robust, we chose not to perform a correction (e.g., Bonferroni) to control for Type I error; were such a correction made, the moderating effect between religious practices and perceived control in the later life group ($p = .043$) would no longer be significant. Fourth, the sample was primarily Caucasian and relatively well educated but was quite diverse on income; the demographic characteristics of the sample did reflect those of the geographical area from which it was obtained. Finally, it is possible that, due to the religious affiliation of the university, those individuals who elected to participate in the NDHWB study tended to be higher on religious and spiritual indices than those who chose not to participate. A study conducted by an institution not affiliated with a religious tradition would be less likely to encounter this issue.

Conclusions and Implications

The many dimensions of religiousness and spirituality have robust associations with positive well-being outcomes (Ellison & Fan, 2008; Patrick & Kinney, 2003; Koenig, 1994a; Levin & Chatters, 1998), but there is still much to be learned when it comes to the mechanisms at work behind this relationship. One finding that contributes to the understanding of the R/S as multidimensional is that religious coping aligns more with “Spirituality” (as indexed by spiritual experiences) than with “Religiosity” (as indexed by religious practices), which also informs which R/S dimensions are most tapped when it comes to coping with stress. Concerning R/S more broadly, the partial mediation effects found for adults aged 50 and older indicate that perceived control is not the only mechanism at work when it comes to the impact of religiousness and spirituality on well-being in these older adults; and the fact that there were no significant mediating effects for those under 50 indicates that perceived control does not serve this function at all for the early midlife group. This combination of findings necessarily implies that there are additional factors involved in this process at all ages, which future studies can investigate. Although much is still to be learned about the beneficial effects of religiosity and spirituality in mid- and later life, the current study provides a strong foundation for considering the multidimensional underpinnings of these

constructs and the complex ways in which these attributes interrelate with control in understanding well-being across much of the adult life span.

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Table 1

Descriptive Statistics and Correlations of the Composite Variables and Their Component Scales for the Full Sample (N = 527)

	Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12
1.	Religious practices	26.90	12.30	—											
2.	Religious coping	22.01	4.11	.71	—										
3.	Daily spiritual experiences	23.51	8.45	.72	.82	—									
4.	*Perceived control composite*	—	2.25	.13	.29	.24	—								
5.	Environmental mastery	38.50	4.97	.10	.22	.19	.87	—							
6.	Dispositional control	37.15	10.03	.13	.16	.14	.75	.65	—						
7.	Perceived social control	36.57	4.50	.07	.27	.21	.62	.31	.05	—					
8.	*Subjective well-being composite*	−0.05	2.39	.17	.37	.30	.56	.40	.21	.63	—				
9.	Positive affect	35.73	6.36	.18	.27	.33	.54	.41	.25	.54	.79	—			
10.	Negative affect**	41.40	6.40	.05	.22	.14	.37	.25	.13	.43	.79	.41	—		
11.	Life satisfaction	47.92	4.87	.19	.32	.27	.45	.32	.13	.56	.83	.53	.49	—	
12.	Age			.10	.13	.11	.56	.47	.73	.07	.16	.14	.15	.11	—

Note. Composite variables reflect the sum of three standardized scores, as described in text. All correlations except those that are underlined were significant at the .05 level. Negative Affect is reversed scored, so that higher scores reflect lower NA.

Table 2

Summary of Mediation and Moderation Results

	Significant mediation?			Significant moderation?		
Sample	**RelPrac**	**SpirExp**	**RelCop**	**RelPrac**	**SpirExp**	**RelCop**
Full sample, N = 529, aged 31–88	Yes, p = .018	Yes, p < .001	Yes, p < .001	No	Yes, p < .001	Yes, p < .001
Young midlife sample, N = 109, aged 31–49	No	No	No	No	No	No
Late midlife sample, N = 162, aged 50–59	No	Yes, p = .015	Yes, p = .008	No	No	No
Later life sample, N = 529, aged 60–88	Yes, p = .01	Yes, p < .001	Yes, p < .001	Yes, p = .043	No	No

Note. RelPrac = Religious Practices; SpirExp = Spiritual Experiences; and RelCop = Religious Coping.