

Religion, Health, and Psychological Well-Being

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Abstract This study compares the effects of religiosity on health and well-being, controlling for work and family. With 2006 GSS data, we assess the effects of religiosity on health and well-being, net of job satisfaction, marital happiness, and financial status. The results indicate that people who identify as religious tend to report better health and happiness, regardless of religious affiliation, religious activities, work and family, social support, or financial status. People with liberal religious beliefs tend to be healthier but less happy than people with fundamentalist beliefs. Future research should probe how religious identity and beliefs impact health and well-being.

Keywords Religion · Health · Happiness · Identity · Beliefs

How are specific facets of religious experience related to physical health and psychological well-being? Do these relationships exist independently of the relationships among work, family, financial situation, social support, and health, and well-being? Much of the research on religion, health, and well-being focuses on attendance as its primary indicator of religiosity. Furthermore, few studies on religion and health/well-being include control variables for work and family conditions; two domains of life that are arguably more important determinants of health and well-being than religion for most people. This study has two strengths that represent substantial improvement over previous research on religion, health and well-being: (1) inclusion of multiple aspects of religiosity, including religious affiliation, religious behaviors such as prayer, attendance at services and involvement in other religious activities, religious beliefs, and religious identity; and (2) controls for social support outside of the religious setting, employment and marital statuses, job and marital satisfaction, and perceived financial status.

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The secondary survey data came from the 2006 wave of the General Social Survey (GSS). Two separate multivariate analyses were conducted, one on overall health ($n = 1000$), and the other predicting happiness ($n = 1976$). Several dimensions of religion are examined in addition to the controls for family and work conditions. These include religious affiliation, how strongly one identifies as a religious individual, the number of activities engaged in that are tied to one's religion, and the fundamentalism or liberalism of one's religious beliefs. The results indicate the relative effects of the various dimensions of religiosity on health and well-being net of the influences of work and family. In particular, both the strength of religious identity and the fundamental or liberal orientation of beliefs are found to be significantly linked to an individual's health and well-being.

The relationship between religion, health, and well-being has been the focus of a number of empirical studies over the last 20 years. Most studies indicate that in the United States, many forms of religious experience are associated with improved physical and mental health. The most common dimension of religious experience that is assessed in research on religion, health, and well-being is attendance at religious services. Frequency of attendance at religious services has been linked to greater psychological well-being in most studies (Keyes & Reitzes 2007; Francis & Kaldor 2002; Ellison et al. 2001; Strawbridge et al. 2001; Ellison et al. 1989) but not all (Dezutter et al. 2006; Schnittker 2001). Some studies demonstrate an indirect link between religious attendance and psychological well-being through the dimension of religious identity and social support (Krause & Wulff 2005; Maltby et al. 1999; Ellison 1991). Attendance has also been linked to better physical health (Larson & Larson 2003; Ellison et al. 2001; Strawbridge et al. 2001).

Other dimensions of religious experience that have been investigated with respect to health and well-being include salience or strength of religious identity, prayer, social support, sense of coherence, religious beliefs, and religious affiliation. Salience of religious identity has been linked to both psychological well-being (Greenfield, & Marks 2007; Keyes & Reitzes 2007; Pargament et al. 2001; Schnittker 2001; Ellison 1991; Peterson & Roy 1985) and physical health (Wink et al. 2005). Frequency of prayer has been positively linked to psychological well-being (Byrd et al. 2007; Francis, & Kaldor 2002; Maltby et al. 1999; Poloma & Pendleton 1989) and physical health (Banthia et al. 2007; Ellison et al. 2001), with the exception of Ellison et al. (2001), who found that church attendance and beliefs were positively associated with well-being, but prayer tended to occur among individuals who were facing more personal problems.

Social support derived from membership in a religious organization has been linked to psychological well-being (Byrd et al. 2000; Ellison 1991). Ellison et al. (1989) found that the number of religious groups to which one belongs and the strength of ties to those groups predict greater psychological well-being, though less so in the case of attendance at religious services. In contrast, when individuals experience social conflict as members within a single religious organization, they tend to have greater distress (Krause et al. 2000).

A greater sense of coherence flows from belief in various religious traditions, and has been linked to diminished depressive symptoms (Eliassen et al. 2005), greater self-esteem, less stress (Yakushko 2005; Crocker & Luhtanen 1990), and a greater sense of belonging and emotional support (Krause, & Wulff 2005). However, the specific content of religious beliefs typically is not associated with mental and physical health. For example, there is no evidence to show that believing in Jesus versus worshipping Allah has differential health effects. However, the ideological underpinnings of religious beliefs may affect health. For instance, homosexual people who attend more fundamental churches tend to experience greater stress, and have lower self-esteem regarding sexual orientation (Yakushko 2005),

are more socially isolated and more depressed (Hood 1992), perhaps because they do not feel accepted. In contrast, gay members of more liberal churches tend to have greater life satisfaction (Ellison 1991). More affirming religions can be a source of liberation for marginalized individuals such as homosexuals (Rodriguez & Ouellette 2000), offering a source of self-esteem, reassurance, and greater social support (Ritter & Terndrup 2002).

There has been very little research on the relationship between fundamentalist versus liberal religious beliefs and health and well-being, although some studies have examined religious denominations classified as fundamentalist or liberal. Nooney and Woodrum (2002) found that members of more fundamentalist Christian denominations tended to suffer more symptoms of depression than members of more moderate or liberal Christian denominations, yet they used more positive coping techniques and had more social support. In contrast, Sethi and Seligman (1993) found that members of fundamentalist religions expressed more optimism than members of moderate religions who in turn had higher rates of optimism and hope than members of liberal religions. Both hope (Bluvol & Ford-Gilboe 2004) and optimism (Scheier & Carver 2006) have been linked to greater physical well-being while pessimism has been found to be detrimental to physical health (Peterson et al. 1988). Optimism and pessimism have both been found to independently contribute to mental health outcomes with optimism being related to lower levels of depression and greater life satisfaction and pessimism being related to higher levels of depression and poorer life satisfaction (Plomin et al. 1992).

People who define themselves as religious and who identify with a specific religious tradition tend to be less depressed, to have greater self-esteem (Keyes, & Reitzes 2007; Schnittker 2001), more effective coping skills (Banthia et al. 2007; Pargament et al. 2001), greater happiness (Ellison 1991), greater life satisfaction (Gauthier et al. 2006), and improved physical health (Wink et al. 2005). Once again, it is not the specific religious affiliation per se that appears to matter, but the strength of the religious affiliation.

There is a great deal of social-scientific research outside of the literature on religion and health, which assesses the social and psychological predictors of health and well-being (Faragher et al. 2005; Kamp Dush & Amato 2005; Lyons & Yilmazer 2005; Lewchuk et al. 2003; Kiecolt-Glaser & Newton 2001; Ross & Mirowsky 1995; Mills et al. 1992). Most studies include demographic characteristics that tend to be associated with both psychological well-being and physical health, such as gender, education, age, income, employment status, and marital status. Women tend to report lower levels of well-being than men (Piccinelli & Wilkinson 2000), although religious participation tends to attenuate the sex difference. That is, women tend to participate more than men in religious activities, giving them an advantage relative to men who participate less (Firori et al. 2006; Gauthier et al. 2006; Francis & Kaldor 2002; Ellison 1991). Education has a positive association with psychological well-being and physical health independent from religion (Lyons & Yilmazer 2005).

Age has a negative association with health reflected by a steady decline in health over the life course, and a curvilinear relationship with well-being: well-being tends to increase until middle age and then decrease through the rest of adulthood in cross-sectional studies (Mirowsky & Ross 1992). Older individuals are more likely to attend church, engage in prayer, and derive greater life satisfaction through their religion than younger individuals (Firori et al. 2006; Francis & Kaldor 2002), though they are also more likely to be hindered with functional limitations that can minimize the ability to attend religious services (Benjamins & Finlayson 2007; Fry 2000). Income is positively associated with psychological well-being and physical health (Suhail & Chaudhry 2004; Ellison et al. 1989). The relationship between income and health and well-being may be accounted for, in part, by

perceived financial standing. Those individuals who perceive themselves to be in poor financial standing are more likely to have poor health than individuals who perceive a better financial standing regardless of their actual income levels (Lyons & Yilmazer 2005; Mills et al. 1992).

Married individuals tend to have greater psychological well-being and physical health than the unmarried (Kamp Dush & Amato 2005; Suhail & Chaudhry 2004; Ellison et al. 1989). Furthermore, the quality of marriage has been found to be highly associated with both psychological well-being and physical health. Greater marital satisfaction is correlated with greater psychological well-being for both the husband and wife (Kamp Dush & Amato 2005; Mills et al. 1992; Pollner 1989) while poor marital satisfaction is linked to several poor physiological conditions and psychological well-being (Kiecolt-Glaser & Newton 2001).

Longitudinal research has shown that individuals with full-time employment experience slower declines in health and physical functioning than individuals who are not employed (Ross & Mirowsky 1995). Among the employed, full-time employment is a stronger predictor of good health than part-time employment (Lewchuk et al. 2003). However, the positive effect of employment depends, in part, on job satisfaction. Those who are more satisfied with their work tend to have better physical health and psychological well-being (Suhail & Chaudhry 2004). This association is stronger for psychological well-being than physical health but remains a significant factor for both (see meta-analysis: Faragher et al. 2005).

Religious engagement in various forms has generally been found to be linked to greater physical health and psychological well-being with few exceptions. In general, it appears that the relationship between religion and well-being depends upon both personal (i.e., prayer, identity, and fundamentalism of beliefs) and social components (attendance, activities, and social support). What has been lacking in previous research is the accounting for experiences that people have external to the realm of religion such as in their work and family lives. These more secular elements of life have also been linked to an individual's health and well-being and should be considered when attempting to isolate the independent role played by religion.

The main purpose of this study is to assess the impact of different dimensions of religious experience on health and well-being while controlling for the key predictors of health and well-being presented in other studies that do not emphasize the religious experience. Most studies on religion and health do not control for work or family conditions, with the exception of a small number of studies that account for marital satisfaction, job satisfaction, and perceived financial conditions (Suhail & Chaudhry 2004; Ellison et al. 2001; Pollner 1989). Thus, many of the reported associations between religion and health and well-being could be found to be spurious if the potential importance of other domains of life, most notably work and family, were taken into account.

Further, this study will assess the impacts on health due to an extensive range of religious activities and beliefs. In addition to religious denomination, this study will consider religious beliefs, religious identity, and religious activities. Fundamentalist beliefs are associated with the premise of a literal interpretation of religious doctrine, strict systems of practice, and a black-and-white defined world vision that provides clear rules for living (Pargament 2002). Liberal beliefs are associated with a more flexible interpretation of religious doctrine and a less stringent worldview. It is predicted that the more fundamentalist people's beliefs are, the better will be their psychological and physical health due to the link between fundamentalism and optimism as well as the clear directions that fundamentalist beliefs provide regarding how to live.

Another domain of religiosity that we assess is that of religious identity. Religious identity refers to the degree to which an individual views himself or herself as a religious individual. It is predicted that individuals who identify as more religious will have greater physical and psychological health as stronger religious identities have previously been found to be linked to greater abilities to cope with stressful situations, greater self-esteem and overall happiness in addition to improved physical health. Religious coping has been found to be associated with a sense of control over difficult situations, leading to more positive health outcomes (Pargament et al. 1990; Pargament et al. 1988). Stronger religious affiliation may lead one to reframe a difficult situation from a religious perspective, giving it a meaning in a way that is compatible with achieving spiritual growth or as part of a more divine plan (Foley 1988).

The third domain taken into consideration is engagement in religious activities. Religious activities include attending religious services, prayer, and activities associated with a religious organization outside of services. It is predicted that greater involvement in religious activities will be associated with greater psychological and physical health, in part, because of the social support it generates, and in part, through a greater sense of purpose. The association between religious activities and health and well-being may depend, in part, on the strength of an individual's religious identity, wherein people who identify more with their religion may benefit more from engagement in religious activities. We assess this possibility by examining the role of religious identity as a potential moderator of the effect of religious activities on health and well-being.

Data and Methods

Data for this study are taken from the 2006 wave of a longitudinal data set, published by the General Social Survey (GSS). The GSS is produced by The National Opinion Research Center (NORC) based at the University of Chicago as part of the National Data Program for the Social Sciences. The data were collected using NORC national full probability samples based upon the 2000 census statistics with a sub-sampling of non-respondents. An interview conducted using a standard questionnaire was administered to a total of 4510 respondents. The format from which the sample was drawn included English- and Spanish-speaking individuals above 18 years of age, living in non-institutionalized settings within the United States (GSS, 2006).

Since 1984, the GSS has used a biennial, split-sample design. The 2006 questionnaire included some changes from previous waves of the GSS such as the inclusion of a third sub-sample with each sample including approximately 1,500 cases. This was also the first year that Spanish speakers were included. The 2006 GSS survey was administered in several modules referred to as ballots A, B, and C. Not all the respondents were asked to complete all the three ballots in order to cover a wider range of topics of interest to researchers without overwhelming the respondents with a lengthy survey. As a result, certain questions of interest to this study were not administered to all the respondents. The samples for this study were selected on the basis of which the ballots included questions on physical health, psychological well-being, and religiosity.

The key measure of health was a single item that asks respondents to rate their current state of health on a scale from poor (1) to excellent (5). This item was only included on ballot A, which included 1003 respondents, 1000 of whom reported valid data on their overall physical health. The key measure of psychological well-being was an item that assesses that the respondents' degree of happiness ranging from not too happy (0) to very

happy (2). This item was included on both ballots A and B and administered to a total of 1980 respondents of whom 1976 reported valid data on psychological well-being, hereafter referred to as happiness.

Demographics: Measures of demographic characteristics were transformed into dummy variables for use in the regression analyses. Gender was measured as male equals zero and female equals one. Race was measured with four dummy variables indicating Caucasian, Black, Latino, and “no race” or “other race” that were grouped together as a residual category. Marital status was categorized into married (1) and other (0) while work status was categorized into employed (1) and other (0). Other socio-demographic variables were measured as continuous variables. Age was reported in years ranging from 18 to 89. Income was assessed (in terms of 1972 dollars to facilitate trend analysis of the GSS) as total family income ranging from 1 (under \$1,000) to 12 (\$25,000 and over). Level of education was assessed based on the years of formal education completed, ranging from none to 20, or 8 years post-high school diploma.

Work, Family, and Finances: Several measures were included to capture the conditions of life within demographic categories such as marital happiness among the married. Marital happiness ranged from not too happy (0) to very happy (2). For those respondents who were not married, the mean for marital happiness was substituted and marital status was controlled in all the regression analyses (Cohen and Cohen 1983). Job satisfaction ranged from very dissatisfied (0) to very satisfied (3). For those who were not employed, the mean for job satisfaction was substituted and employment status was controlled in all regression analyses. The financial situation of respondents’ lives was assessed by asking them to rate their financial status compared to other American families in general on a continuum ranging from far below average (0) to far above average (4).

Social integration was assessed with four items that measured time spent socializing with others, including relatives, neighbors, at a bar or tavern, and with friends who live outside of the neighborhood. Frequency of social interaction was assessed on a seven-point scale where 1 equals never and 7 equals almost every day. The alpha reliabilities for the four items were unacceptably low (0.47 for the health sample and 0.42 for the happiness sample), so we included these four items separately in all regression analyses.

Religiosity: The respondents’ religious affiliation was recoded into four individual categories of Christian, Catholic, other religion, and no religion. Several scales were created to assess various dimensions of religiosity that may be related to physical health and psychological well-being. All items for scales were converted into z-scores before they were summed as they were not measured using the same range of options. The first dimension measured was the nature of one’s religious beliefs ranging from liberal to fundamentalist. High scores signified more fundamentalist beliefs while low scores signified more liberal beliefs. This scale was constructed from four items: (1) the respondents’ belief that the Bible is literal (coded as fundamentalist); (2) belief in God ranging from atheism (associated with more liberal religious beliefs) to no doubt there is a God (coded as fundamentalist); (3) whether or not the respondent believed that a violation of “God’s rules” would require punishment (coded as fundamentalist); and (4) whether the respondents described their religion as liberal, moderate, or fundamentalist. The alpha reliability for liberalism versus fundamentalism for the health sample was 0.69 and was 0.69 for the happiness sample. Religious identity was measured with three items: (1) whether or not respondents carried their religious beliefs over into their everyday lives, ranging from strongly disagree (0) to strongly agree (3); (2) the strength of the respondents’ identities as a religious person ranging from not religious at all (0) to very religious (3); and (3) the strength of their identities with their preferred religion ranging from not very strong (1) to

strong (3). For respondents who had no religious affiliation, we substituted the mean value for strength of identity with preferred religion and controlled for religious affiliation in all regression analyses. The alpha reliability for religious identity for the health sample was 0.67 and 0.65 for the happiness sample. Religious activities were measured based on how often the respondent prayed ranging from never (1) to several times a day (6), how often the respondent attended religious services ranging from never (0) to several times a week (8), and how often the respondent participated in religious activities outside of services, ranging from less than once a year (0) to several times a day (9).

The data were analyzed with a series of hierarchical linear regressions, beginning with physical health and followed by happiness. The first equation of the hierarchical regression of each series assessed the associations between demographic variables and the dependent variables, including age, income, sex, employment status, marital status, education, and race. The second equation in the series added the potential modifiers of the categorical demographic variables including marital happiness, job satisfaction, and perceived financial status. Happiness of marriage was expected to partially or fully explain the expected positive association between being married and health and happiness. Similarly, job satisfaction was expected to partially or fully explain the expected positive association between being employed and health and happiness. Perceived financial status was expected to fully or partially explain the expected positive association between family income and health and happiness. Finally, the scale of social integration was expected to independently predict better health and greater happiness.

The final equation of each series included the three religiosity scales as well as the religious affiliation variables to predict health and happiness. The rationale for entering indicators of religion and religiosity in the final equation was to first take into account the other dimensions of respondents' lives, including marriage, work, financial status, and social integration. By first controlling the associations between these important aspects of life and health and happiness, there can be greater confidence that any associations we do find between religiosity and health and happiness are real rather than spurious.

Results

Means and standard deviations for all variables are presented separately for the health sample and the happiness sample in Table 1. The health sample of 1000 included 439 (43.9%) males and 561 (56.1%) females. Age ranged from 18 to 89 with a mean of 48. Household income varied from <\$1,000 to over \$25,000 in terms of 1972 dollars with a mean income between \$20,000 and \$24,999 for the year. Five hundred and ninety five (59.5%) reported being employed at least part-time, and 486 (48.6%) reported being married. A majority of them were Caucasian (72.3%), 13.8% were Black, and 8.3% were Hispanic. Their average level of education approximately 13 years or the equivalent of 1 year of college, and their average level of marital happiness was between "pretty" and "very" happy. Job satisfaction averaged between "moderately" and "very" satisfied and financial status was perceived to be as slightly below the "average American family." The frequency of social engagements averaged to about once a month for each of the four categories. The scales for religiosity are standardized with means of zero. Means and standard deviations were very similar for the larger sample of 1976 used to predict happiness, and happiness itself averaged a bit above "pretty happy."

Regression results for health are presented in Table 2. In equation 1, health is regressed on demographic characteristics. The results indicate that being employed, married, and

Table 1 Descriptive statistics for both the samples

Variable	Minimum value	Maximum value	Health		Happiness	
			Mean	SD	Mean	SD
<i>Dependent variables</i>						
Happiness	1	3	2.98	0.83		
Health	1	4			2.20	0.61
<i>Demographics</i>						
Age	18	89	47.72	17.16	47.24	17.10
Income	1	13	11.18	2.15	11.11	2.24
Female	0	1	0.56	0.50	0.56	0.50
Employed	0	1	0.60	0.49	0.59	0.49
Married	0	1	0.49	0.50	0.48	0.50
Education	0	20	13.36	3.22	13.42	3.26
Black	0	1	0.14	0.35	0.14	0.35
Latino	0	1	0.08	0.28	0.09	0.29
<i>Conditions of life</i>						
Happy marriage	1	3	2.60	0.36	2.59	0.38
Job satisfaction	0	3	2.31	0.65	2.32	0.77
Perceived-financial status	0	4	1.85	0.83	1.86	0.86
Social support	4	25	14.25	4.28	14.25	4.17
<i>Religiosity</i>						
Liberal/fundamental	-7.22	4.83	0.00	2.92	0	2.93
Religious activity	-6.24	6.59	0.00	3.04	0	3.00
Religious identity	-5.92	3.82	0.00	3.11	0	2.53

more educated are associated with better health, while age is associated with worse health. Race/ethnicity, gender, and income are not significantly related to health. Equation 1 accounts for 12% of the variance in health.

Equation 2 adds indicators of work, family, and finances. Happiness of marriage is positively and significantly associated with health, and reduces the association between being married and health to non-significance, suggesting that it is the quality of marriage, not simply being married, that leads to better health. Perceived financial status is also positively and significantly associated with health, even when absolute income level is not, suggesting that people's perceptions of the state of their financial affairs are more important to their health than their actual income. Nonetheless, perceived financial status and income do have a positive correlation of 0.33, indicating that perceptions and actual income are somewhat in line of agreement. Job satisfaction is not significantly correlated with health, suggesting that being employed is more important to health than the satisfaction that an individual derives from employment. None of the indicators of social integration variables were significantly associated with health, and the explained variance for equation 2 was 0.15.

Before settling on the final model shown in equation 3, we tested associations between religious affiliation and happiness alternating the reference category from Catholic, Christian, other, and no religion, but in none of the cases was religious affiliation significantly associated with health. Next, we added each of the three scales of religiosity one at

Table 2 Regression of health on sociodemographics, life conditions, and religiosity

	Equation 1		Equation 2		Equation 3	
	<i>b</i>	β	<i>b</i>	β	<i>b</i>	β
<i>Constant</i>	2.162		1.595		1.849	
<i>Demographics</i>						
Age	-0.005**	-0.102	-0.005**	-0.100	-0.006***	-0.118
Income	0.010	0.026	-0.003	-0.007	0.001	0.002
Female	0.017	0.010	0.044	0.027	0.020	0.012
Employed	0.260***	0.154	0.249***	0.148	0.238***	0.144
Married	0.110*	0.066	0.096	0.058	0.086	0.050
Education	0.056***	0.214	0.042***	0.161	0.035***	0.133
Black	-0.138	-0.057	-0.125	-0.052	-0.100	-0.042
Latino	-0.001	0.000	0.046	0.015	-0.000	-0.001
<i>Conditions of life</i>						
Happy marriage			0.156*	0.069	0.148*	0.067
Job satisfaction			0.050	0.039	0.045	0.035
Perceived-financial status			0.135***	0.137	0.121***	0.125
Social relatives			-0.007	-0.014	-0.003	-0.009
Social neighbors			0.012	0.028	0.011	0.025
Social friends			0.018	0.036	0.017	0.034
Social bar			0.013	0.026	0.012	0.024
<i>Religious affiliation</i>						
Christian					-0.119	-0.070
No religion					-0.099	-0.042
Other religion					-0.089	-0.021
Liberal/fundamental					-0.039**	-0.135
Religious-identity					0.029*	0.142
Religious activities					0.015	0.054
R ²	0.12		0.15		0.16	
S.E.E.	0.78		0.77		0.76	

a time, controlling for religious affiliation which remained non-significant. Strength of religious identity and engagement in religious activities were both positively related to health when entered independently. However when entered together, only religious identity was significantly associated with health. Although religious identity and religious activities were highly correlated, we found no evidence of problems with multicollinearity based on the tolerance levels and variance inflation factor (VIF). To test the possibility that religious identity modifies the effect of religious activities wherein activities improve health and well-being only for people who strongly identify with their religion, we tested an interaction term between identity and activities, but it was non-significant. Lastly, we found that the liberalism vs fundamentalism of beliefs had a significant negative association with health, indicating that individuals with relatively fundamentalist beliefs tend to be in worse health. The explained variance for equation 3 increased slightly to 0.16 from 0.15.

Table 3 presents the results of the regression of happiness. In equation 1, happiness is regressed on demographic characteristics. The results indicate that income, being married,

Table 3 Regression of happiness on sociodemographics, life conditions, and religiosity

	Equation 1		Equation 2		Equation 3	
	<i>b</i>	β	<i>b</i>	β	<i>b</i>	β
<i>Constant</i>	1.388		0.112		0.155	
<i>Demographics</i>						
Age	0.001	0.038	−0.001	−0.021	−0.001	−0.025
Income	0.029***	0.105	0.015	0.051	0.015*	0.052
Female	0.029	0.024	0.040	0.033	0.022	0.018
Employed	−0.004	−0.004	0.051	0.034	0.054	0.036
Married	0.272***	0.222	0.282***	0.237	0.272***	0.229
Education	0.022***	0.114	0.010*	0.051	0.011*	0.056
Black	−0.011	−0.006	0.024	0.014	−0.015	−0.009
Latino	−0.003	−0.001	0.062	0.031	0.060	0.030
<i>Conditions of Life</i>						
Happy Marriage			0.419***	0.272	0.405***	0.262
Job Satisfaction			0.106***	0.137	0.102***	0.133
Perceived—Financial Status			0.106***	0.152	0.109***	0.157
Social Relatives			0.017	0.045	0.013	0.035
Social Neighbors			0.004	0.014	0.002	0.008
Social Friends			0.007	0.019	0.006	0.016
Social Bar			−0.014	−0.039	−0.005	−0.014
<i>Religiosity</i>						
Christian					−0.019	−0.016
No Religion					0.072	0.045
Other religion					0.050	0.019
Liberal/Fundamental					0.014*	0.071
Religious identity					0.017**	0.082
R ²	0.10		0.25		0.26	
S.E.E	0.58		0.52		0.52	

and having a higher education level are positively and significantly associated with being happy. Age, gender, race, and employment status are not significantly associated with happiness. Equation 1 accounts for 10% of the variance in happiness. Equation 2 indicates that marital happiness, job satisfaction, and perceived financial status are all significantly and positively associated with happiness. Marital happiness does not explain the association between being married and happiness, suggesting that being married increases happiness, but even more so when the marriage is relatively happy. Being relatively satisfied with one's job is associated with greater happiness although being employed, per se, is not. The addition of perceived financial status renders the association between income and happiness non-significant, suggesting again that it is not absolute income, per se, but how one views oneself relative to others that matters most, in this case, for happiness. The explained variance for equation 2 was 0.25, as compared to 0.10 of equation 1.

Once again, we explored the effects of religious affiliation and religiosity separately before determining the final equation. Religious affiliation was unrelated to happiness

regardless of the reference category we used. Religious identity and religious activities were again highly correlated at 0.71 but we found no evidence of problems with multicollinearity. As with health, when identity and activities are entered together, only religious identity is significant. Once again, to test whether identity modifies the impact of religious activities, we tested an interaction term between identity and activities, but it was non-significant. Finally, we found that the association between liberal versus fundamentalist beliefs and happiness is positive and significant, indicating that people with more fundamentalist beliefs tend to be happier regardless of the strength of the religious identity. The explained variance for equation 3 was 0.26.

Discussion

The purpose of this study was to examine the relationships between a number of religious factors and health and well-being while also including other dimensions of life such as work and family that tend not to be included in research on religion and health. Much of the research on religion, health, and well-being has been limited to single concepts such as attendance at religious services or engagement in personal prayer, whereas in this article, we assess a variety of aspects of people's religious lives. Furthermore, we improve on much of the existing research on religion and health by including measures of marital happiness, job satisfaction, perceived financial situation, and social integration, as well as a complete set of measures of demographic characteristics.

This test of the association between religion and physical health and happiness is strengthened by the inclusion of controls for conditions of work and family in people's lives. By taking into account work and family conditions first, we were able to conclude with confidence that the remaining impact of religiosity on health and well-being was real and not spurious. At the same time we found that marital happiness, job satisfaction, perceived financial status, and certain aspects of social integration were related to physical health and happiness net of the effects of religious beliefs and religious identity.

Youth, employment, being educated, happily married, and perceiving one's financial status to be relatively high are each independently associated with better physical health. Higher income, being married, and having a higher level of education are each associated with greater happiness, as are marital happiness, job satisfaction, and perception of financial status.

After taking into account demographics, work and family, we found that religious affiliation was unrelated to health or happiness. Rather, it was the extent to which an individual identified as religious, regardless of the content of their religion that affected health and well-being. Engagement in religious activities was unrelated to either outcome when religious identity was controlled suggesting engaging in religious activities is not helpful to health or well-being unless one believes in the meaning of the activities or in themselves as religious persons. To engage in religious activities without a psychological commitment to them may be attributed more to a routine action than to a meaningful activity, thus diminishing any health benefits that the activities might have. We expected that people with relatively fundamentalist beliefs would have better health and greater happiness, but we found that fundamentalism was associated with poor health yet greater happiness. Fundamentalism may be associated with greater happiness indirectly via its association with optimism. Furthermore, fundamentalism that is associated with a relatively strict and regimented worldview may increase happiness by reducing uncertainty and offering a benevolent and optimistic framework through which one understands life's

hardships. Optimism has traditionally been linked to greater well-being; thus, those subscribing to more fundamental beliefs are likely to have a more optimistic world view, and a greater ability to cope with difficult situations, thus reducing their levels of depression.

The unexpected negative relationship between fundamentalist beliefs and health may be caused in part by people deferring responsibility for any physical health problems away from themselves and on to a higher power. As life tends to be viewed more as deterministic, a person may be less likely to seek medical attention or practice healthy behaviors, instead preferring to rely upon divine intervention. In contrast, those who ascribe to more liberal religious beliefs may be less likely to ascribe their health to powers outside their control and therefore may be more likely to engage in healthy behaviors to ensure their good health.

This study is limited by the use of single items to assess physical health and mental well-being. Happiness alone does not determine whether an individual is in good mental health although it is highly correlated with overall mental health. In addition, physical health is measured as a subjective self-report by the individual, and does not account for doctor visits, or possible time of absence from work, or other functional limitations to daily activities. Furthermore, the data are cross sectional, rendering it impossible to know to what extent it is religion that causes health and happiness, versus the possibility that healthier and happier people are more likely to have active religious lives. Future research should employ measures of multiple facets of physical and mental health, and longitudinal data to assess the effects of religiosity on change in health outcomes over time.

In conclusion, this study contributes to the growing body of literature that links religious engagement to physical health and psychological well-being. The unique contribution of this study is its success in establishing that the effects of religion on health and well-being are independent of work and family. Future research on the relationship between religion and health or well-being should continue to include more elements of work and family life, as well as other domains that may be potentially related to physical health and psychological well-being. Further exploration of the inter-relatedness of religious identity and religious activities is warranted in order to explore the suspicion that religious activities are not beneficial to health unless the individual sees himself or herself as a religious person. Finally, further research should explore the role of the fundamentalism or liberalism of religious beliefs in shaping the relationship between religion and health and well-being.

References

- Banthia, R., Moskowitz, J. T., Acree, M., & Folkman, S. (2007). Socioeconomic differences in the effects of prayer on physical symptoms and quality of life. *Journal of Health Psychology, 12*, 249–260. doi: [10.1177/1359105307074251](https://doi.org/10.1177/1359105307074251).
- Benjamins, M. R., & Finlayson, M. (2007). Using religious services to improve health: Findings from a sample of middle-aged and older adults with multiple sclerosis. *Journal of Aging and Health, 19*, 537–554. doi: [10.1177/0898264307300972](https://doi.org/10.1177/0898264307300972).
- Bluvol, A., & Ford-Gilboe, M. (2004). Hope, health work and quality of life in families of stroke survivors. *Journal of Advanced Nursing, 48*, 322–332. doi: [10.1111/j.1365-2648.2004.03004.x](https://doi.org/10.1111/j.1365-2648.2004.03004.x).
- Byrd, K. R., Hageman, A., & Isle, D. B. (2007). Intrinsic motivation and subjective well-being: The unique contribution of intrinsic religious motivation. *The International Journal for the Psychology of Religion, 17*, 141–156.
- Byrd, K. R., Lear, D., & Schwenka, S. (2000). Mysticism as a predictor of subjective well-being. *The International Journal for the Psychology of Religion, 10*, 259–269. doi: [10.1207/S15327582IJPR1004_04](https://doi.org/10.1207/S15327582IJPR1004_04).

- Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.
- Crocker, J., & Luhtanen, R. (1990). Collective self-esteem and ingroup bias. *Journal of Personality and Social Psychology, 58*, 60–67. doi:10.1037/0022-3514.58.1.60.
- Dezutter, J., Soenens, B., & Hutsebaut, D. (2006). Religiosity and mental health: A further exploration of the relative importance of religious behaviors vs. religious attitudes. *Personality and Individual Differences, 40*, 807–818. doi:10.1016/j.paid.2005.08.014.
- Eliassen, A. H., Taylor, J., & Lloyd, D. A. (2005). Subjective religiosity and depression in the transition to adulthood. *Journal for the Scientific Study of Religion, 44*, 187–199. doi:10.1111/j.1468-5906.2005.00275.x.
- Ellison, C. G. (1991). Religious involvement and subjective well-being. *Journal of Health and Social Behavior, 32*, 80–99. doi:10.2307/2136801.
- Ellison, C. G., Boardman, J. D., Williams, D. R., & Jackson, J. S. (2001). Religious involvement, stress, and mental health: Findings from the 1995 Detroit area study. *Social Forces, 80*, 215–249. doi:10.1353/sof.2001.0063.
- Ellison, C. G., Gay, D. A., & Glass, T. A. (1989). Does religious commitment contribute to individual life satisfaction? *Social Forces, 68*, 100–123. doi:10.2307/2579222.
- Faragher, E. B., Cass, M., & Cooper, C. L. (2005). The relationship between job satisfaction and health: A meta-analysis. *Occupational and Environmental Medicine, 62*, 105–112. doi:10.1136/oem.2002.006734.
- Firori, K. L., Brown, E. E., Cortina, K. S., & Antonucci, T. C. (2006). Locus of control as a mediator of the relationship between religiosity and life satisfaction: Age, race, and gender differences. *Mental Health Religion & Culture, 9*, 239–263. doi:10.1080/13694670600615482.
- Foley, D. P. (1988). Eleven interpretations of personal suffering. *Journal of Religion and Health, 27*, 321–328. doi:10.1007/BF01533200.
- Francis, L. J., & Kaldor, P. (2002). The relationship between psychological well-being and Christian faith and practice in an Australian population sample. *Journal for the Scientific Study of Religion, 41*, 179–184. doi:10.1111/1468-5906.00109.
- Fry, P. S. (2000). Religious involvement, spirituality and personal meaning for life: Existential predictors of psychological wellbeing in community-residing and institutional care elders. *Ageing & Mental Health, 4*, 375–387.
- Gauthier, K. J., Christopher, A. N., Walter, M. I., Mourad, R., & Marek, P. (2006). Religiosity, religious doubt, and the need for cognition: Their interactive relationship with life satisfaction. *Journal of Happiness Studies, 7*, 139–154. doi:10.1007/s10902-005-1916-0.
- Greenfield, E. A., & Marks, N. F. (2007). Religious social identity as an explanatory factor for associations between more frequent formal religious participation and psychological well-being. *The International Journal for the Psychology of Religion, 17*, 245–259.
- Hood, R. W., Jr. (1992). Sin and guilt in faith traditions: Issues for self-esteem. In J. F. Schumaker (Ed.), *Religion and mental health* (pp. 110–121). New York: Oxford University Press.
- Kamp Dush, C. M., & Amato, P. R. (2005). Consequences of relationship status and quality for subjective well-being. *Journal of Social and Personal Relationships, 22*, 607–627. doi:10.1177/0265407505056438.
- Keyes, C. L. M., & Reitzes, D. C. (2007). The role of religious identity in the mental health of older working and retired adults. *Ageing & Mental Health, 11*, 434–443. doi:10.1080/13607860601086371.
- Kiecolt-Glaser, J. K., & Newton, T. L. (2001). Marriage and health: His and hers. *Psychological Bulletin, 127*, 472–503. doi:10.1037/0033-2909.127.4.472.
- Krause, N., Chatters, L. M., Meltzer, T., & Morgan, D. L. (2000). Negative interaction in the church: Insights from focus groups with older adults. *Review of Religious Research, 41*, 510–533. doi:10.2307/3512318.
- Krause, N., & Wulff, K. M. (2005). Church-based social ties, a sense of belonging in a congregation, and physical health status. *The International Journal for the Psychology of Religion, 15*, 73–93. doi:10.1207/s15327582ijpr1501_6.
- Larson, D. B., & Larson, S. S. (2003). Spirituality's potential relevance to physical and emotional health: A brief review of quantitative research. *Journal of Psychology and Theology, 31*, 37–51.
- Lewchuk, W., de Wolff, A., King, A., & Polanyi, M. (2003). From job strain to employment strain: Health effects of precarious employment. *Just Labour, 3*, 23–35.
- Lyons, A. C., & Yilmazer, T. (2005). Health and financial strain: Evidence from the survey of consumer finances. *Southern Economic Journal, 71*, 873–890.
- Maltby, J., Lewis, C. A., & Day, L. (1999). Religious orientation and the psychological well-being: The role of the frequency of personal prayer. *British Journal of Health Psychology, 4*, 363–378. doi:10.1348/135910799168704.

- Mills, R. J., Grasmick, H. G., Morgan, C. S., & Wenk, D. (1992). The effects of gender, family satisfaction, and economic strain on psychological well-being. *Family Relations*, *41*, 440–445. doi:10.2307/585588.
- Mirowsky, J., & Ross, C. E. (1992). Age and depression. *Journal of Health and Social Behavior*, *33*, 187–205. doi:10.2307/2137349.
- Nooney, J., & Woodrum, E. (2002). Religious coping and church-based social support as predictors of mental health outcomes: Testing a conceptual model. *Journal for the Scientific Study of Religion*, *41*, 359–368. doi:10.1111/1468-5906.00122.
- Pargament, K. I. (2002). The bitter and the sweet: An evaluation of the costs and benefits of religiousness. *Psychological Inquiry*, *13*, 168–181. doi:10.1207/S15327965PLI1303_02.
- Pargament, K. I., Ensing, D. S., Falgout, K., Olsen, H., Reilly, B., Van Haitisma, K., et al. (1990). God help me: Religious coping efforts as predictors of the outcomes to significant negative life events. *American Journal of Community Psychology*, *18*, 793–824. doi:10.1007/BF00938065.
- Pargament, K. I., Kennell, J., Hathaway, W., Grevengoed, N., Newman, J., & Jones, W. (1988). Religion and the problem-solving process: Three styles of religious coping. *Journal for the Scientific Study of Religion*, *27*, 90–104. doi:10.2307/1387404.
- Pargament, K. I., Tarakeshwar, N., Ellison, C. G., & Wulff, K. M. (2001). Religious coping among the religious: The relationships between religious coping and well-being in a national sample of Presbyterian clergy, elders, and members. *Journal for the Scientific Study of Religion*, *40*, 497–513. doi:10.1111/0021-8294.00073.
- Peterson, L. R., & Roy, A. (1985). Religiosity, anxiety, and meaning and purpose: Religion's consequences for psychological well-being. *Review of Religious Research*, *27*, 49–62. doi:10.2307/3511937.
- Peterson, C., Seligman, M. E. P., & Vaillant, G. E. (1988). Pessimistic explanatory style is a risk factor for physical illness: A thirty-five-year longitudinal study. *Journal of Personality and Social Psychology*, *55*, 23–27. doi:10.1037/0022-3514.55.1.23.
- Piccinelli, M., & Wilkinson, B. (2000). Gender differences in depression: Critical review. *The British Journal of Psychiatry*, *177*, 486–492. doi:10.1192/bjp.177.6.486.
- Plomin, R., Scheier, M. F., Bergeman, C. S., Pedersen, N. L., Nesselroade, J. R., & McClearn, G. E. (1992). Optimism, pessimism and mental health: A twin/adoption analysis. *Personality and Individual Differences*, *13*, 921–930. doi:10.1016/0191-8869(92)90009-E.
- Pollner, M. (1989). Divine relations, social relations, and well-being. *Journal of Health and Social Behavior*, *30*, 92–104. doi:10.2307/2136915.
- Poloma, M. M., & Pendleton, B. F. (1989). Exploring types of prayer and quality of life: A research note. *Review of Religious Research*, *31*, 46–53. doi:10.2307/3511023.
- Ritter, K. Y., & Terndrup, A. I. (2002). *Handbook of affirmative psychotherapy with lesbians and gay men*. New York: Guilford.
- Rodriguez, E. M., & Ouellet, S. C. (2000). Gay and lesbian Christians: Homosexual and religious identity integration in the members and participants of a gay-positive church. *Journal for the Scientific Study of Religion*, *39*, 333–347. doi:10.1111/0021-8294.00028.
- Ross, C. E., & Mirowsky, J. (1995). Does employment affect health? *Journal of Health and Social Behavior*, *36*, 230–243. doi:10.2307/2137340.
- Scheier, M. E., & Carver, C. S. (2006). Dispositional optimism and physical well-being: The influence of generalized outcome expectancies on health. *Journal of Personality*, *55*, 169–210. doi:10.1111/j.1467-6494.1987.tb00434.x.
- Schnitker, J. (2001). When is faith enough? The effects of religious involvement on depression. *Journal for the Scientific Study of Religion*, *40*, 393–411. doi:10.1111/0021-8294.00065.
- Sethi, S., & Seligman, M. E. P. (1993). Optimism and fundamentalism. *Psychological Science*, *4*, 256–259. doi:10.1111/j.1467-9280.1993.tb00271.x.
- Strawbridge, W. J., Shema, S. J., Cohen, R. D., & Kaplan, G. A. (2001). Religious attendance increases survival by improving and maintaining good health behaviors, mental health, and social relationships. *Society of Behavioral Medicine*, *23*, 68–74. doi:10.1207/S15324796ABM2301_10.
- Suhail, K., & Chaudhry, H. R. (2004). Predictors of subjective well-being in an eastern Muslim culture. *Journal of Social and Clinical Psychology*, *23*, 359–376. doi:10.1521/jscp.23.3.359.35451.
- Wink, P., Dillon, M., & Larsen, B. (2005). Religion as moderator of the depression-health connection: Findings from a longitudinal study. *Research on Aging*, *27*, 197–220. doi:10.1177/0164027504270483.
- Yakushko, O. (2005). Influence of social support, existential well-being, and stress over sexual orientation on self esteem of gay, lesbian, and bisexual individuals. *International Journal for the Advancement of Counseling*, *27*, 131–143. doi:10.1007/s10447-005-2259-6.

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