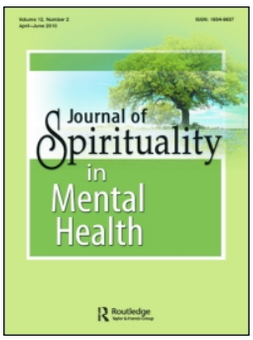

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The relationship between Americans' spiritual/religious beliefs and behaviors and mental health: New evidence from the 2016 General Social Survey

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ABSTRACT

This study uses 2016 General Social Survey (GSS) data to examine the relationship between Americans' religious and spiritual beliefs and behaviors and their mental health. Mental health is measured by days of poor mental health, depressive symptoms (Center for Epidemiologic Studies Depression subscale score), and general happiness. Spiritual/religious beliefs and behaviors measured include afterlife beliefs, belief in God, prayer, service attendance, and self-perceived religiosity and spirituality. More frequent service attendance was the most consistent predictor of enhanced mental health and well-being. Findings are consistent with those of prior studies using GSS data, which showed associations between Americans' religious/spiritual beliefs and behaviors, especially service attendance, and mental health.

KEYWORDS

General Social Survey; spiritual beliefs; religious beliefs; religious service attendance; prayer; happiness; depression; mental health

Introduction

There is an abundance of research evidence suggesting a relationship between Americans' spiritual/religious beliefs and behaviors, and their mental health and well-being. It has been well established that religion and spirituality provide physical benefits as well (Aldwin, Park, Jeong, & Nath, 2014; Doane & Elliott, 2016). Using data from the 2016 General Social Survey, this study investigates the relationship between Americans' mental health and religiosity/spirituality including belief in God and the afterlife, frequency of prayer, and religious service attendance. Specifically, it provides evidence that specific beliefs and practices are associated with days of poor mental health, depression, and general happiness.

Belief in God or the afterlife, meditation, or prayer may be perceived as being either religious or spiritual (Bonelli & Koenig, 2013; Smith & Kim, 2007; Wortham & Wortham, 2007). Because people have different interpretations of the terms "religious" and "spiritual" there may be overlap between the two concepts as demonstrated in prior studies (Brown, Carney, Parrish, & Klem, 2013; Greenfield, Vaillant, & Marks, 2009). For this reason, it may

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not be all that helpful to try to differentiate between religiosity and spirituality, or religious and spiritual beliefs and behaviors; therefore, for the purposes of this study, spiritual and religious beliefs and behaviors are amalgamated.

Theoretical frameworks

Spiritual/religious beliefs can affect mental health via cognitive, emotional, or behavioral pathways. Spiritual/religious beliefs may affect cognitive processes related to threat assessment, social connectivity, and trust (Flannelly, Ellison, Galek, & Koenig, 2008). Positive cognitions stemming from spiritual/religious beliefs may play a role in helping people cope with stressful life events (Pargament, 2013). Furthermore, religious or spiritual beliefs may strengthen emotional and behavioral regulation (Aldwin et al., 2014) and can play a role in preventing depression or anxiety (Bradshaw & Ellison, 2010; Kidwai, Mancha, Brown, & Eaton, 2014).

Religious or spiritual beliefs can provide people with a greater sense of control over their lives (Ellison & Burdette, 2012; Holmes & Kim-Spoon, 2016). Beliefs and practices have the potential to instill hope, meaning, and purpose in people's lives thereby increasing psychological resilience and well-being (Sternthal, Williams, Musick, & Buck, 2010). Pargament (2013) argues it is the spiritual journey itself, more so than beliefs or involvement, that explains the relationship between religiosity/spirituality and enhanced well-being. He posits spirituality is the driver that motivates people along a path toward self-discovery and transformation, thereby enhancing lifelong well-being.

It has been theorized that religious attendance or involvement positively affects mental health by providing congregants with a sense of belonging (Hout & Greeley, 2012), social support and assistance, and a community of likeminded people (Sternthal et al., 2010). Idler et al. (2009) suggest, "Attendance at religious services provides multifaceted physical, emotional, social, and spiritual experiences that may promote physical health through multiple pathways" (p. 1).

It is important to note that negative religious/spiritual beliefs or practices could have harmful effects on mental health. For example, negative cognitions stemming from spiritual or religious beliefs, such as belief in a punishing God, could contribute to fear, anxiety, or depression (Doane & Elliott, 2016). Using General Social Survey (GSS) data collected between 2006 and 2010, Doane and Elliott (2016) found an inverse relationship between conservative religious beliefs and well-being. Furthermore, religious service attendance could have negative effects on a person's mental health if her or she encounters interpersonal conflict, judgment, or mistrust at their place of worship (Schieman, Bierman, & Ellison, 2013).

Current research evidence

Several recent studies have found a relationship between Americans' religious/spiritual beliefs and mental health. The strongest evidence centers on the relationship between religious service attendance and mental health. Highlighted below are findings related to variables examined in this study.

Spirituality and religiosity

Several studies have examined the link between self-perceived spirituality or religiosity and mental health. Maselko, Gilman, and Buka (2009) found existential well-being was associated with lower odds of having depression, while religious well-being was associated with higher odds. Examining 1998 and 2004 GSS data, Ellison and Fan (2008) found a positive association between daily spiritual experiences such as feeling God's presence, finding inner peace, or finding strength and comfort in religion, controlling for religious practices (religious attendance and prayer) and general well-being. Yonker, Schnabelrauch, and DeHaan (2012) looked at 75 independent studies on the effects of religion and spirituality on youth and found greater religiosity or spirituality was generally associated with fewer risky behaviors and less depression, and greater well-being and self-esteem.

Afterlife beliefs

Several studies have looked at the relationship between afterlife beliefs and mental health. Ellison, Burdette, and Hill (2009) analyzed data from the 1996 GSS module on spiritual beliefs and found belief in an afterlife was negatively associated with anxiety and positively associated with feelings of tranquility. In their study, Flannelly et al. (2008) found those who possessed positive and hopeful afterlife beliefs tended to have less depression, anxiety, OCD, social phobia, and paranoia, while those with negative afterlife beliefs tended to have more occurrences of these disorders.

Belief in God

There is scant research evidence that belief in God is related to better mental health; however, it is a difficult belief to measure. Using a sample of undergraduate and graduate students, Brown, Carney, Parrish, and Klem (2013) found satisfaction with one's relationship with God was inversely related to anxiety and depression. Doubting the existence of God could be more stressful for those who consider themselves very religious (Sternthal et al., 2010), whereas for atheists, not believing in God may have no negative effects on mental health (Speed & Fowler, 2016).

Prayer

The effects of prayer on mental health are unclear. In their study, Sternthal et al. (2010) found more frequent prayer was related to worse mental health. One possible explanation for this finding is that those who pray very frequently may be going through a particularly stressful period in their lives, or are in poor health, and turn to prayer for comfort. The stress or poor health may actually mediate the association between frequent prayer and poorer mental health (Idler & Stanislav, 1995; Schieman et al., 2013).

Religious service attendance

Among the various spiritual/religious beliefs and behaviors that have been studied, service attendance has demonstrated the most salient relationship with mental health. Maselko et al. (2009) examined data from the New England Family Study and found religious service attendance was associated with 30% lower odds of depression. Sternthal et al. (2010) looked at the relationship between religious service attendance and mental health for participants in the Chicago Community Adult Health Study. They found those who attended services once a week (but no more), compared with those who attended less than once month or never, tended to have fewer depressive or anxiety symptoms.

Religious attendance and mental health have been the focus of several studies using GSS data. Ellison et al, (2009) analyzed data from the 1996 GSS module on spiritual beliefs and found greater religious attendance was negatively associated with anxiety and positively associated with feelings of tranquility. Examining 2008 GSS data, Tovar-Murray (2011) found the interaction between spiritual beliefs and religious service attendance was positively associated with happiness. Stark and Meier (2008) examined 24 years of GSS data between 1972 and 2002 and found those who attended religious services more frequently were more likely to be very happy versus pretty or not very happy.

Bonelli and Koenig (2013) reviewed relevant literature from the field of psychiatry published between 1990 and 2010 and found 31 rigorous studies that showed "good evidence" of a relationship between religious involvement (defined as a combination of beliefs and religious practices) and mental health, with those who were more involved having less depression and substance abuse. They also found "some evidence" of an association between more religious involvement and fewer stress-related disorders and organic mental disorders (p. 668).

Purpose and hypotheses

The current study adds further evidence, based on responses from a nationally representative sample of Americans who completed the 2016 GSS, about

which specific spiritual/religious beliefs and behaviors are associated with mental health and general happiness. The 2016 GSS included core questions about religious and spiritual beliefs and practices that have been included in the annual survey for decades. The study examined the relationship between six separate religious/spiritual beliefs and behaviors and three mental health and well-being indicators: days of poor mental health, depression, and general happiness.

Based on findings from previous studies using GSS data, findings from other large studies, and relevant literature, the following hypotheses about the relationship between specific spiritual/religious beliefs and behaviors and mental health for participants in the 2016 GSS were made:

Religiousl/spiritual beliefs

H1: Belief in the afterlife is associated with fewer days of poor mental health, less depression, and greater general happiness.

H2: Doubting or not believing in God's existence, compared to being certain in God's existence, is associated with more days of poor mental health, more depression, and less general happiness.

Religious/spiritual behaviors

H3: Frequent prayer, but not more than once a day, is associated with fewer days of poor mental health, less depression, and greater general happiness.

H4: Attending religious services more frequently is associated with fewer days of poor mental health, less depression, and greater general happiness.

Self-perceived religiosity/spirituality

H5: Stronger self-perceived religiosity is associated with fewer days of poor mental health, less depression, and greater general happiness.

H6: Stronger self-perceived spirituality is associated with fewer days of poor mental health, less depression, and greater general happiness.

Methods

The GSS has been conducted annually since 1972 by NORC at the University of Chicago (formerly the National Opinion Research Center) with funding from the National Science Foundation. The cross-section data was collected

via interviews at participants' homes that took approximately 1.5 hours. Computer-assisted personal interviewing (CAPI) was used to conduct the interviews and all response were anonymous. Data for the 2016 GSS survey were collected from April to November of 2016 (Smith, Marsden, & Hout, 2017b).

The GSS gathers information about Americans' views and practices focusing on topics such as politics, work, family, social problems, institutions, and religion. The survey also gathers demographic and health information. In some years supplemental modules are used to collect additional information about specific topics.

Due to the adoption of a nonrespondent subsampling design, weighting must be employed when analyzing GSS data after 2003. The WTSS variable takes into consideration (a) the subsampling of nonrespondents and (b) the number of adults in the household (Smith, Davern, Freese, & Hout, 2017a).

Participants and sample

The study employed a full probability, multistage sampling plan with the first stage using consolidated statistical areas (CSA) and counties as sampling units (Smith et al., 2017b) and the second stage using households. The sampling frame was 72% of American adults over the age of 18 who lived in noninstitutional settings. Only 72% of all adults are included in NORC's National Sampling Frame because, according to NORC, it is easier to update and use a specific frame of addresses for each survey administration (Smith et al., 2017b).

Samples used by NORC are proportional to the U.S. population as reflected by U.S. census data. The response rate in 2016 was 61.3%. The original sample of 6,200 was reduced to 4,327 due to vacant properties and language problems (Smith et al., 2017b, p. 3134). The net sample was reduced to the final sample after 1,232 households refused to participate (32.7% refusal rate), 76 were unavailable (2%), and 152 (4%) could not participate for other reasons. After subsampling for nonrespondents, the final sample size was 2,867.

Since 1988 the full sample was divided into three subsamples, each of which received different sets of questions called ballots. "Replicating core" questions are included on all ballots (Smith et al., 2017b), but some questions are only asked of half of the subsample receiving Ballot 2, the full subsample receiving Ballot 3, or the subsamples receiving Ballots 2 or 3. Data from the Ballot 3 (referred to as Ballot c) subsample (n = 979) was used in this study because these participants answered all the questions of interest to this study.

Table 1. Descriptive statistics for days of poor mental health and CESD subscale score.

	Days of poor mental health[a]			CESD score[b]		
Variable	*n*	*M*	*SD*	*n*	*M*	*SD*
Sociodemographic						
Sex						
Male	318	2.96	6.438	430	1.6471	.49442
Female	419	3.74	6.704	535	1.7165	.55644
Education						
LT high school	84	3.99	8.098	117	1.7346	.60487
High school	373	3.50	6.869	503	1.7378	.54864
Junior college/college	181	3.45	5.984	236	1.6087	.46561
Graduate school	97	2.47	5.019	108	1.5628	.45012
General health						
Excellent	179	1.36	1.36	227	1.4740	.40922
Good	341	2.63	2.63	456	1.6322	.43879
Fair/poor	216	6.21	6.21	281	1.9371	.63747
Income						
$0–$19,999	118	5.55	8.511	152	1.9425	.62815
$20,000–$49,999	184	3.87	7.655	243	1.7233	.55193
$50,000–$89,999	193	2.18	4.341	251	1.5756	.41169
$90,000 and up	177	2.70	5.169	221	1.5625	.44813
Religious beliefs and behaviors						
Belief in the afterlife						
Yes	540	3.37	6.731	697	1.6637	.52609
No	118	3.49	6.381	169	1.7394	.52430
Belief in God						
Don't believe	32	2.49	5.678	45	1.7106	.47920
No way to find out	62	4.65	7.433	77	1.7083	.45133
Some higher power	76	3.97	6.133	105	1.7737	.50601
Believes sometimes or doubts	145	3.39	6.825	183	1.7042	.57175
Know God exists	413	3.19	6.465	545	1.6566	.53274
Prayer						
Several times a day	228	3.22	228	319	1.6960	.55349
Once a day	218	3.21	6.855	270	1.6527	.49003
Several times a week	75	4.57	7.802	107	1.7664	.61391
Once a week/less than once a week	105	3.62	6.634	125	1.5837	.46406
Never	104	3.26	5.913	135	1.7705	.52179
Attend religious services						
Once a year or less	324	3.98	6.928	423	1.7383	.54867
A few times a year to once a month	123	4.17	7.862	158	1.7265	.56327
A few times a month	108	2.26	5.539	143	1.6338	.47181
Once a week or more	176	2.45	5.053	236	1.5894	.48607
Spiritual person						
Very spiritual	233	3.26	6.519	301	1.6410	.52961
Moderately spiritual	271	3.38	6.660	363	1.6894	.52916
Slightly spiritual	160	3.82	6.834	204	1.7284	.53920
Not spiritual	66	3.28	6.326	88	1.7379	.50725
Religious person						
Very religious	124	3.13	6.596	166	1.6422	.51937
Moderately religious	284	3.03	6.803	359	1.6449	.54810
Slightly religious	164	3.95	6.886	224	1.7368	.53330
Not religious	154	3.75	5.963	205	1.7307	.49172

[a]$n = 737$. [b]$n = 970$.

*$p < .05$. **$p < .01$. ***$p < .001$.

Until 2004, NORC only interviewed English speakers but in 2006 they added Spanish speakers to the target population. Participants demographics for the ballot c subsample are provided in Table 1.

Measures

Spiritual and religious beliefs and behaviors

To measure belief in an afterlife participants were asked, "Do you believe there is a life after death" (yes or no). To measure belief in God they were asked, "Which statement comes closest to expressing what you believe about God" and given the following response choices: I don't believe in God; I don't know whether there is a God and I don't believe there is any way to find out; I don't believe in a personal God, but I do believe in a Higher Power of some kind; I find myself believing in God some of the time, but not at others; While I have doubts, I feel that I do believe in God; I know God really exists and I have no doubts about it.

To measure frequency of prayer, participants were asked, "How often do you pray?" Six response choices ranged from several times a day to never. To measure religious attendance participants were asked, "How often do you attend religious services?" Eight response choices ranged from less once a year to more than once a week.

To measure religiosity and spirituality (separate items) participants were asked, "To what extent do you consider yourself a religious person? Are you" and "To what extent do you consider yourself a spiritual person? Are you" Responses choices for each were: very, moderately, slightly and not religious/spiritual.

Hout and Hastings (2016) measured the test–retest reliability of the religion/spirituality variables using responses from panels of respondents who took the GSS between 2006 and 2014. The following alpha levels were reported: spiritual person and religious person ($\alpha = .80$) belief in God and the afterlife ($\alpha > .75$), and religious attendance and prayer ($\alpha > .75$).

Mental health and well-being indicators

The first mental health indicator was "Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?" (Smith et al., 2017a).

The second mental health indicator was the Center for Epidemiologic Studies Depression Scale (CESD) subscale, which is based on items from CES-D (Radloff, 1977). The CESD subscale included five items. Each began with, "I will now read out a list of the ways you might have felt or behaved during the past week. Tell me how much of the time during the past week you felt depressed? You felt sad? You felt restless? You felt lonely? You felt

happy?" Each item was measured using a 4-point Likert scale: none of the time, almost none of the time, almost all of the time, all of the time.

The CESD subscale score was created by reversing coding "you felt happy," summing the five items, and dividing the sum by 5. If a respondent did not answer all five questions their subscale score was not calculated. A higher subscale score indicated more symptoms of depression. CES-D has been widely used in depression screening and found to hold strong psychometric properties. The CESD subscale demonstrated strong reliability in the current study ($\alpha = .76$).

The well-being indicator was, "Taken all-together, how would you say things are these days—would you say that you are very happy, pretty happy, or not too happy?" Bivariate correlations were conducted to examine validity of the measures. General happiness and time happy in past week (recoded to have three response choice) yielded a significant moderate correlation ($r = -.419$). Time sad and time depressed yielded a significant moderate correlation ($r = .524$). Days of poor mental health and the CESD subscale yielded a significant moderate correlation ($r = .587$).

Covariates included in the multivariable analyses were sex, income, highest degree earned, and self-reported global health. These variables were included as control variables to determine if the effects of the various religious/spiritual behaviors and practices on the three key dependent variables disappeared or diminished with the addition of the covariates to the model.

Data analysis

Analyses were performed using SPSS version 24. All variables were examined to determine whether response choices should be combined or eliminated. Two response categories for belief in the existence of God (I find myself believing in God some of the time, but not at others; While I have doubts, I feel that I do believe in God) were combined. Two response categories for frequency of prayer (once a week and less than once a week) were combined.

To estimate models for days of poor mental health and the CESD subscale, multiple linear regressions were conducted. To estimate models for general happiness a multinomial logistic regression was conducted. A mediation analysis was performed using PROCESS.

Results

Descriptive statistics for days of poor mental health and CESD subscale score are presented in Table 1. Means and standard deviations are provided for each religious/spiritual variable and each demographic variable.

Beta coefficients for days of poor mental health are presented in Table 2.

Table 2. Coefficients for effects of religious/spiritual beliefs and behaviors on days of poor mental health (N = 737).

	Model 1		Model 2	
Variable	β	(SE)	β	(SE)
Spiritual/religious beliefs and behavior				
Belief in the afterlife				
Yes	−376	(.858)	−.574	(.865)
Belief in God (reference = know God exists)				
Don't believe	−.144	(1.751)	−.465	(1.722)
No way to find out	2.350	(1.442)	2.663	(1.417)
Some higher power	−.317	(1.118)	−.731	(1.075)
Believe sometimes/believe but doubts	−.732	(.799)	−.533	(.794)
Prayer (reference = never)				
Several times a day	1.915	(1.495)	1.840	(1.546)
Once a day	2.067	(1.447)	2.656	(1.499)
Several times a week	2.578	(1.482)	4.009**	(1.533)
Once a week/less than once week	1.689	(1.426)	2.129	(1.435)
Attend religious services (reference = once a year or less)				
A few times year/once a month	1.441	(.819)	2.101**	(.829)
A few times a month	−2.329**	(.868)	−1.566	(.861)
Once a week or more	−2.534**	(.840)	−2.046**	(.831)
Spiritual person (reference = not spiritual)				
Very spiritual	−.530	(1.257)	.247	(1.233)
Moderately spiritual	−.276	(1.159)	.369	(1.130)
Slightly spiritual	.264	(1.173)	−.052	(1.145)
Religious person (not religious)				
Very religious	1.594	(1.104)	.086	(1.096)
Moderately religious	−.987	(.992)	−2.071*	(.993)
Slightly religious	−.865	(.989)	−2.154*	(.973)
Sociodemographic				
Sex				
Male	—	—	.093	(.556)
Education (reference = less than high school)				
High school	—	—	−1.819*	(.804)
Junior college/college	—	—	.330	(.938)
Graduate school	—	—	.019	(1.121)
General health (reference = fair/poor)				
Excellent	—	—	−4.943***	(.798)
Good	—	—	−3.748***	(.641)
Income (reference = $90,000 and up)				
$0–$19,999	—	—	2.139*	(.862)
$20,000–$49,999	—	—	1.422	(.747)
$50,000–$89,999	—	—	−.445	(.690)
Adjusted R^2	.033		.151	

*p < .05. **p < .01. ***p < .001.

Neither belief in God nor belief in an afterlife were significant in either model. In Model 2, prayer was related to mental health with those who said they pray several times a week tending to have more days of poor mental health than those who said they never pray. Also, in Model 2, those who reported being slightly or moderately religious tended to have fewer days of poor mental health compared to those who said they were not religious.

Since these associations only appeared in Model 2, the relationships may be a function of specific demographic variables. In fact, in examining interactions, it was found that health moderated the effects of prayer on mental health with those in fair or poor health who prayed several times a week or more tending to have more days of poor mental health compared to those in good or excellent health who prayed this frequently. Furthermore, females who prayed several times a day tended to have more days of poor mental health than males who prayed several times a day.

Attending services once a week or more, compared to attending once a year or less, predicted fewer days of poor mental health in both models. In the first model, those who reported attending a few times a month, also tended to have fewer days of poor mental health. In the second model, those who reported attending services a few times a year to once a month tended to have more days of poor mental health than those who reported attending once a year or less.

Regression models for the CESD subscale are reported in Table 3. In model one, those who reported they don't believe in God or there is no way to find out tended to have lower CESD scores (less depression) than those who said they know God exists. Prayer was related to CESD scores in both models with those who reported praying once a week/less than once a week having lower CESD scores than those who reported never praying.

In both models, those who reported attending religious services once a week or more had lower CESD scores compared to those who reported never attending. In both models those who reported being very spiritual had lower CESD scores compared to those who reported not being spiritual. In the second model those who said reported being moderately religious had lower CESD scores than those who reported not being religious.

Results of the multinomial logistic regression to examine the effects of religious/spiritual beliefs and behaviors on general happiness are reported in Table 4. Those who said they attended church once a year or less had lower odds of saying they were very happy versus not so happy, compared to those who attended once a week or more. Those who said they are very, moderately, or slightly spiritual, compared to those who said they are not spiritual, had lower odds of saying they were very happy or somewhat happy versus not too happy.

Several covariates were consistent predictors of better mental health and greater happiness. Having better health predicted fewer days of poor mental health, lower CESD scores, and greater happiness. Having a higher income also predicted fewer days of poor mental health, lower CESD scores, and greater happiness. As noted, in some instances, the covariates appear to

Table 3. Coefficients for effects of spiritual/religious beliefs and behaviors on CESD subscale scores (N = 965).

	Model 1		Model 2	
Variable	β	(SE)	β	(SE)
Spiritual/religious beliefs and behavior				
Belief in the afterlife				
Yes	.051	.054	.011	.053
Belief in God (reference = know God exists)				
Don't believe	−.222*	.113	−.118	.190
No way to find out	−.187*	.096	−.038	.097
Some higher power	−.015	.074	−.051	.073
Believe sometimes/believe but doubts	−.022	.055	.018	.054
Prayer (reference = never)				
Several times a day	.008	.096	.084	.100
Once a day	−.106	.093	.018	.097
Several times a week	−.048	.096	.135	.098
Once a week/less than once a week	−.344***	.092	−.231*	.093
Attend religious services (reference = once a year or less)				
A few times year/once a month	.035	.056	−.002	.057
A few times a month	−.108	.059	−.098	.059
Once a week or more	−.183**	.057	−.166**	.057
Spiritual person (reference = not spiritual)				
Very spiritual	−.236**	.084	−.186*	.084
Moderately spiritual	−.99	.077	−.088	.075
Slightly spiritual	−.066	.077	−.071	.075
Religious person (not religious)				
Very religious	.053	.077	−.049	.076
Moderately religious	−.089	.067	−.149*	.066
Slightly religious	.021	.065	−.066	.063
Sociodemographic				
Sex				
Male	—	—	.047	.037
Education (reference = grad school)				
Less than high School	—	—	.031	.055
High School	—	—	.049	.064
Junior college/college	—	—	.061	.079
General health (reference = fair/poor)				
Excellent	—	—	−.373***	.054
Good	—	—	−.244***	.043
Fair/poor	—	—		
Income				
$0–$19,999	—	—	.245***	.059
$20,000–$49,999	—	—	.058	.050
$50,000–$89,999	—	—	−.018	.047
$90,000 and up	—	—		
Adjusted R^2	.056		.169	

*p < .05. **p < .01. ***p < .001.

explain the association between key belief and behavior variables and outcomes variables. Service attendance was the only consistent predictor of all three outcome variables.

Table 4. Odds ratios for effects of spiritual and religious beliefs and behaviors on general happiness.

	General happiness (very happy vs. not too happy)[a]		General happiness (pretty happy vs. not too happy)[b]	
Variable	OR	(SE)	OR	(SE)
Spiritual and religious beliefs and behavior				
Belief in the afterlife				
Yes	1.643	(.384)	1.363	(.341)
Belief in God (reference = know God exists)				
Don't believe	1.787	(.827)	1.133	(.735)
No way to find out	1.239	(.747)	.929	(.668)
Some higher power	1.609	(.546)	1.511	(.494)
Believe sometimes or doubts	1.230	(.378)	1.198	(.341)
Prayer (reference = never)				
Several times a day	1.361	(.735)	.614	(.629)
Once a day	1.350	(.711)	.551	(.602)
Several times a week	1.451	(.744)	.887	(.633)
Once a week/less than once a week	4.336	(.769)	1.337	(.687)
Attend (reference = once a week or more)				
Once a year or less	.465*	(.392)	.925	(.353)
Few times year/once a month	.816	(.428)	1.036	(.398)
Few times a month	.535	(.378)	.611	(.351)
Spiritual person (reference = not spiritual)				
Very	.168*	.731	.166**	(.680)
Moderately	.196*	.697	.310	(.647)
Slightly	.195*	.687	.256*	(.632)
Religious person (reference = not religious)				
Very religious	1.350	.506	2.232	(.475)
Moderately religious	1.315	.441	1.704	(.411)
Slightly religious	1.294	.457	1.933	(.412)
Sociodemographic				
Sex				
Male	.961	(.263)	.936	(.241)
Education (reference = grad school)				
Less than high School	1.097	(.694)	.592	(.659)
High School	.649	(.605)	.466	(.585)
Junior college/college	.722	(.620)	.547	(.602)
General health (reference = fair/poor)				
Excellent	3.903***	(.378)	1.385	(.340)
Good	3.311***	.304	1.629	(.255)
Income (reference group = $90,000 and up)				
$0–$19,999	.064***	(.485)	.150***	(.447)
$20,000–$49,999	.174***	(.450)	.326**	(.434)
$50,000–$89,999	.440	(.459)	.631	(.450)
Nagelkerke .233				

[a]n = 775. [b]n = 775.
*p < .05. **p < .01. ***p < .001.

Discussion

The aim of this study was to determine if religious/spiritual beliefs and behaviors are associated with mental health and well-being. Although some associations were found between religious/spiritual beliefs and behaviors and mental health, many findings were not consistent across outcomes and models. Religious service attendance, however, consistently

predicted mental health across all three outcomes with and without covariates included.

The first set of hypotheses centered on religious and spiritual beliefs. Hypothesis 1, that belief in the afterlife would be associated with mental health and happiness, was not supported. It is difficult to interpret this finding without knowing what conception of the afterlife participants hold. Afterlife beliefs were not as relevant to mental health and happiness as belief in God or considering oneself spiritual or religious. This is an interesting finding that deserves further investigation. Perhaps, there is more uncertainty around afterlife beliefs even for those who consider themselves religious or spiritual.

Hypothesis 2, that doubting or not believing in God's existence would be associated with more days of poor mental health, more depression, and less general happiness was not supported. Surprisingly, those who expressed a more tenuous belief in the existence of God (don't believe, no way to find out) tended to have lower CESD subscale scores (fewer depressive symptoms) than those who said they know God exists.

It is possible that those who don't believe in God, such as atheists, as Speed and Fowler (2016) suggested, are not "disappointed" by God during times of hardship and stress simply because they don't believe in God. Those who do believe may be more likely to be disappointed or angry with God when stress or hardship occurs, resulting in more depression.

Hypothesis 3, that more frequent prayer (but not more than once day) would predict greater mental health and happiness, was partially supported. Those who reported praying several times a week, versus those who reported never praying, tended to have more days of poor mental health. It may be that those who pray as frequently as several times a week, similar to those who pray daily or more, are turning to prayer for consolation or support in times of stress and therefore have worse mental health. Occasional prayer did predict fewer depressive symptoms, however with those who reported praying once a week or less than once a week, versus those who reported never praying, tending to have lower CESD scores.

More frequent religous service attendance predicted greater mental health and happiness, thereby supporting Hypothesis 4. Attendance was the only variables associated with all three mental health and well-being indicators and across both models. These finding are consistent with results from previous studies showing a relationship between more frequent service attendance and better mental health and well-being (Ellison & Fan, 2008; Schieman et al., 2013; Stark & Meier, 2008; Sternthal et al., 2010).

Religious service attendance is a very important variable to consider when looking at Americans' mental health and well-being. A mediation analysis was conducted (not shown) to determine if service attendance mediated the effects of the other religious/spiritual beliefs and behaviors variables on the mental-health indicators. It was found that service attendance did in fact mediate the effects of belief in God, prayer, and being a spiritual person on days of poor mental health. This result further illustrates the robustness of more frequent service attendance as a predictor of better mental health. It may be that service attendance strengthens beliefs and practices such as prayer. It may also be the case that the effects of service attendance on mental health have more to do with the social aspects of belonging to a congregation and worshiping in communion with others.

Hypothesis 5, that those who reported being more religious would have better mental health and greater happiness, was partially supported. Those who said they are slightly or moderately religious, compared to those who said they are not religious, tended to have fewer days of poor mental health. This finding was only significant in the second model suggesting the association is more robust for individuals with certain demographic characteristics.

Hypothesis 6, that those who reported being more spiritual would have better mental health and more happiness, was partially supported. Those who reported being very spiritual, compared to those who said they are not spiritual, had lower CESD scores. Curiously, those who reported being more spiritual were less likely to say they were very happy versus not too happy in both models. The two findings seem to be in contradiction.

Limitations and strengths

There are several limitations to the current study. It would be helpful to know more about the nature of respondents' beliefs in the afterlife such as whether their beliefs were hopeful or foreboding. Also, it would be helpful to know how participants define religiosity and spirituality. This information could have enhanced the study's finding, but the 2016 GSS only included core questions about spiritual and religious beliefs and behaviors.

It also would be helpful to know more about participants' religious service attendance. Do they feel highly motivated to attend? Does attending strengthen their beliefs or behaviors? Also, do they feel attuned to the beliefs and lifestyle

of other congregants? This information would help determine whether it is the social or spiritual aspects of service attendance that influence mental health.

A strength of the study is that the GSS includes a core set of questions about spiritual and religious beliefs and behaviors that are reliable measures. The GSS also includes a strong set of mental health and well-being indicators. Although variables that provide a more nuanced understanding of participants' beliefs and motivations would have helped flesh out the findings, the core set of items still offer meaningful insights into the relationship between religious/spiritual beliefs and behaviors and mental health.

The sample used in this study was highly representative of the sociodemographic diversity of the United States, and therefore, it is expected findings were not skewed toward a particular political, geographic, religious, or age group. Finally, these findings add current knowledge about the association between Americans' beliefs and behaviors and mental health.

Future research

Future research should examine interactions between different types of stressors (e.g., financial, marital) and religious/spiritual beliefs and behaviors, and their impact on mental health. This information could aid in understanding the potential "buffering" effect of spirituality/religiosity on stress (Schieman et al., 2013, p. 21). For example, it would be helpful to understand whether prayer has a more positive impact for those suffering from a particular type of stressful life event such as illness or loss.

More qualitative research is needed to better understand how Americans define spirituality and religiosity, how they conceive of the afterlife, and what they expect from prayer and religious service attendance. Furthermore, ongoing comparisons of findings from GSS with other studies that include similar belief and behavior variables is important to understand more deeply the relationship between religion/spirituality and mental health. More research about changes in the effects of beliefs and behaviors on mental health across the lifespan is also needed.

Finally, researchers engaged in this field of inquiry should continue to study what aspects of religious service attendance have the most robust effects on mental health and well-being. Is it the social aspect of service attendance that has such a positive effect or is it that service attendance strengthens religious/spiritual beliefs, thereby enhancing mental health?

Practice implications

This study affirms previous findings showing a relationship between spiritual/religious beliefs and behaviors and mental health. Mental health

professionals should learn more about how they can integrate knowledge about their client's spiritual and religious beliefs and behaviors into the therapeutic approach used Some therapists may be more comfortable discussing spirituality and religion with clients from similar religious backgrounds. If this is the case, they should disclose this preference with clients.

Therapists should be open to helping their clients lean on spiritual or religious beliefs and practices during times of heightened stress. They might also consider explaining to clients who lack a specific religious/spiritual orientation that others have found great resilience and hope from spirituality or religion and suggest the client consider exploring spiritual beliefs or developing a spiritual path. Therapists might also consider using spiritual assessment tools and evidence-based spiritually oriented interventions (Hodge, 2004).

There is evidence more clinicians, especially social workers (Dwyer, 2010), are recognizing the promise of integrating spirituality and religion into therapeutic approaches with clients, where appropriate (Elkonin, Brown, & Naicker, 2014). As understanding grows of the role spirituality and religion plays in mental health and well-being, clinicians will be better able to develop or tailor therapies for spiritually and religiously inclined clients and for those whom the research evidence suggests would be helped most by such an approach.

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