

ABSTRACT

Private Religiosity and Mental Health: The Buffering Role of Prayer and Scriptures on Social Isolation among Americans

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The existing body of literature identifies religion, especially public religiosity, as a factor that ameliorates the detrimental effects of stressors in the time of challenge, as well as promoting health. However, a facet unique to the COVID-19 pandemic that has yet to be grasped in existing studies is that participation in public religiosity took on a drastically different form under social distancing and lockdown. Thus, I argue that private religiosity (measured by private scripture reading and private prayer) provides a buffering effect on loneliness, a key predictor of mental health, during the pandemic. Using data from the Baylor Religion Survey Wave 6 my findings underscore that scripture reading buffers loneliness ($b = -.005$, $P < .05$), while prayer has null effect on loneliness associated with social distancing.

Private Religiosity and Mental Health: The Buffering Role of Prayer and Scriptures on Social
Isolation among Americans

by

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A Thesis

Approved by the Department of Sociology

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Submitted to the Graduate Faculty of
Baylor University in Partial Fulfillment of the
Requirements for the Degree
of
Master of Arts

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Accepted by the Graduate School

May 2023

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ACKNOWLEDGMENTS

First and foremost, thanks to Dr. Jerry Z. Park for continued support as both a mentor and thesis chair, as well as affirming me throughout this thesis. Many thanks also to Dr. Paul Froese, who provided me with important measures and scales for the development of the thesis and taught me the fundamentals of sociology of religion. Thanks to Dr. Stephanie Boddie, who graciously agreed to serve on my thesis committee.

DEDICATION

To my father Dr. Changmo Yang and my mother Eunsook Lee, whose unending love and support made me reach this far. To my girlfriend Junga Lee, who perseveres through our long-distance relationship and believes in me. To my cohort members Nick Andre, Rudra Chakraborty, James Malo and Meagan McGourty for their presence throughout our years at Baylor. Lastly, to Steve Foertsch for his friendship and academic advice.

CHAPTER ONE

Introduction

The impact of enforced social isolation and the consequent loneliness due to mandatory social distancing and lockdown has been explored by many mental health scholars. (Alzueta et al. 2020; Douglas et al. 2020; Boden et al. 2021). Loneliness is an important predictor of mental health across generations that was prevalent during the pandemic. Thus, it is in the interest of research to continue to examine factors that may ameliorate the long-term consequences of loneliness on mental health.

Religion is one factor which has been identified as ameliorating the detrimental effects of pandemic-related stress through providing psychological compensation and a sense of control, as well as promoting health in a challenging time (Barmania and Reiss 2021; Dein et al. 2020; Hart and Koenig 2020; Schnabel and Schieman 2021). Regardless of social conditions, religious beliefs and behaviors generally exhibit a beneficial relationship with mental well-being (Vilchinsky and Kravetz 2005; Koenig 2012), psychological adjustment (Hackney and Sanders 2003) and depressive and anxiety symptoms (Sternthal et al. 2010). A facet unique to the COVID-19 pandemic that has yet to be grasped in existing studies is that religious attendance took on a drastically different form, with some communities shifting to virtual services or placing limits on the number of in-person gatherings. Since mass isolation brought about social distancing and loneliness and self-quarantine were a result of the early stages of the pandemic, the social benefits of religion may have been limited.

Therefore, it is necessary to examine whether private religiosity such as reading scripture or praying may affect loneliness associated with social distancing during the COVID-19 pandemic in America. While the positive outcomes of religious participation for individuals in everyday life has been discovered through cross-sectional and short-term longitudinal surveys, do we arrive at similar conclusions in these unusual times that affected many religious individuals and the communities in which they once participated? I use survey responses from a national random sample of American adults that was collected during the early months of 2021, a year after COVID-19 had officially been announced as a pandemic, to examine the question. This research contributes to the literature on health and religion by investigating the role of private religiosity in moderating loneliness resulting from social distancing in the unprecedented time of mass social isolation, where social support is limited, through a cross-sectional study.

CHAPTER TWO

Review of the Literature

Pandemic and Mental Health: Social Isolation during COVID-19 and Loneliness

Historically, the outbreak of global pandemics such as severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS), and COVID-19 have posed serious mental health problems in the general population. Specifically, for COVID-19, several risk factors ranging from institutional racism, economic hardship, anxiety, domestic violence, fear of death, insomnia, and substance abuse contributed to detrimental outcomes on the mental health of people (Boden et al. 2021; Kumar and Nayar 2021; Oyetunji et al. 2021; Zhou et al. 2020). Also, such cases are associated with the subsequent global increase in suicide attempts (Elbogen et al. 2020; Kim 2021; McIntyre and Lee 2020; Osaki et al. 2021).

The abrupt and pervasive nature of COVID-19 posed another threat to mental health of people around the world unseen in other pandemics: the implementation of mandatory social distancing and lockdown. These policies spared no societal functions, and as a result deteriorated the economy by suspending public gatherings and informal social gatherings and prevented the general public from acquiring basic needs (Bierman et al. 2021). Those who had been quarantined reported a high prevalence of symptoms of psychological distress and disorder such as depression, irritability, and post-traumatic stress symptoms (Brooks et al. 2020). This suggests that loneliness during the quarantine may be a contributing factor in exacerbating mental health.

Many existing empirical studies assert the existence of the negative association between social isolation and mental health due to loneliness. Loneliness is an important predictor of mental health across all age groups, as loneliness is associated with social phobia, higher probabilities of depression and anxiety, suicidal ideation, poor health and loss of mobility, and neurodevelopmental disorder (Beutel et al. 2017; Richardson et al. 2017; Rohde et al. 2016; Wang et al. 2017; Wenger et al. 1996). Clemens et al. (2020) report an acute increase in the probability of experiencing anxiety and stress among children and adolescence during school lockdowns. Other consequences of loneliness during the pandemic include the increased risk of negative mental health outcomes such as depressive symptoms, anxiety, low mood, mental distress, and a substantial increase in domestic violence (Mohler et al. 2020; Zhao et al. 2020; Zhou et al. 2020). In sum, it can be argued that many Americans may have taken a toll from loneliness, the product of the mandatory social distancing and the consequent social isolation during COVID-19. without receiving necessary social support, some of which was provided by religious organizations.

Religion and Mental Health: Stress Process Model

Prior to COVID-19, much of the literature focused more on public religiosity compared to private religiosity. Emile Durkheim (1912) defines religion as a system that unites a community under the same beliefs and practices. Through the process, social solidarity is formed among those people that enable them to bond as a group. Hence, he examines the functions of the ritual and religion as they make up a collective consciousness for the members. Through rituals and rites, the members of the community collectively form similar ideas which ultimately create the system of unified beliefs and

practices. The interaction of people therefore ensures social order and stability (Mishra and Rath 2020). Religious institutions are a primary place where both collective effervescence and the consequent social solidarity provide a sense of solidarity through rituals by clearly distinguishing who is in and who is not (Draper 2019). However, with the outbreak of the pandemic and the subsequent social distancing, attaining social solidarity through interaction has become a difficult task even through religious activities.

There is much evidence that shows religious organizations may affect the mental health of people, especially during stressful times. Hence, the role of religion and religious organizations in the sociology of health cannot be overlooked. The primary function of religion in dealing with stressful events is the provision of resources that suppress harmful effects of stressors to a certain extent, especially through social support provided by religion. Hence, sociologists of health have paid particular attention to the stress process model developed by Leonard Pearlin, which describes what causes stress throughout human life, and how it can be moderated. Pearlin states the crucial role of supporting relationships in coping with stress, which “are found in virtually all institutional and social contexts: religion, occupation, family, neighborhood, voluntary associations, the medical care system, and elsewhere” (Pearlin 1989:251). There are three main types of stressors: life events or acute stressors, that involve traumatic events such as job loss, bereavement, or divorce; chronic strains such as poverty, disablement, or marital conflict; and daily hassles such as traffic congestion (Ellison and Henderson 2011:14). Yet, the same stressors usually do not produce the same health outcome for individuals, which suggests that there are moderating factors playing a role in coping

with stressful events. One of the moderators is social support, which is readily available in religious institutions.

Religion is considered one of the gateways to obtain social support. Existing studies on the effects of religion and social support on mental health report many salutary influences, including a significant effect in buffering stress caused by financial strain compared to secular help; a provision of coping methods with racism for minorities; a decrease in family-related stressors; a better quality of life at a later stage of life; and a cultivation of friendship and network by providing supportive relationships (DeSouza et al. 2021; Ferraro and Koch 1994; Hamren, Chungkham, and Hyde 2015; Krause 2006). One of the most common ways to derive social support from religious institutions is via the frequency of religious attendance, because those who attend religious services regularly form stronger social integration with the members of the congregations (Bradley et al. 2019; Broyles and Drenovsky 1992; Robinson and Nussbaum 2004). Therefore, religious activities can be considered as one of the most prevalent ways to cope with stressors through the means of social support.

In line with this, the ameliorative effects of religious attendance have since been discovered, including better well-being and reduced distress, positive influence in health at a later stage of life, the ability to cope with stressful situations through religion, and longer life span (Ellison et al. 2001; Hummer et al. 1999; Koenig et al. 1999; Pargament et al. 1999; Upenieks and Schafer 2020). Furthermore, religion is helpful in providing social resources for older adults to stabilize their mental health, and public religious activity is related to lower psychological stress and happiness for men (Krause 2006; Schieman, Bierman, and Ellison 2013:461). Another benefit of religious attendance is

positive self-affirmation and reinforcement in identities, because it brings in relatively homogenous groups of people together in terms of socioeconomic status and worldviews (Page et al. 2020). While the emerging literature on “the dark side” of religion describe adverse effects of religion such as creating psychological discomfort and stressful social encounters (Ellison and Lee 2010) and undermining women’s health (Homan and Burdette 2021), the overwhelmingly positive influence of religious attendance on mental health cannot be overlooked.

Private Religiosity and Mental Health

Private religiosity refers to religious activities performed in an individual level, such as prayer or reading scripture. Contrary to public religiosity, usually measured by attendance at religious organizations or other activities, private religiosity has conflicting results in its association with mental health. Many scholars reported salutary effects of praying because it provides a supportive relationship with God through various means such as interacting with a divine other, reinforcing the idea of having a supernatural power being involved with one’s life, higher self-esteem through a reconstruction of self-concept, and clinically salutary effects (Froese and Jones 2021; Pollner 1989; Schieman et al. 2017; Whittington and Scher 2010). However, the evidence is not as strong compared to the relationship between religious attendance and mental health, especially considering the importance of social support in religion to produce salutary effects on mental health. Bartkowski et al. (2017) report that the frequency of communal prayer is positively associated with elevated symptoms of anxiety, while there is no statistically significant association between individual prayer and decrease in anxiety. They argue that such relationship may exist because those who experience anxiety symptoms frequently

may seek religious support through communal prayer more. Similarly, several studies discuss the null effects of prayer on mental health: Ellison and Burdette (2012) report no statistically significant association between the frequency of private prayer and a sense of control, and prayer must be incorporated with belief in an afterlife to have salient effects on mental health; Mannheimer and Hill (2015) reveal that normative patterns of prayer were not associated with psychological distress among Conservative Protestants possibly due to the difficulties in monitoring the frequency of prayer; Bradshaw and Kent (2017) also report that prayer is unrelated to mental health contingent to the attachment to God, and it may actually be negatively associated with psychological well-being. The contradicting effects of prayer on mental health in previous literature suggest that there may not be any significant association between the two.

Reading religious scripture, on the other hand, has not received great attention in the sociological study of religion and mental health (DeAngelis, Bartkowski, and Xu 2018). Scripture reading is often studied under the comprehensive category of private religious activities, because it is seen as an auxiliary variable to prayer, meditation, and/or Bible study groups, or because participants in general do not attach significant personal value to scripture (Hwang 2018; Krause and Pargament 2018; Nelson-Becker 2005). Of the few studies that focus specifically on the effect of scripture reading on mental health, the results suggest that there are mixed outcomes with the relationship. Krause and Pargament (2018) show that reading the Bible more often offset the negative relationship between stress and hope and increase coping to stressful events. On the other hand, DeAngelis et al. (2018) suggest a stress-exacerbating effect of reading scripture on people with lower SES and poor physical health because respondents with poor health

and low SES increased the likelihood of reading scriptures, thus stating that those with more stressors rely more on scriptures. The conflicting findings on the association between private religiosity and mental health suggest that there may be other factors involved in the relationship.

Social Isolation, Private Religiosity, and Mental Health

Following the outbreak of COVID-19, religious institutions and attendance quickly became a venue for transmission of the disease in the United States among many other places, and in turn forced governments to implement social distancing and lockdown (CNN, April 1, 2020; Kuipers, Mujani, and Pepinsky 2021; Tan, Musa, and Su 2022; Wildman et al. 2020). Many religious institutions hence introduced virtual attendance to mitigate various negative mental health outcomes of religious people associated with social isolation. Online activities, including virtual worshipping service, have been identified with salutary effects on mental health through providing social solidarity to a certain extent (Muqsith et al. 2021; Parish 2020). However, the lack of physical presence prevents people participating in virtual religious activities from interacting effectively with others, especially during important rituals due to the absence of senses such as smell, touch, or taste (Ben-Lulu 2021; Draper 2019; Parish 2020). Hence, inadequate interaction may hinder the formation of social support, an integral part in salutary effects of religious attendance, because social solidarity may not arise through virtual worshipping services, and therefore renders the previously known effects of in-person religious activities uncertain.

In this light, under the context of social isolation, private religiosity including praying or reading religious scriptures may have more positive impact on loneliness,

especially given the fact that many religious individuals use prayer to manage negative emotions. Several studies support this idea by showing that individuals use prayer to manage negative emotions arising from illness, conflict, traumatic events, or other negative life event in general (Boelens et al. 2009; Boelens et al. 2012; Butler et al. 1998; Humphrey, Hughes, and Holmes 2008; Sharp and Carr 2017; Shaw et al. 2007). Sharp (2010) noted that prayer is effective for individuals seeking social support to manage their negative emotions in his study of victims of intimate partner violence. He notes four ways prayer is efficacious: (1) expressing negative emotions; (2) providing individuals with positive reflected appraisals; (3) protecting themselves from fear and anxiety; and (4) distancing themselves from negative emotion-induced stimuli. Sharp's finding posits a possibility that socially isolated people, including those suffering from domestic violence from their significant others, may find solace from private religiosity because it provides imaginary social support through an intentional interaction with a higher being.

Many religious people resorted to prayer to cope with psychological distresses associated with COVID-19. Google searches on prayer surged shortly after World Health Organization declared COVID-19 as pandemic, and the rate of people praying increased significantly (Bentzen 2021; Boguszewski et al. 2020; Pew Research Center 2020). Studies on praying during the pandemic report positive results, as praying is considered an important coping mechanism to combat mental distress (Keisari et al. 2022; Labrague 2021; Rotas and Cahapay 2021). A review of this literature suggests that private religiosity may provide some effect, perhaps positive or negative, on loneliness during COVID-19.

With all these at hand, I propose the following hypotheses:

Hypothesis 1: Social distancing has positive association with perceived increase in loneliness during COVID-19 in America.

Hypothesis 2a: The positive association between social distancing and perceived loneliness during COVID-19 in America will be moderated by praying.

Hypothesis 2b: The positive association between social distancing and perceived loneliness during COVID-19 in America will be moderated by reading scripture.

CHAPTER THREE

Methodology

Data

I use the 2021 Baylor Religion Survey Wave 6 in this paper (BRS6). The BRS6 was administered by Gallup from January 27 to March 21, 2021, with a random sample of 1,248 adults ages 18 and older. Data were collected with a mailed or an online questionnaire. Surveys were written in English and Spanish, and the response rate was 11.3%. This survey was selected because it is national in scope, collected during the pandemic, and includes valuable information, including private religiosity, that may be related to loneliness under the influence of COVID-19.

Measures

Dependent Variable: Loneliness

The respondents were asked, “During COVID-19 pandemic, compared to your life before, how often do you feel. . .” followed by several emotional responses. Respondents were asked about how often they felt (a) “happy,” (b) “sad,” (c) worried, (d) confident, (e) tense, (f) relaxed, (g) lonely, (h) cared for, and (i) angry. I selected loneliness as the indicator of negative mental health outcomes because loneliness is a key exacerbating factor of mental health during the pandemic and the subsequent social isolation. Response choices were recoded as binary variables where 0=“less often” and “about the same”, and 1=“a little more often” and “much more often.”

Key Independent Variables

Social Distancing: I measured social distancing using the following question: “As a result of the COVID-19 pandemic, have you. . . (a) sheltered in place and (b) kept six feet away from others when outside your home. The questions were chosen based on previous studies on different practices of social distancing that cause social isolation among individuals (Kotwal et al. 2021; Peng and Roth 2022. Response options were recoded into a five-category variable from 0=“never” to 4=“all of the time.” Then the variables were combined to create a scale from 0 to 8 ($\alpha = .51$). While the alpha score is relatively low due to the scale’s short length, the scale is appropriate for use because the average inter-item covariance of the scale is .352, which is between the optimal range of .2 and .4 as recommended by Briggs and Cheek (1986).

Private Religiosity: To examine the impact of private religiosity on loneliness during the pandemic, I selected the questions “How often outside of religious services do you pray alone for less than five minutes,” “How often outside of religious services do you pray alone for five minutes or longer at a time,” “How often outside of religious services do you pray with others,” and “Outside of attending religious services, about how often do you spend time reading the Bible, Koran, Torah, or other sacred books?” The measures for praying and reading scripture as private religiosity were based on the common measures of private religious activities employed by other researchers in previous studies (Ellison 1991; Ellison and Henderson 2011; Krause and Pargament 2018; Schieman, Bierman, and Ellison 2013). I recoded the frequency of prayer by recoding three questions related to prayer into a six-category variable from 0=“never,” 1=“seldom,” 2=“monthly,” 3=“weekly,” 4=“daily,” to 5=“several times a day.” I then

combined the three variables together to create a fifteen-point scale ($\alpha = .854$). This scale is based on the argument made by Krause and Chatters (2005), where they stated that assessment of prayer quantity requires both prayer frequency and prayer duration.

The BRS coded the frequency of reading scripture into a nine-category variable. The response options were: 0=“never,” 1=“less than once a year,” 2=“once or twice a year,” 3=“several times a year,” 4=“once a month,” 5=“2-3 times a month,” 6=“about once a week,” 7=“several times a week,” and 8=“daily.”

Control Variables

I control for a range of variables that are associated with social distancing, family, health, and religiosity. Self-rated health (SRH) is considered to be an accurate predictor of both mental and physical health outcomes by many scholars, and hence was implemented as a key control variable (Bombak 2013). SRH was recoded into six categories, ranging from 0=poor to 5=excellent. I recoded gender dichotomously where males=0 and females=1. I did not include “other” because the sample size was not large enough to provide significant result ($N=11$). Education was recoded into 0=less than high school degree and high school graduate, 1=some college education, technical school degree, and associate degree, and 2=college degree or higher. I recoded employment where 0=unemployed and 1=employed. I recoded race into four categories: 0=non-Hispanic whites, 1=Blacks, 2=Latinx, 3=Asian-American, Native American, Pacific Islanders, and multiracial. Religious affiliations include 0=no religion, 1=Evangelical Protestant, 2=Mainline Protestant, 3=Black Protestant, 4=Catholic, 5=Jewish, and 6=other religions. Number of family members ranges from 0 to 6, and responses larger than 6 were dropped to exclude the possible effect of outliers ($N=18$). For urbanity, I

recoded the responses into the following categories: 0=a large city, 1=a suburb near a large city, 2=a small city or town, and 3=a rural area. Region consisted of four categories: 0=Northeast, 1=South, 2=Midwest, and 3=West. BRS 6 coded religious attendance into 8 categories, and the responses options range from 0="never" to 7="several times a week." Last year's income before tax was recoded into seven categories: (0) \$10,000 or less, (1) \$10,001-\$20,000, (2) \$20,001-\$35,000, (3) \$35,001-\$50,000, (4) \$50,001-\$100,000, (5) \$100,001-\$150,000, and (6) \$150,001 or more.

Plan of Analysis

A series of Ordinary Least Squares (OLS) regression models were conducted to predict the association between social distancing and loneliness associated with COVID-19 and the possible moderating effects of private religiosity. Analyses use OLS regression with robust standard errors (Hayes and Cai 2009). To detect multicollinearity, I reviewed the variance inflation factor (VIFs) for all variables, and none of the variables went above the cut-off point of 3 which suggests the lack of multicollinearity (Allison 1999).

Private religiosity variables, religious attendance, gender, education, employment, ethnicity, religious traditions, number of family members in the household, location, age, and income all had missing data greater than 5% of the variable sizes. Hence, the sample size after regression shrunk down by 31 percent. To maintain sample size, I conducted multiple imputations (M=31) with chained equations *mi impute* in Stata to limit biases caused by missing data. The dependent variable was not imputed, and missing values were dropped according to the recommendations by von Hippel (2007).

CHAPTER FOUR

Results

Table 4.1 features descriptive statistics of all the available cases prior to imputation. One of the most noticeable observations is the impact of the mitigating measures during the COVID-19 outbreak on loneliness. More than 43 percent of the respondents reported that they were feeling lonelier. The weighted social distancing scale features a high mean of 5.468 (SD=1.806), which suggests that many respondents practiced social distancing during the pandemic between some of the time and much of the time. During the pandemic, the average self-rated health scale among the respondents was 2.34, which is between good and very good (SD=.980). Weighted private religiosity scale illustrates that respondents on average prayed alone seldomly to monthly with a mean of 4.268 (SD=3.448), and that the average respondent read religious scriptures about once a year with a mean of 2.667 (SD=2.906). On average, respondents viewed themselves as slightly to moderately religious/spiritual according to the mean of 3.242 (SD=1.891), and they attended religious services about once or twice a year with the mean of 2.468 (SD=2.532).

The weighted demographic components of the sample display that over half of the respondents are female (52.56 percent) who are also non-Hispanic whites (64.41 percent). A bit over one-third (36.25 percent) of the respondents hold bachelor's degree or higher, and 66.35 percent are employed. About 19 percent of the respondents identified themselves as religious nones, while more than a quarter (27.73 percent) of the

respondents were Evangelical Protestants. Other religious traditions include Catholic (23.23 percent), Mainline Protestant (11.97 percent), Black Protestant (8.54 percent), Judaism (1.58 percent) and all other religions (7.28 percent). The weighted average family size was 2.241 (SD=.1.344), and the average age of the respondents is 49.44. Over one third of the respondents lived in a small city or a town in terms of urbanity (34.2 percent) and were based in southern region (37.48 percent). On average, respondents earned between \$35,001 and \$100,000 ($b=3.413$, $SD=1.764$).

Tables 4.2 features the unstandardized OLS regression coefficients based on analyses using weighted and imputed data. Model 1 represents the baseline model, which assesses the effect of social distancing on loneliness controlling for gender, level of education, employment, race/ethnicity, religious affiliation, number of family members, urbanity, regions, age, and income. Model 2 includes self-rated health as a key control variable to test hypothesis 2. Model 3 introduces religious attendance as an additional control variable to assess the possible buffering effects of religion on loneliness during COVID-19 due to social distancing. Finally, I add the frequency of prayer and reading religious texts in Model 4 as a moderator to analyze the possible moderating effects of private religiosity on pandemic-induced loneliness associated with social distancing in order to test hypothesis 3, which suggests that private religiosity can moderate the positive association between social distancing and loneliness in America during the pandemic.

Table 4.1. Descriptive Statistics

Measures	Range	Weighted			Unweighted		
		Mean/%	SD	N	Mean/%	SD	N
<u>Dependent Variable</u>							
As a result of the pandemic, <i>r</i> feels lonelier	0,1	43.31		1,226	43.37		1,231
<u>Key Independent Variables</u>							
Social Distancing Scale	0-12	5.468	1.806	1,233	5.664	1.663	1,295
Prayer	0-15	5.610	4.575	1,165	5.788	4.590	1,181
Scripture Reading	0-8	2.667	2.906	1,226	2.854	2.976	1,254
<u>Key Control Variable</u>							
Religious Attendance	0-7	2.468	2.532	1,213	2.580	2.534	1,222
Self-Rated Health Scale	0-4	2.354	.980	1,244	2.382	.945	1,329
<u>Demographic and Other Control Variables</u>							
Gender							
Female	0,1	52.56		1,228	54.23		1,228
Education							
	0-2			1,217			1,217
High school or less ^a	0,1	35.27			14.54		
Some College Education, Technical School, Associate's Degree	0,1	28.47			35.58		
Bachelor's Degree or Higher	0,1	36.25			49.88		
Employment							
Employed	0,1	66.35		1,219	62.04		1,233
Ethnicity							
	0-3			1,230			1,230
Non-Hispanic White ^a	0,1	64.41			65.77		
Black	0,1	11.25			11.46		
Latinx	0,1	16.51			15.61		
Asian-Americans, Native Americans, Pacific Islanders, and multiracial	0,1	7.83			7.15		
Religious Affiliations							
	0-6			1,226			1,244
No Religion ^a	0,1	19.67			18.33		
Evangelical Protestant	0,1	27.73			24.76		
Mainline Protestant	0,1	11.97			13.50		
Black Protestant	0,1	8.54			7.80		
Catholic	0,1	23.23			24.84		
Jewish	0,1	1.58			2.41		
Other	0,1	7.28			8.36		
No. of Family Members							
	0-6	2.421	1.344	1,192	2.292	1.266	1,203
Urbanity							
	0-3			1,226			1,227
A large city ^a	0,1	23.82			25.18		
A suburb near a large city	0,1	25.44			28.44		
A small city or town	0,1	34.2			32.19		
A rural area	0,1	16.54			14.18		
Region							
	0-3			1,241			1,329
Northeast	0,1	17.47			16.25		
South	0,1	37.48			38.15		
Midwest	0,1	21.22			20.92		
West	0,1	23.83			24.68		
Income							
	0-6	3.413	1.764	1,192	3.577	1.712	1,207
Age							
	18-98	49.44	17.78	1,221	54.89	17.19	1,221

^a Reference Category

Table 4.2. Loneliness Regressed on Social Distancing Scale by Private Religiosity, OLS Model (N=1,226)

Measures	Model 1	Model 2	Model 3	Model 4a	Model 4b
Social Distancing Scale	.071 (.009) ***	.068 (.009) ***	.069 (.009) ***	.082 (.015) ***	.086 (.012) ***
Private Religiosity Scale					
Prayer				-.004 (.011)	
Scripture Reading					.012 (.015)
Social Distancing Scale * Praying				-.002 (.002)	
Social Distancing Scale * Reading					-.005 (.003) *
Religious Attendance			-.002 (.009)	.003 (.009)	.005 (.010)
Self-Rated Health Scale		-.060 (.019) **	-.060 (.018) **	-.056 (.018) **	-.059 (.018) **
Demographic and Control Variables					
Gender (Ref. Male)					
Female	.027 (.036)	.030 (.036)	.026 (.036)	.043 (.036)	.030 (.036)
Education					
(Ref. High school or less)					
Some College Education, Technical School, Associate's Degree	.115 (.047) *	.116 (.047) *	.115 (.046) *	.113 (.046) *	.122 (.046) **
Bachelor's Degree or Higher	.069 (.052)	.085 (.052)	.083 (.052)	.078 (.051)	.091 (.052) †
Employment (Ref. not employed)					
Employed	-.024 (.044)	-.011 (.044)	-.013 (.044)	-.008 (.004)	-.006 (.043)
Ethnicity (Ref. non-Hispanic white)					
Black	-.105 (.079)	-.102 (.082)	-.111 (.081)	-.091 (.081)	-.103 (.080)
Latinx	-.065 (.056)	-.063 (.054)	-.064 (.054)	-.052 (.054)	-.061 (.053)
Asian-Americans, Native Americans, Pacific Islanders, and multiracial	.003 (.075)	.006 (.077)	.003 (.077)	.014 (.076)	.004 (.076)
Religious Affiliations (Ref. no religion)					
Evangelical Protestant	-.056 (.054)	-.053 (.054)	-.088 (.061)	-.070 (.061)	-.081 (.060)
Mainline Protestant	.003 (.064)	.008 (.063)	-.014 (.067)	-.017 (.067)	-.024 (.066)
Black Protestant	.105 (.100)	.109 (.101)	.075 (.105)	.079 (.103)	.079 (.104)
Catholic	.074 (.057)	.084 (.056)	.059 (.059)	.071 (.058)	.044 (.058)
Jewish	-.068 (.112)	-.049 (.116)	-.068 (.118)	-.084 (.117)	-.066 (.116)
Other	-.031 (.067)	-.043 (.065)	-.063 (.067)	-.071 (.067)	-.070 (.066)
No. of Family Members	-.051 (.014) ***	-.052 (.014) ***	-.052 (.014) ***	-.049 (.014) **	-.051 (.014) ***
Urbanity (Ref. Large city)					
A suburb near a large city	.106 (.048) *	.109 (.048) *	.108 (.047) *	.105 (.048) *	.113 (.047) *

A small city or town	.057 (.048)	.066 (.047)	.066 (.047)	.067 (.047)	.070 (.047)
A rural area	.002 (.062)	.003 (.061)	-.005 (.061)	.002 (.061)	-.001 (.061)
Region (Ref. Northeast)					
South	-.089 (.050) [†]	-.095 (.050) [†]	-.101 (.049) [*]	-.095 (.048) [*]	-.104 (.048) [*]
Midwest	-.038 (.055)	-.041 (.055)	-.046 (.054)	-.052 (.054)	-.061 (.054)
West	-.040 (.051)	-.046 (.051)	-.049 (.051)	-.057 (.050)	-.059 (.050)
Age	-.005 (.001) ^{***}	-.005 (.001) ^{***}	-.005 (.001) ^{***}	-.005 (.001) ^{***}	-.005 (.001) ^{***}
Income	-.009 (.012)	-.001 (.012)	.001 (.012)	-.003 (.012)	-.003 (.012)
Constant	.399 (.119) ^{**}	.523 (.130) ^{***}	.529 (.129) ^{***}	.397 (.154) [*]	.402 (.139) ^{**}

*** p<0.001, ** p<0.01, * p<0.05, [†] p<.1

Model 1 presents the influence of several demographic and control variables on feeling lonely. One unit increase in social distancing is associated with an increase in feeling lonely, which is a trend that continues across all models ($P < .001$). Compared to the respondents with high school education or less, respondents who received an intermediate level of education such as some college education or an associate's degree are more susceptible to feeling lonely during the pandemic. This relationship displays statistical significance across five models. An increase in the number of family members is associated with a decrease in loneliness in all models ($P < .001$), and those who live in a suburb near a large city feel lonelier compared to the respondents living in a large city ($P < .05$). People who live in the South feel less lonely in comparison to those who live in the Northeast in all models, and a unit increase in age was associated with lower loneliness ($P < .001$).

Model 2 adds in the self-rated health scale as a key control variable, and the analysis displays that loneliness is negatively associated with mental and physical health ($b = -.060$, $P < .01$). The social distancing scale retains the positive association with loneliness, but the effect decreases slightly compared to Model 1 ($b = .068$, $P < .001$).

In Model 3, where religion variables are included as key control variables, the effect size of social distancing scale also decreases slightly ($b = -.069$, $P < .001$) compared to the baseline models. However, religious attendance does not have a statistically significant association with feeling lonely. Self-rated health continues to exhibit a significant and negative association with loneliness ($b = -.060$, $P < .01$), as well as the number of family members in household ($b = -.052$, $P < .001$).

Model 4a evaluates the moderating effects of praying on feeling lonely due to social distancing. It was surprising to see that controlling for prayer, one unit increase in social distancing was associated with a higher unit increase in feeling lonelier compared to other models ($b=.082$, $P<.001$). Although praying contributes to the decrease in feeling lonelier ($b=-.004$), the relationship is not statistically significant. Furthermore, the interaction model does not display a meaningful association between praying and social distancing.

Model 4b examines the suppressing effect of scripture on feeling lonely associated with social distancing. Controlling for scripture reading, people felt significantly lonelier ($b=.086$, $P<.001$). While scripture reading does not have a statistically significant association with loneliness, the interaction coefficient between social distancing and scripture reading results in a meaningful and negative association ($b=-.005$, $P<.05$). This association suggests that as people participate in stricter levels of social distancing, they are more likely to read religious texts. Furthermore, those who read scripture daily experience .04 unit decrease in feeling lonelier. People with higher levels of education than those with high school degree or less are more susceptible to feeling lonely, net of other variables, which may indicate that people with higher literary proficiency depend more on reading scripture in response to feeling lonely.

CHAPTER FIVE

Discussions, Limitations and Future Research, and Conclusions

Discussions

COVID-19 and the subsequent social distancing were an unprecedented event that left many people wounded, both physically and mentally. Hence, with the outlook that the damage caused by the pandemic will linger for a long period of time, research should continue to search for resources to mitigate the negative impact on the mental health of Americans. In line with this interest, this study sought to explore how social distancing may be related to loneliness, which is a key indicator for negative mental health outcomes during the pandemic. One of the unique characteristics of COVID-19 was that it led to the implementation of global social distancing, which included mandatory lockdown, school and business closure, and staying six feet away from others to prevent the spread of the disease. As a result, many benefits of public religiosity born from interaction and social solidarity have become difficult to be attained. In this light, a second objective of this study was to explore how private religiosity may play part in moderating the relationship between social distancing and mental health. Through the scope of the stress process model, this paper suggested that scripture reading can moderate loneliness associated with social distancing during the pandemic.

One of the key findings of this study is the documentation of the buffering role of scripture reading during COVID-19. The interaction between social distancing scale and scripture reading displays significant association in diminishing loneliness. However,

prayer has null effects on feeling lonely. This pattern is consistent with previous literature on private religiosity and mental health, which often produced mixed results (Bartkowski et al. 2017; DeAngelis et al. 2018; Ellison and Burdette 2012; Froese and Jones 2021; Krause and Pargament 2018). Scripture reading in the context of COVID-19 can be viewed as a coping mechanism that connects the readers with God, which in turn moderates the association between major life events and mental health (DiAngelis et al. 2021). However, it is worth noting that those who experienced the buffering effects of scripture reading is associated with higher unit increase in feeling lonely. This finding may suggest that higher level of loneliness leads people to pursue specific forms of private religiosity for support. This study is one of the few existing studies that focus on scriptural reading as a moderator on the association between stressors and mental health. Scriptural coping is an understudied subject in sociology of religion and health, and this study contributes to the existing literature by adding more dimensions on how scripture reading can provide a buffering effect on negative mental health outcome through suppressing a key exacerbator.

Another takeaway from this study is the possibility of implementing scripture reading by religious leaders for individuals suffering from social isolation. Religious leaders played a key role in promoting health and mitigating damage during the pandemic (Barmania and Reiss 2021; Tan et al. 2022; Weinberger-Litman et al. 2020). This suggests that religious leaders are capable of influencing religious individuals to use prayer and scripture reading as coping mechanisms. Even though social distancing has been cleared after two years of COVID-19, the older population in America may still suffer from loneliness due to loss of mobility which leads to higher probabilities of

experiencing negative mental health outcomes (Rohde et al. 2016; Wang et al. 2017; Wenger et al. 1996). To minimize the detrimental effects of loneliness on mental health that may persist after the pandemic, religious leaders may consider encouraging private scripture reading.

Limitations and Future Research

This study is limited in several ways. First, I am limited to cross-sectional data, which renders it difficult to address the question on causality. As a result, it is not possible to draw any conclusion on the long-term efficacy of private religiosity as a buffer on mental health. Longitudinal data shall be necessary to draw a definitive conclusion on causal order as well as to assess how the association between social distancing and negative emotional outcomes may have changed at various stages of the pandemic, especially after the adjustment of people to the drastic changes in their lifestyle.

Secondly, the timing in which the data was gathered may have influenced the result. The buffering effect of private religiosity may have been higher or lower at different times of the pandemic, and only one wave of survey was conducted.

Thirdly, this study uses only four measures for private religiosity: the frequency of praying alone for five minutes or less, the frequency of praying alone for more than five minutes, the frequency of praying with others, and the frequency of reading religious texts outside of religious service. Furthermore, the sample consists mostly of Christians, and although the question on scripture reading includes the Koran, there is no sufficient sample size for other Abrahamic religions. Future research can incorporate more

measures for private religiosity and larger sample sizes on other religious groups to expand on the findings in this study.

Fourthly, while the buffering effect of reading scripture on loneliness due to social distancing has been discovered, the reason behind this relationship cannot be explained from the existing literature. Furthermore, the question regarding why prayer does not influence loneliness has not been fully answered. Future research may look for the causation to enhance literature on scripture reading and health.

Lastly, the lack of racial minorities in the sample makes it difficult to distinguish how private religiosity during the COVID-19 may have impacted Americans across various ethnicities. The majority of the respondents in the sample were non-Hispanic whites, but racial minorities suffered more from the pandemic and historically benefited more from religion (Boddie and Park 2021; DeSouza et al. 2021; Hodge et al. 2022). Hence, future research may focus on racial minorities for a more accurate picture on the association between religion and mental health during COVID-19.

Conclusion

Considered as a whole, my findings show that scripture reading practiced during the COVID-19 pandemic had a buffering effect on loneliness associated with social distancing. Reading scripture certainly suppressed the tendency to feel lonely as the level of social distancing increased. This study highlights that scripture reading can moderate some stressors to a certain extent even without social interaction, which is a key aspect in salutary effects of religion, hence supporting the stress process model. While the long-term efficiency of scripture reading needs further assessment, it can nevertheless be

useful for solving issues related to mental health associated with loneliness within the society even after the end of the pandemic.

BIBLIOGRAPHY

- Allison, Paul. 1999. *Multiple Regression: A Primer*. Thousand Oaks, CA: Pine Forge. ———. 2002. *Missing Data*. Thousand Oaks, CA: Sage.
- Alzueta Elisabet, Paul Perrin, Fiona C. Baker, Sendy Caffarra, Daniela Ramos-Usuga, Dilara Yuksel, and Juan Carlos Arango-Lasprilla 2021. “How the COVID-19 Pandemic Has Changed Our Lives: A Study of Psychological Correlates across 59 Countries.” *J. Clin. Psychol.* 2021;77: 556–570. <https://doi.org/10.1002/jclp.23082>.
- Barmania, Sima, and Michael J. Reiss. 2021. “Health Promotion Perspectives on the COVID-19 Pandemic: The Importance of Religion.” *Global Health Promotion* 28(1):15–22. doi: 10.1177/1757975920972992.
- Bartkowski, John, Gabriel Acevedo, and Harriet Van Loggerenberg. 2017. “Prayer, Meditation, and Anxiety: Durkheim Revisited.” *Religions* 8(9):191. doi: 10.3390/rel8090191.
- Ben-Lulu, Elazar. 2021. "Zooming in and out of Virtual Jewish Prayer Services during the COVID-19 Pandemic." *Journal for the Scientific Study of Religion* 60(4):852-870.
- Bentzen, Jeanet Sinding. 2021. “In Crisis, We Pray: Religiosity and the COVID-19 Pandemic.” *Journal of Economic Behavior & Organization* 192:541–83. doi: 10.1016/j.jebo.2021.10.014.
- Beutel, Manfred E., Eva M. Klein, Elmar Brähler, Iris Reiner, Claus Jünger, Matthias Michal, Jörg Wiltink, Philipp S. Wild, Thomas Münzel, Karl J. Lackner, and Ana N. Tibubos. 2017. “Loneliness in the General Population: Prevalence, Determinants and Relations to Mental Health.” *BMC Psychiatry* 17(1):97. doi: 10.1186/s12888-017-1262-x.
- Bierman, Alex, Laura Upenieks, Paul Glavin, and Scott Schieman. 2021. “Accumulation of Economic Hardship and Health during the COVID-19 Pandemic: Social Causation or Selection?” *Social Science & Medicine* 275:113774. doi: 10.1016/j.socscimed.2021.113774.
- Boddie, Stephanie C., and Jerry Z. Park. 2021. “Racializing the Religious during the COVID-19 Pandemic”. *Religions* 12(5):341. doi: 10.3390/rel12050341.

- Boden, Matt, Lindsey Zimmerman, Kathryn J. Azevedo, Josef I. Ruzek, Sasha Gala, Hoda S. Abdel Magid, Nichole Cohen, Robyn Walser, Naina D. Mahtani, Katherine J. Hoggatt, and Carmen P. McLean. 2021. "Addressing the Mental Health Impact of COVID-19 through Population Health." *Clinical Psychology Review* 85:102006. doi: 10.1016/j.cpr.2021.102006.
- Boelens, Peter A., Roy R. Reeves, William H. Replogle, and Harold G. Koenig. 2009. "A Randomized Trial of the Effect of Prayer on Depression and Anxiety." *The International Journal of Psychiatry in Medicine* 39(4):377–92. doi: 10.2190/PM.39.4.c.
- Boelens, Peter A., Roy R. Reeves, William H. Replogle, and Harold G. Koenig. 2012. "The Effect of Prayer on Depression and Anxiety: Maintenance of Positive Influence One Year after Prayer Intervention." *The International Journal of Psychiatry in Medicine* 43(1):85–98. doi: 10.2190/PM.43.1.f.
- Boguszewski, Rafał, Marta Makowska, Marta Bożewicz, and Monika Podkowińska. 2020. "The COVID-19 Pandemic's Impact on Religiosity in Poland." *Religions* 11(12):646. doi: 10.3390/rel11120646.
- Bombak, Andrea. 2013. "Self-rated health and public health: A critical perspective." *Frontiers in Public Health*, 1. <https://www.frontiersin.org/article/10.3389/fpubh.2013.00015>
- Bradley, Christopher S., Terrence D. Hill, Amy M. Burdette, Krysia N. Mossakowski, and Robert J. Johnson. 2020. "Religious Attendance and Social Support: Integration or Selection?" *Review of Religious Research* 62(1):83–99. doi: 10.1007/s13644-019-00392-z.
- Bradshaw, Matt, and Blake Victor Kent. 2018. "Prayer, Attachment to God, and Changes in Psychological Well-Being in Later Life." *Journal of Aging and Health* 30(5):667–91. doi: 10.1177/0898264316688116.
- Brooks, Samantha K., Rebecca K. Webster, Louise E. Smith, Lisa Woodland, Simon Wessely, Neil Greenberg, and Gideon James Rubin. 2020. "The Psychological Impact of Quarantine and How to Reduce It: Rapid Review of the Evidence." *The Lancet* 395(10227):912–20. doi: 10.1016/S0140-6736(20)30460-8.
- Broyles, Philip A., and Cynthia K. Drenovsky. 1992. "Religious Attendance and the Subjective Health of the Elderly." *Review of Religious Research* 34(2):152. doi: 10.2307/3511131.
- Butler, M.H., Brandt C. Gardner, and Mark H. Bird. 1998. "Not Just a Time-Out: Change Dynamics of Prayer for Religious Couples in Conflict Situations." *Family Process* 37: 451-478. <https://doi.org/10.1111/j.1545-5300.1998.00451.x>

- Clemens, Vera, Peter Deschamps, Jörg M. Fegert, Dimitris Anagnostopoulos, Sue Bailey, Maeve Doyle, Stephan Eliez, Anna Sofie Hansen, Johannes Hebebrand, Manon Hillegers, Brian Jacobs, Andreas Karwautz, Eniko Kiss, Konstantinos Kotsis, Hojka Gregoric Kumperscak, Milica Pejovic-Milovancevic, Anne Marie Råberg Christensen, Jean-Philippe Raynaud, Hannu Westerinen, and Piret Visnapuu-Bernadt. 2020. "Potential Effects of 'Social' Distancing Measures and School Lockdown on Child and Adolescent Mental Health." *European Child & Adolescent Psychiatry* 29(6):739–42. doi: 10.1007/s00787-020-01549-w.
- CNN. 2020. <https://www.cnn.com/2020/04/01/us/washington-choir-practice-coronavirusdeaths/index.html>
- DeAngelis, Reed T., John P. Bartkowski, and Xiaohe Xu. 2018. "Scriptural Coping: An Empirical Test of Hermeneutic Theory." *Journal for the Scientific Study of Religion* jssr.12576. doi: 10.1111/jssr.12576.
- Dein, Simon, Kate Loewenthal, Christopher Alan Lewis, and Kenneth I. Pargament. 2020. "COVID-19, Mental Health and Religion: An Agenda for Future Research." *Mental Health, Religion & Culture* 23(1):1–9. doi: 10.1080/13674676.2020.1768725.
- DeSouza, Flavia, Carmen Black Parker, E. Vanessa Spearman-McCarthy, Gina Newsome Duncan, and Reverend Maria Myers Black. 2021. "Coping with Racism: A Perspective of COVID-19 Church Closures on the Mental Health of African Americans." *Journal of Racial and Ethnic Health Disparities* 8(1):7–11. doi: 10.1007/s40615-020-00887-4.
- Douglas, Margaret, Srinivasa Vittal Katikireddi, Martin Taulbut, Martin McKee, and Gerry McCartney. 2020. "Mitigating the Wider Health Effects of Covid-19 Pandemic Response." *BMJ* m1557. doi: 10.1136/bmj.m1557.
- Durkheim, Émile. 1995. *The Elementary Forms of Religious Life*. Translated by K. E. Fields. New York: Free Press
- Draper, Scott. 2019. *Religious Interaction Ritual: The Microsociology of the Spirit*. Lanham: Lexington Books.
- Elbogen, Eric B., Megan Lanier, Ann Elizabeth Montgomery, Susan Strickland, H. Ryan Wagner, and Jack Tsai. 2020. "Financial Strain and Suicide Attempts in a Nationally Representative Sample of US Adults." *American Journal of Epidemiology* 189(11):1266–74. doi: 10.1093/aje/kwaa146.
- Ellison, Christopher G. 1991. "Religious Involvement and Subjective Well-Being." *Journal of Health and Social Behavior* 32(1):80. doi: 10.2307/2136801.

- Ellison, C. G., J. D. Boardman, D. R. Williams, and J. S. Jackson. 2001. "Religious Involvement, Stress, and Mental Health: Findings from the 1995 Detroit Area Study". *Social Forces* 80(1):215–49. doi: 10.1353/sof.2001.0063.
- Ellison, C. G., and A. M. Burdette. 2012. "Religion and the Sense of Control among U.S. Adults." *Sociology of Religion* 73(1):1–22. doi: 10.1093/socrel/srr035.
- Ellison, Christopher G, and Andrea K. Henderson. 2011. "Religion and Mental Health: Through the Lens of the Stress Process. Pp. 20-53 in *Toward a Sociological Theory of Religion and Health*, edited by A.J. Blasi. Boston: Brill.
- Ferraro, Kenneth F., and Jerome R. Koch. 1994. "Religion and Health among Black and White Adults: Examining Social Support and Consolation." *Journal for the Scientific Study of Religion* 33(4):362. doi: 10.2307/1386495.
- Froese, Paul, and Rory Jones. 2021. "The Sociology of Prayer: Dimensions and Mechanisms." *Social Sciences* 10(1):15. doi: 10.3390/socsci10010015.
- Hackney, Charles H., and Glenn S. Sanders. 2003. "Religiosity and Mental Health: A Meta-Analysis of Recent Studies." *Journal for the Scientific Study of Religion* 42(1):43–55. doi: 10.1111/1468-5906.t01-1-00160.
- Hamren, Kidist, Holendro Singh Chungkham, and Martin Hyde. 2015. "Religion, Spirituality, Social Support and Quality of Life: Measurement and Predictors CASP-12(v2) amongst Older Ethiopians Living in Addis Ababa." *Aging & Mental Health* 19(7):610–21. doi: 10.1080/13607863.2014.952709.
- Hart, Curtis W., and Harold G. Koenig. 2020. "Religion and Health During the COVID-19 Pandemic." *Journal of Religion and Health* 59(3):1141–43. doi: 10.1007/s10943-020-01042-3.
- Hayes, Andrew F., and Li Cai. 2007. "Using Heteroskedasticity-Consistent Standard Error Estimators in OLS Regression: An Introduction and Software Implementation." *Behavior Research Methods* 39(4):709–22. doi: 10.3758/BF03192961.
- Hodge, David R., Robert Joseph Taylor, Linda M. Chatters, and Stephanie C. Boddie. 2022. "Religious Involvement and DSM-IV Anxiety Disorders Among African-Americans." *Journal of Nervous & Mental Disease* 210(10):784–91. doi: 10.1097/NMD.0000000000001538.
- Hummer, Robert A., Richard G. Rogers, Charles B. Nam, and Christopher G. Ellison. 1999. "Religious Involvement and U.S. Adult Mortality". *Demography* 36(2):273–85. doi: 10.2307/2648114.

- Humphrey, Natalie, Honore M. Hughes, and Deserie Holmes. 2008. "Understanding of Prayer Among African American Children: Preliminary Themes." *Journal of Black Psychology* 34(3):309–30. doi: 10.1177/0095798408319885.
- Hwang, Priscilla. 2018. "Mindful Awareness as a Method of Christian Scripture Meditation among Empathic Korean Mothers in South Korea." *Christian Education Journal: Research on Educational Ministry* 15(2):224–42. doi: 10.1177/0739891318778858.
- Keisari, Shoshi, Gianmarco Biancalani, Erica Tavelli, Saverio Fassina, and Ines Testoni. 2022. "Spirituality during COVID-19 in Northern Italy: The Experience of Participating in an Online Prayer Group." *Pastoral Psychology* 71(2):201–15. doi: 10.1007/s11089-022-00998-1.
- Kim, Agnus M. 2021. "The Short-Term Impact of the COVID-19 Outbreak on Suicides in Korea." *Psychiatry Research* 295:113632. doi: 10.1016/j.psychres.2020.113632.
- Koenig, Harold G. 2012. "Religion, Spirituality, and Health: The Research and Clinical Implications." *ISRN Psychiatry* 2012:1–33. doi: 10.5402/2012/278730.
- Koenig, H. G., J. C. Hays, D. B. Larson, L. K. George, H. J. Cohen, M. E. McCullough, K. G. Meador, and D. G. Blazer. 1999. "Does Religious Attendance Prolong Survival? A Six-Year Follow-Up Study of 3,968 Older Adults." *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences* 54(7):M370–76. doi: 10.1093/gerona/54.7.M370.
- Kotwal, Ashwin A., Julianne Holt-Lunstad, Rebecca L. Newmark, Irena Cenzer, Alexander K. Smith, Kenneth E. Covinsky, Danielle P. Escueta, Jina M. Lee, and Carla M. Perissinotto. 2021. "Social Isolation and Loneliness Among San Francisco Bay Area Older Adults During the COVID -19 SHELTER-IN-PLACE Orders." *Journal of the American Geriatrics Society* 69(1):20–29. doi: 10.1111/jgs.16865.
- Krause, N. 2006. "Exploring the Stress-Buffering Effects of Church-Based and Secular Social Support on Self-Rated Health in Late Life". *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences* 61(1):S35–43. doi: 10.1093/geronb/61.1.S35.
- Krause, Neal, and Linda M. Chatters. 2005. "Exploring Race Differences in a Multidimensional Battery of Prayer Measures among Older Adults." *Sociology of Religion* 66(1):23. doi: 10.2307/4153114.
- Krause, Neal, and Kenneth I. Pargament. 2018. "Reading the Bible, Stressful Life Events, and Hope: Assessing an Overlooked Coping Resource." *Journal of Religion and Health* 57(4):1428–39. doi: 10.1007/s10943-018-0610-6.

- Kuipers, Nicholas, Saiful Mujani, and Thomas Pepinsky. 2021. "Encouraging Indonesians to Pray From Home During the COVID-19 Pandemic." *Journal of Experimental Political Science* 8(3):211–22. doi: 10.1017/XPS.2020.26.
- Kumar, Anant, and K. Rajasekharan Nayar. 2021. "COVID 19 and Its Mental Health Consequences." *Journal of Mental Health* 30(1):1–2. doi: 10.1080/09638237.2020.1757052.
- Labrague, Leodoro J. 2021. "Psychological Resilience, Coping Behaviours and Social Support among Health Care Workers during the COVID-19 Pandemic: A Systematic Review of Quantitative Studies." *Journal of Nursing Management* 29(7):1893–1905. doi: 10.1111/jonm.13336.
- Mannheimer, Andrew H., and Terrence D. Hill. 2015. "Deviating from Religious Norms and the Mental Health of Conservative Protestants." *Journal of Religion and Health* 54(5):1826–38. doi: 10.1007/s10943-014-9951-y.
- McIntyre, Roger S., and Yena Lee. 2020. "Projected Increases in Suicide in Canada as a Consequence of COVID-19." *Psychiatry Research* 290:113104. doi: 10.1016/j.psychres.2020.113104.
- Mishra, Chinmayee, and Navaneeta Rath. 2020. "Social Solidarity during a Pandemic: Through and beyond Durkheimian Lens". *Social Sciences & Humanities Open* 2(1):100079. doi: 10.1016/j.ssaho.2020.100079.
- Mohler, George, Andrea L. Bertozzi, Jeremy Carter, Martin B. Short, Daniel Sledge, George E. Tita, Craig D. Uchida, and P. Jeffrey Brantingham. 2020. "Impact of Social Distancing during COVID-19 Pandemic on Crime in Los Angeles and Indianapolis." *Journal of Criminal Justice* 68:101692. doi: 10.1016/j.jcrimjus.2020.101692.
- Morgan, Craig, Tom Burns, Ray Fitzpatrick, Vanessa Pinfold, and Stefan Priebe. 2007. "Social Exclusion and Mental Health: Conceptual and Methodological Review." *British Journal of Psychiatry* 191(6):477–83. doi: 10.1192/bjp.bp.106.034942.
- Muqsith, Munadhil Abdul, Rizky Ridho Pratomo, Ana Kuswanti, and Valerii Leonidovich Muzykant. 2021. "Social Solidarity Movement to Prevent the Spread of COVID-19 Pandemic in Indonesia." *Masyarakat, Kebudayaan Dan Politik* 34(2):147. doi: 10.20473/mkp.V34I22021.147-158.
- Nelson-Becker, Holly. 2005. "Religion and Coping in Older Adults: A Social Work Perspective." *Journal of Gerontological Social Work* 45(1–2):51–67. doi: 10.1300/J083v45n01_04.

- Osaki, Yoneatsu, Hitoshi Otsuki, Aya Imamoto, Aya Kinjo, Maya Fujii, Yuki Kuwabara, Yoko Kondo, and Yoshiko Suyama. 2021. "Suicide Rates during Social Crises: Changes in the Suicide Rate in Japan after the Great East Japan Earthquake and during the COVID-19 Pandemic." *Journal of Psychiatric Research* 140:39–44. doi: 10.1016/j.jpsychires.2021.05.035.
- Oyetunji, Tosin Philip, Olusegun Ayomikun Ogunmola, Timothy Tomiwa Oyelakin, Olorunyomi Felix Olorunsogbon, and Foluso O. Ajayi. 2021. "COVID-19-Related Risk Perception, Anxiety and Protective Behaviours among Nigerian Adults: A Cross-Sectional Study." *Journal of Public Health*. doi: 10.1007/s10389-021-01502-4.
- Page, Robin L., Jill N. Peltzer, Amy M. Burdette, and Terrence D. Hill. 2020. "Religiosity and Health: A Holistic Biopsychosocial Perspective." *Journal of Holistic Nursing* 38(1):89–101. doi: 10.1177/0898010118783502.
- Pargament, Kenneth I., Harold G. Koenig, and Lisa M. Perez. 2000. "The Many Methods of Religious Coping: Development and Initial Validation of the RCOPE". *Journal of Clinical Psychology* 56(4):519–43. doi: 10.1002/(SICI)1097-4679(200004)56:4<519::AID-JCLP6>3.0.CO;2-1.
- Parish, Helen. 2020. "The Absence of Presence and the Presence of Absence: Social Distancing, Sacraments, and the Virtual Religious Community during the COVID-19 Pandemic." *Religions* 11(6):276. doi: 10.3390/rel11060276.
- Pearlin, Leonard I. 1989. "The Sociological Study of Stress". *Journal of Health and Social Behavior* 30(3):241. doi: 10.2307/2136956.
- Peng, Siyun, and Adam R. Roth. 2022. "Social Isolation and Loneliness Before and During the COVID-19 Pandemic: A Longitudinal Study of U.S. Adults Older Than 50" edited by J. Kelley. *The Journals of Gerontology: Series B* 77(7):e185–90. doi: 10.1093/geronb/gbab068.
- Pew Research Center. 2020. "Most Americans Say Coronavirus Outbreak Has Impacted Their Lives." <https://www.pewresearch.org/social-trends/2020/03/30/most-americans-say-coronavirus-outbreak-has-impacted-their-lives/>
- Pollner, Melvin. 1989. "Divine relations, social relations, and well-being." *Journal of Health and Social Behavior* 30 (1): 92–104. doi.org/10.2307/2136915
- Richardson, Thomas, Peter Elliot, and Ron Roberts. 2017, "Relationship between loneliness and mental health in students", *Journal of Public Mental Health*, Vol. 16 No. 2: 48-54. <https://doi.org/10.1108/JPMH-03-2016-0013>

- Robinson, Jeffrey D., and Nussbaum Jon F. 2004. "Grounding Research and Medical Education About Religion in Actual Physician-Patient Interaction: Church Attendance, Social Support, and Older Adults." *Health Communication* 16(1):63–85. doi: 10.1207/S15327027HC1601_5.
- Rohde, Nicholas, Conchita D'Ambrosio, Kam Ki Tang, and Prasada Rao. 2016. "Estimating the Mental Health Effects of Social Isolation." *Applied Research in Quality of Life* 11(3):853–69. doi: 10.1007/s11482-015-9401-3.
- Rotas, Erwin, and Michael Cahapay. 2021. "From Stress to Success: Exploring How Filipino Students Cope with Remote Learning amid COVID-19 Pandemic." *Journal of Pedagogical Sociology and Psychology* 3(1):27–35. doi: 10.33902/JPSP.2021366608.
- Schieman, Scott, Alex Bierman, and Christopher G. Ellison. 2013. "Religion and Mental Health". Pp 457–78 in *Handbook of the Sociology of Mental Health, Handbooks of Sociology and Social Research*, edited by C. S. Aneshensel, J. C. Phelan and A. Bierman. Dordrecht: Springer Netherlands.
- Schieman, Scott, Alex Bierman, Laura Upenieks, and Christopher G. Ellison. 2017. "Love Thy Self? How Belief in a Supportive God Shapes Self-Esteem." *Review of Religious Research* 59(3):293–318. doi: 10.1007/s13644-017-0292-7.
- Schnabel, Landon, and Scott Schieman. 2022. "Religion Protected Mental Health but Constrained Crisis Response During Crucial Early Days of the COVID-19 Pandemic." *Journal for the Scientific Study of Religion* 61(2):530–43. doi: 10.1111/jssr.12720.
- Sharp, Shane. 2010. "How Does Prayer Help Manage Emotions?" *Social Psychology Quarterly* 73(4):417–37. doi: 10.1177/0190272510389129.
- Sharp, Shane, and Deborah Carr. 2017. "The Use of Prayer to Manage Anger: Do Characteristics of the Emotional Experience Matter?" *Review of Religious Research* 59(4):557–74. doi: 10.1007/s13644-017-0299-0.
- Shaw, Bret, Jeong Yeob Han, Eunkyung Kim, David Gustafson, Robert Hawkins, James Cleary, Fiona McTavish, Suzanne Pingree, Patricia Eliason, and Crystal Lumpkins. 2007. "Effects of Prayer and Religious Expression within Computer Support Groups on Women with Breast Cancer." *Psycho-Oncology* 16(7):676–87. doi: 10.1002/pon.1129.
- Sternthal, Michelle J., David R. Williams, Marc A. Musick, and Anna C. Buck. 2010. "Depression, Anxiety, and Religious Life: A Search for Mediators." *Journal of Health and Social Behavior* 51(3):343–59. doi: 10.1177/0022146510378237.

- Tan, Min Min, Ahmad Farouk Musa, and Tin Tin Su. 2022. "The Role of Religion in Mitigating the COVID-19 Pandemic: The Malaysian Multi-Faith Perspectives." *Health Promotion International* 37(1):daab041. doi: 10.1093/heapro/daab041.
- Upenieks, Laura, and Markus H. Schafer. 2020. "Religious Attendance and Physical Health in Later Life: A Life Course Approach." *Journal of Health and Social Behavior* 61(4):486–502. doi: 10.1177/0022146520961363.
- Vilchinsky, Noa, and Shlomo Kravetz. 2005. "How Are Religious Belief and Behavior Good for You? An Investigation of Mediators Relating Religion to Mental Health in a Sample of Israeli Jewish Students." *Journal for the Scientific Study of Religion* 44(4):459–71. doi: 10.1111/j.1468-5906.2005.00297.x.
- Wang, Jingyi, Brynmor Lloyd-Evans, Domenico Giacco, Rebecca Forsyth, Cynthia Nebo, Farhana Mann, and Sonia Johnson. 2017. "Social Isolation in Mental Health: A Conceptual and Methodological Review." *Social Psychiatry and Psychiatric Epidemiology* 52(12):1451–61. doi: 10.1007/s00127-017-1446-1.
- Weinberger-Litman, Sarah L., Leib Litman, Zohn Rosen, David H. Rosmarin, and Cheskie Rosenzweig. 2020. "A Look at the First Quarantined Community in the USA: Response of Religious Communal Organizations and Implications for Public Health During the COVID-19 Pandemic." *Journal of Religion and Health* 59(5):2269–82. doi: 10.1007/s10943-020-01064-x.
- Wenger, G. Clare, Richard Davies, Said Shahtahmasebi, and Anne Scott. 1996. "Social Isolation and Loneliness in Old Age: Review and Model Refinement." *Ageing and Society* 16(3):333–58. doi: 10.1017/S0144686X00003457.
- Whittington, Brandon L., and Steven J. Scher. 2010. Prayer and subjective well-being: An examination of six different types of prayer. *International Journal for the Psychology of Religion* 20 (1): 59–68.
- Wildman, Wesley J., Joseph Bulbulia, Richard Sosis, and Uffe Schjoedt. 2020. "Religion and the COVID-19 Pandemic." *Religion, Brain & Behavior* 10(2):115–17. doi: 10.1080/2153599X.2020.1749339.
- Zhao, Sheng Zhi, Janet Yuen Ha Wong, Yongda Wu, Edmond Pui Hang Choi, Man Ping Wang, and Tai Hing Lam. 2020. "Social Distancing Compliance under COVID-19 Pandemic and Mental Health Impacts: A Population-Based Study." *International Journal of Environmental Research and Public Health* 17(18):6692. doi: 10.3390/ijerph17186692.
- Zhou, Yanmengqian, Erina L. MacGeorge, and Jessica Gall Myrick. 2020. "Mental Health and Its Predictors during the Early Months of the COVID-19 Pandemic Experience in the United States." *International Journal of Environmental Research and Public Health* 17(17):6315. doi: 10.3390/ijerph17176315.