

# Prevalence and Religious Predictors of Healing Prayer Use in the USA: Findings from the Baylor Religion Survey

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**Abstract** Using data from the 2010 Baylor Religion Survey ( $N = 1714$ ), this study investigates the prevalence and religious predictors of healing prayer use among US adults. Indicators include prayed for self (lifetime prevalence = 78.8 %), prayed for others (87.4 %), asked for prayer (54.1 %), laying-on-of-hands (26.1 %), and participated in a prayer group (53.0 %). Each was regressed onto eight religious measures, and then again controlling for sociodemographic variables and health. While all religious measures had net effects on at least one healing prayer indicator, the one consistent predictor was a four-item scale assessing a loving relationship with God. Higher scores were associated with more frequent healing prayer use according to every measure, after controlling for all other religious variables and covariates.

**Keywords** Healing · Prayer · Spiritual healing · Religion · Healthcare use

## Introduction

Of all the ways that religion is practiced, that faith is expressed, that spirituality is experienced, throughout the world and across time and cultures and belief systems, the one common factor may be prayer. It is an almost universal expression of the innate human longing to connect with the holy or sacred or divine or transcendent, and it manifests among religious believers regardless of faith tradition (see Castelli 1994). Americans, especially, are a praying people (Poloma and Gallup 1994). Among the most pressing reasons for prayer—for prayerfulness in general and the act of focused praying, in particular—are challenges to health or well-being, such as due to acute or chronic illness or to

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an injury. Such circumstances disrupt the normal rhythms of life, and they may cause even religiously disinterested people to call out to God, imploring Him to respond to their needs. We all know the saying that there are no atheists in foxholes. For active believers and people of faith, prayer, including for healing, is more than a situationally motivated response to one's own suffering; it is an ongoing expression of piety and of taking up the yoke to be of service to others by acting as a liaison or advocate between suffering individuals and God.

Interest in the instrumentality of prayer and praying for human health and healing has been a focus of scholarly reflection by physicians and pastoral professionals for at least the past couple centuries. Beginning in the nineteenth century, prominent figures in medicine (e.g., Brigham 1835; Osler 1910) and ministry (e.g., Dearmer 1909; Weatherhead 1951; Worcester and McComb 1908) have weighed in on clinical, psychiatric, theological, pastoral, and ethical dimensions of a possible prayer-healing connection, and historians have documented popular and clerical interest that has been ongoing since the time of Christ (see Ferngren 2009, 2014; Kelsey 1995; Porterfield 2005). Researchers have been exploring this relationship in earnest since the 1980s through empirical studies (see Duckro and Magaletta 1994; McCullough 1995). But social or population-based research has been scant. Most of the recent effort here has consisted of a controversial group of clinical trials and experimental studies of the possible therapeutic effects of absent or distant petitionary prayer.

This conversation began with the publication, in 1988, of a now famous double-blinded, randomized, controlled clinical trial of distant intercessory prayer among 393 cardiac patients in a San Francisco hospital (Byrd 1988). The study found that prayed-for subjects did significantly better on selected outcomes than the non-prayed-for control group. This study kicked up a firestorm of controversy, leading to skeptical critiques, passionate defenses, follow-up studies by other investigators, and more published articles and editorial pieces than could possibly be cited here. Detailed methodological postmortems of the study and the literature as a whole were few, notable exceptions being the work of Benor (2001) and Dossey (1993); most assessments were written through strict ideological lenses. Moreover, some of the efforts to replicate the Byrd study were themselves far more methodologically challenged and ill-conceived than the most strident critics accused the Byrd study of being (e.g., Benson et al. 2006).<sup>1</sup> As a once provocative research topic deteriorated into a cluster of highly charged and polarized screeds and weak one-off studies, the best advice came from Dossey (2008), who suggested “a temporary moratorium on healing studies.... Currently, researchers seem to wander almost without direction in this field....” (p. 350). He wisely called for a summit, bringing together people from across disciplines and fields and perspectives, to collegially outline and discuss the most serious points of contention and to set an agenda. His recommendation still awaits implementation.

Because of the notoriety of these studies, scholarly writing on the impact of prayer on health or healing has been monopolized by critiques and counter-critiques of the clinical trials literature, focused less on legitimate methodological concerns than on conceptual underpinnings and presumptions of these studies. Medical scientists have gotten wrapped

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<sup>1</sup> The present author takes a positive view of the Byrd study. It was thoughtfully conceived and fairly sound, methodologically. Had the treatment modality been something other than intercessory prayer conducted by Christians, the study would have resembled a garden-variety clinical trial and been unlikely to have caused any commotion. Further reflections on this body of work and its contentious discourse can be found in an essay published several years ago in this journal (Levin 2009a).

up in philosophical and even theological discussions about the nature of God, workings of divine theodicy, and existence of supernatural realities—debates that, on the whole, they are not particularly suited to conduct (see Levin 2015). There have been a few exceptionally thoughtful analyses of this literature (e.g., Dossey and Hufford 2005), but these are in the minority.

One sequela of the contentious parsing of these experimental studies is that research which would provide more basic information about healing prayer has been lacking. So much energy has been taken up with attempting to design the perfect randomized controlled trial of an ostensibly “supernatural” phenomenon that naturalistic science may not best be equipped to address (see Levin 1996) that other possible research approaches to this issue—social, behavioral, ethnographic, epidemiologic, biomedical, health services—have been given short shrift (see Levin 2004). It is also apparent that many contributors to this topic, through both original studies and critiques, have confused and confounded the concept of clinical trials of distant-prayer-as-a-therapeutic-intervention-for-sick-people with sociological or epidemiologic studies of the health impact of praying-as-a-religious-characteristic-of-general-populations (see Levin 2009a). As a result, for a topic that has attracted so much study and contention, we actually do not know much of anything about this phenomenon at the population level—e.g., how many folks actually participate in healing prayer and why.

### The Prevalence of Healing Prayer Use

Since the early 1990s, there have been efforts to estimate rates of use for health-directed prayer and other modes of spiritual intervention, broadly defined. Some of these have involved analysis of single items serendipitously included in national population surveys. The wording of such questions therefore varies quite a bit, thus explaining the wide variation in findings, none of which are precisely focused on the subject of the present study: the prevalence of healing prayer use in response to a medical issue.

In findings from a 1991 national interview survey of unconventional medical care use which asked respondents to select from a lengthy list of “therapies and treatments” that they had used in the past year, 4 % reported using “spiritual healing” and 25 % reported using “prayer” (Eisenberg et al. 1993), more than for any other therapy, except exercise. Yet for prayer (and exercise) alone, the authors noted that respondents “were not asked for details about this use” (p. 248). A follow-up survey, conducted in 1997, found that the past-year prevalence of “spiritual healing by others” was now 7.0 % and “self-prayer” was now 35.1 % (Eisenberg et al. 1998). Again, the authors added, curiously, that “[a]ll analyses in this article exclude data involving self-prayer” (p. 1571), so additional information is not available.

Findings from other national data sources reveal considerable variation in estimates: 13.7 % past-year prevalence for “spiritual healing or prayer,” from the 1999 National Health Interview Survey (NHIS) (Ni et al. 2002); 22 % lifetime prevalence for “prayer or spiritual practice” for any of a list of common medical conditions, from a 1997–1998 national randomized phone survey (McCaffrey et al. 2004); lifetime prevalence of 42.9 % for praying for one’s own health, 24.3 % for asking others to pray for one’s health, 9.5 % for participating in a prayer chain or prayer group for one’s health, and 2.0 % for having a healing ritual or sacrament performed for one’s health, from the 2002 NHIS (Bell et al. 2005); and past-year prevalence of 48.0 % for praying for one’s own health, from the 2007 NHIS (Wachholtz and Sambamoorthi 2011). In these latter data, measures of gender, race, and physical and mental health were significant predictors of use of prayer.

A recent effort to provide some clarification, especially regarding predictors, looked at data on spiritual healing from the National Survey of American Life (NSAL), a nationally representative survey of 6082 adult Americans conducted from 2001 to 2003 (Levin, Taylor, and Chatters 2011). The most notable finding was the suggestion that utilization of spiritual healers “is not due, on average, to poor education, marginal racial/ethnic or socioeconomic status, or lack of other healthcare options. To some extent, the opposite appears to be true” (p. 63). Limitations in the wording of available items, however, make these results less pertinent to the topic of healing prayer. Only two measures were used, both from a list of response options to a yes/no question asking from whom medical care was ever sought: “a faith healer” and “a person who practices astrology, reads zodiac signs, or is a psychic.” Use of a faith healer or psychic healer, while both markers in a broad sense of participation in spiritual healing, is something quite different than personally praying for healing. The authors noted this and recommended that subsequent studies ask respondents more directly about their own prayers for healing. Despite these built-in limitations, this study provided a baseline for future research. According to the NSAL, the lifetime prevalence of faith healer use in the USA is 3.7 %, and for psychic healers is 6.1 %. These numbers are lower than those of the other studies, but, then again, they do not seem to be assessing the same things.

Persistent variability in defining, naming, and measuring the construct in question here hinders easy comparison of results across studies. This is not the fault of any one study—these are uniformly solid and thoughtful analyses; there is just no assessment standard or convention in the medical research field for a topic as unusual as prayer. Spiritual healing, faith healing, healing, prayer, prayer for health, and other terms used in this literature (e.g., directed intention, energy healing, psychic healing) are not interchangeable and thus do not necessarily assess the same things. Comparing these studies’ results may be a bit like comparing apples and oranges. What can be said, with confidence, is that national population data from the USA, from multiple sources, document patient involvement with prayer or with other praying people for purposes of responding to a health challenge at substantially nonzero rates of prevalence, whether in the past year or over one’s lifetime. Moreover, these rates of use seem to be getting higher over time. This is a start, but a closer look is merited.

The present paper is an effort to take a step beyond these previous studies and to focus precisely on the use of prayer for purposes of healing, for oneself and for others. The intention is twofold: (a) to document the prevalence of healing prayer, moving beyond having to infer use of healing prayer from, for example, a single yes/no item assessing undefined and undifferentiated spiritual or faith healing; and (b) to investigate whether or not use of healing prayer is a reflection or expression of dimensions of religiosity—and to identify which ones—or is rather a function primarily of one’s socioeconomic, demographic, or health-related status. These analyses will make use of data from the third round of Baylor Religion Survey (BRS3), a comprehensive national probability survey of the US adult population, which contains five items asking respondents about the frequency of their lifetime use of healing prayer.

## Study Aims and Hypotheses

This study aims to identify the lifetime prevalence and religious predictors of the use of healing prayer in a nationally representative sample of US adults. As noted, prior studies have examined types and patterns of prayer and prayer-based coping behavior, and a controversial literature of clinical trials has investigated the putative therapeutic effects of

petitionary prayer. Yet more fundamental issues about prayer and healing have been overlooked, including questions that would be of most interest to health services researchers and population-health scientists: How prevalent is the use of healing prayer? Are there differences in prevalence depending upon the type of prayer? What are the correlates or determinants of such use? Are there differences among different types of people? Is use of healing prayer mainly a reflection of sociodemographic or health-related factors, or is it a function of or marker of religiousness?

Besides documenting the prevalence of healing prayer use, this study investigates the impact of several hypothesized predictors of use. These include eight religious variables, each of whose association with healing prayer use is examined both bivariate and then adjusting for effects of all other religious variables and a set of covariates which include measures of physical and mental health. These analyses examine whether praying for healing is a function of religious beliefs and practices, and, if so, whether such effects are explained by demographic correlates of religiousness and health, including socioeconomic factors, or by health itself.

Reasonable hypotheses support the effects of a number of religious constructs on the use of healing prayer. Others are possible as well, but we are limited here by the variables available in the data source (BRS3) containing the healing prayer variables. Hypothesized predictors are as follows:

**H<sub>1</sub>: Religiousness → healing prayer use** Stronger faith, as indicated by a higher self-rating of overall religiosity, leads to greater reliance on potential religious sources of healing. Prayer is one expression of faith. Without faith in God—that is, without belief in, trust in, and obedience to God—why would people pray to Him? Stronger faith, as indicated in surveys by self-assessments of the magnitude of one’s religious commitment, overall religiosity, or ratings of the importance of religion, is associated with public and private religious behaviors which make this faith manifest, including prayer. These behaviors, incidentally, and faith itself, may be therapeutic in a medical sense through various psychological pathways (see Levin 2009b).

**H<sub>2</sub>: Religious attendance → healing prayer use** Socialization into faith and worship expressed through communal fellowship leads to more opportunities and exposure to healing prayer. Formal healing services or liturgies are by now a staple in so many congregations in the USA, across religions and denominations. In some branches of Christianity, for example, evening services on a particular day of the week, oftentimes Wednesday, is set aside for communal healing prayer (Griffith et al. 1980).

**H<sub>3</sub>: Reading scriptures → healing prayer use** Regular study of sacred texts increases exposure to divine promises of well-being, that in turn create hope and optimism which encourage and reinforce participation in healing prayer. The Hebrew Bible tells us that the Torah, the word of God, is wisdom (*chokh'mah*), and that “[H]appy is the man that findeth wisdom.... Her ways are ways of pleasantness, and all her paths are peace. She is a tree of life to them that lay hold upon her, and happy is every one that holdeth her fast” (Proverbs 3:13, 17–18; JPS). The Bible also tells us, repeatedly, that God promises healing to the faithful. Knowledge of such verses cannot help but be a comfort and sufficient impetus to “pray without ceasing” (I Thessalonians 5:17; KJV).

**H<sub>4</sub>: Non-congregational prayer → healing prayer use** There may be a prayer-in-general effect, such that people who privately pray more as a matter of course are more likely to pray for healing. Prayer and praying have been subcategorized in many ways, one

of which differentiates ritual, petitionary, conversational, and meditative types of prayer (Poloma and Gallup 1991). Each of these ways of praying can be used to pray for healing; and, according to Gallup data from 1988, most Americans are especially well practiced in the latter two types of prayer (Poloma and Gallup 1991)

**H<sub>5</sub>: Belief in God → healing prayer use** Stronger belief in God leads to greater belief in the power of God, including His ability to heal. Findings from a qualitative study indicate that among the ways that people express their gratitude and closeness to God is through communicating and connecting with Him through prayer, which in turn relieves stress, enhances well-being, and creates expectations of health benefits (Krause et al. 2012).

**H<sub>6</sub>: Loving God → healing prayer use** Stronger affirmation of God as a loving being and past experience of feeling this love make one more likely to tap into God's love to make it manifest in one's life. This may produce instrumental effects of the experience of divine love on health behavior, healthcare use, or even health status (see Levin 2000).

**H<sub>7</sub>: Meditation → healing prayer use** Practicing meditation goes hand in hand with use of healing prayer for many folks, such as stereotypical spiritual seekers or new-agers, although not all praying people, of course, meditate. Both meditation and healing prayer may invoke a shared mind–body mechanism that engenders states of higher consciousness conducive to healing. The very people most likely to practice some form of meditation or spiritual pursuit to attain heightened awareness may be among the same folks inclined to lay on hands or participate in a healing circle. Indeed, these pursuits may be one in the same and may occur together in such settings, and it may be hard to differentiate among meditation, prayer, or other spiritual activities, all of which have been shown to exhibit physiological and psychophysiological effects (Murphy and Donovan 1997).

**H<sub>8</sub>: Non-medical healer use → healing prayer use** As with meditation, using the services of self-described healers goes hand in hand with use of healing prayer, via acknowledgment of the ability of some people (or all of us) to serve as intermediaries or transmitters of divine healing. People who seek out healers may also be more likely to pray for healing, and such healers themselves may work in a practice that is wholly or partly defined by the act of praying. This is the case for both energy healers and Christian spiritual healers alike (Levin 2011).

Multivariable tests of these hypotheses will adjust for effects of age, sex, race, marital status, education, income, and urbanicity as a way to verify that any observed religious associations emerge net of the possible propensity of healing prayer to be a function in part of these variables, as suggested in the literature. These analyses also control for effects of two additional variables, supported by the following hypotheses:

**H<sub>9</sub>: Poor physical health → healing prayer use** People suffering from an acute or chronic illness or other health need are more likely to seek healing through prayer. This seems to be a common-sense expectation: desperate times call for desperate measures. Some believers, of course, pray for healing without requiring a life-threatening health crisis; but, on the whole, at the population level, this would seem to be a reasonable expectation. Numerous studies on religion and health have documented an inverse association between health, especially functional health, and private religious behaviors such as prayer: With increased disability, symptomatology, or pain, people are more inclined to seek comfort from God (e.g., Ellison and Taylor 1996).

**H<sub>10</sub>: Poor mental health → healing prayer use** People who are depressed, stressed out, or otherwise suffering from psychological or emotional challenges are more likely to turn to prayer for comfort. Again, decades of empirical research on religion and health indicate that prayer may be inversely associated with mental health and psychological well-being—not because prayer causes poor outcomes, but rather because emotional suffering and other forms of psychological distress lead people to turn to sources of religious coping for relief, including praying to God (Pargament et al. 2013).

These hypotheses are not mutually exclusive. Findings may reveal multiple statistically significant determinants, the identity of which may vary across the five measures of healing prayer use. There are substantial differences in meaning and intent (and even theological underpinnings) between, say, praying to God for one's own healing and using a laying-on-of-hands technique to treat another person. In the present paper, these and the other measures are grouped together for categorical purposes as “healing prayer,” but clearly they cover a wide range of religious behavior. Therefore, they are modeled separately in the analyses.

## Methods

### The Baylor Religion Survey

The Baylor Religion Survey (BRS) is a multi-round program of nationally representative, probability-based surveys of the adult population of the USA. Conducted by the Gallup Organization, with funding from the John Templeton Foundation, the first survey was conducted in 2005, the second was conducted in 2007, and the third was conducted in 2010. Although sometimes referred to as “waves” (e.g., Wave III), technically speaking the BRS is not a panel survey, but rather is based on a series of unique cross-sectional samples, similar to the General Social Survey. Each BRS has been somewhat thematic, while preserving a core of basic religious measures and other indicators from substantive fields of interest to sociologists (e.g., family, politics, gender, work, education, demography). A fourth BRS is currently underway.

The third round (BRS3) used a mixed-mode sampling design, with both telephone and self-administered surveys drawn through random-digit-dialing procedures representing both listed and unlisted numbers (see Mencken 2011). The sampling frame consisted of households with at least one adult aged 18 or over, and a \$5.00 completion incentive was paid. The overall return rate based on the total sample contacted in both phases of recruitment was 49.0 %, and the final sample size was 1714. For results with this sample, there is about a  $\pm 4$  % error (with 95 % confidence) attributable to sampling and other random effects (see Mencken 2011).

The mean age of respondents is 55.9 years; 54.1 % are female and 63.0 % are married and living together; 60.8 % identify as exclusively White; 69.9 % have completed at least some college or technical school; 31.6 % report an annual household income between \$50,001 and \$100,000; and 17.0 % are urban dwellers. Religiously, respondents self-identify with any of about 40 religious or denominational categories, the most prevalent being Roman Catholic (23.1 %), Baptist (15.3 %), and “no religion” (11.3 %). These numbers on religious affiliation are in keeping with data from other recent national surveys, such as by Pew (Pew Research Center 2015) and ARIS (Kosmin and Keyser 2009).



Among the over 250 items in the BRS3 questionnaire were measures of several religious constructs largely understudied by sociologists of religion, including healing prayer, meditation, moral attitudes, and one's relationship with and images of God. Prior BRS3 research findings have been published on both religious and non-religious topics related to criminology (Jang and Franzen 2013), political sociology (Whitehead 2014), business (Halbesleben and Tolbert 2014), family studies (Whitehead and Perry 2016), and mental health (Ellison et al. 2014).

## Measures

The dependent construct in this study is *healing prayer use*, assessed by five variables. Independent variables consist of eight *religious predictors*, mostly single items and one scale. Nine *covariates* are included in analyses, including single-item sociodemographic variables and measures of physical and mental health status.

### *Healing Prayer Use*

The five measures of *healing prayer use* are included in a section of the questionnaire preceded by a common instruction: "Please indicate how often you have done each of the following." These include *prayed for oneself* ("Prayed to God to receive healing for an illness or injury"), *prayed for others* ("Prayed to God for another person's healing from an illness or injury"), *asked for prayer* ("Asked others to pray to God for your healing from an illness or injury"), *laying-on-of-hands* ("Given a laying-on-of-hands for an illness or injury"), and *prayer group* ("Participated in a prayer group, prayer chain, or prayer circle that prayed for other people's healing from illness or injury") (all coded: 1 = "never," 2 = "once," 3 = "occasionally," 4 = "often"). Given the wording of the items and their response categories, this construct is thus, in epidemiologic or health services research terms, a measure of the lifetime prevalence of healing prayer use.

### *Religious Predictors*

The eight *religious predictors* assess a diverse range of religious constructs and dimensions. These consist of standard single-item assessments of *subjective religiosity* ("How religious do you consider yourself to be?"; coded: 1 = "not at all religious," 2 = "not too religious," 3 = "somewhat religious," 4 = "very religious"), *religious attendance* ("How often do you attend religious services at a place of worship?"; coded: 1 = "never," 2 = "less than once a year," 3 = "once or twice a year," 4 = "several times a year," 5 = "once a month," 6 = "2–3 times a month," 7 = "about weekly," 8 = "several times a week"), *reading scriptures* ("Outside of attending religious services, about how often do you spend time alone reading the Bible, Koran, Torah, or other sacred book [sic]?"; coded: 1 = "never," 2 = "less than once a year," 3 = "once or twice a year," 4 = "several times a year," 5 = "once a month," 6 = "2–3 times a month," 7 = "about weekly," 8 = "weekly," 9 = "several times a week or more often"), *private prayer* ("About how often do you spend time alone praying outside of religious services?"; coded: 1 = "never," 2 = "only on certain occasions," 3 = "once a week or less," 4 = "a few times a week," 5 = "once a day," 6 = "several times a day"), and *belief in God* ("Which one statement comes closest to your personal beliefs about God?"; several categories collapsed down to: 1 = atheist or agnostic, 2 = "sometimes believe" in God, 3 = believe



in God “with some doubts,” 4 = “no doubts” that God or a “higher power or cosmic force” exists).

Also among the religious predictors is a four-item summary scale assessing affirmation of a *loving relationship with God*. This consists of the four-item religious love subscale of the Sorokin Multidimensional Inventory of Love Experience (SMILE), a 24-item scale containing six dimensions (see Levin and Kaplan 2010). The religious love subscale has been found to be a strong, statistically significant correlate of both subjective health (Levin 2001) and fewer depressive symptoms (Levin 2002) in a clinical sample, explaining nearly 10 % of the variance in each outcome. In the BRS3, the four items are preceded by a common instruction: “Please indicate your level of agreement with the following statements.” These include “I feel loved by God,” “God loves all living beings,” “God’s love is eternal,” and “God’s love never fails” (all coded: 1 = “strongly disagree,” 2 = “disagree,” 3 = “agree,” 4 = “strongly agree”). In this sample, the subscale has a very high internal-consistency reliability ( $\alpha = .96$ ).

Finally, religious predictors include single-item measures of *meditation* (“Do you practice meditation?”) and *use of a non-medical healer* (“Have you ever sought the help of someone, other than a physician/nurse, who calls themselves [sic] a ‘healer’?”) (both coded: 0 = no, 1 = yes).

### Covariates

Regression analyses control for effects of several *covariates*, mostly standard sociodemographic indicators. These include *age* (in years), *gender* (0 = male, 1 = female), *race* (multiple yes/no items in response to “What is your race?” collapsed to: 1 = White, 0 = non-White),<sup>2</sup> *marital status* (several categories collapsed to 1 = married and living together, 0 = not married and not living together), *education* (7 categories from “8th grade or less” to “postgraduate work/degree”), *income* (7 categories of total household income from “\$10,000 or less” to “\$150,001 or more”), and *urbanicity* (1 = “a rural area,” 2 = “a small city or town,” 3 = “a suburb near a large city,” 4 = “a large city”). Each of these variables has been found in hundreds of research studies, dating back decades, to be a significant correlate of religious (Levin et al. 1994), health-related (Last 1987), and health services (Pol and Thomas 1992) constructs, and most are routinely controlled for in analyses.

In addition, a single-item self-rating of *physical health status* is included. This is excerpted from the 14-item, three-dimensional Health-Related Quality of Life (HRQOL-14) scale, developed by the Centers for Disease Control and Prevention and also known as the “Healthy Days Measures” (Moriarty et al. 2003). The item asks, “Now thinking about

<sup>2</sup> In the BRS3, “race” is assessed by a series of questions. The instructions state, “What is your race? (You can mark ‘yes’ to more than one.)” There are then separate yes/no questions for “White,” “Black or African American,” “American Indian or Alaska Native,” “Asian,” “Native Hawaiian or other Pacific Islander,” and “Some other race (please specify).” As a result, in creating a binary race variable, in this instance White vs. non-White, one has a choice: either identify respondents who check “yes” only to the White category and “no” to all the others (and are thus *exclusively White*) or identify respondents who check “yes” to the White category and to one or more of the other categories (and are thus *multiracial and inclusive of White identity*). For comparison, by the former criterion the sample is 60.8 % White (SD 0.49); by the latter criterion, the sample is 94.8 % White (SD 0.22). In the present analyses, this variable was used only as a covariate. Conducting the analyses both ways did not uncover any substantive differences in the net effects of the religious predictors. Because we did not wish to present duplicate sets of findings and tables on account of discrepancies in coding a single binary covariate, one of these definitions had to be selected. For the purpose of presenting the findings in this paper, the more exclusive classification is used.

your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?” This variable was recorded for use in the present analyses such that a higher score denotes better health (coded: 1 = “all 30 days,” 2 = “21–39 days,” 3 = “11–20 days,” 4 = “1–10 days,” and 5 = “none”). A single-item self-rating of *mental health status* is also included (“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?”), taken from the same source and coded the same way.

**Data Analysis**

These analyses have two aims: (a) to determine the prevalence of different indicators of healing prayer use and (b) to investigate effects on healing prayer use of religious predictors and sociodemographic and health-related covariates. Analyses consist of descriptive statistics; Pearson correlations among all study variables; and hierarchical OLS regression analysis of each healing prayer measure on all religious variables (Model I) and then after adjusting for covariates (Model II). This strategy thus enables a look at the association among each religious measure and each healing prayer indicator under three conditions: bivariately, multivariably in the presence of all other religious measures (gross effects), and multivariably in the presence of all other religious measures and all covariates (net effects). The most salient religious predictors of the use of healing prayer would be those variables, ideally, if any, that remain strongly and significantly impactful on each healing prayer indicator across all phases of analysis through to the net level. All analyses are conducted using version 9.4 of SAS.

**Results**

In Table 1, frequency response data are presented for each of the five healing prayer indicators. For four of the five variables, the lifetime prevalence (i.e., ever having experienced this, at least once) exceeds half of the adult population of the USA. Over three quarters of adults have prayed for their own healing (78.8 %), over six in seven have prayed for the healing of others (87.4 %), and over half have asked for healing prayer

**Table 1** Prevalence of healing prayer use among US adults

Healing prayer use variables	Frequency								Lifetime prevalence <sup>a</sup>	
	Never		Once		Occasionally		Often		N	%
	N	%	N	%	N	%	N	%		
Prayed for oneself (N = 1683)	357	21.2	76	4.5	704	41.8	546	32.4	1326	78.8
Prayed for others (N = 1684)	213	12.7	56	3.3	555	33.0	860	51.1	1471	87.4
Asked for prayer (N = 1674)	769	45.9	120	7.2	516	30.8	269	16.1	905	54.1
Laying-on-of-hands (N = 1660)	1227	73.9	114	6.9	242	14.6	77	4.6	433	26.1
Prayer group (N = 1672)	787	47.0	111	6.6	475	28.4	300	17.9	886	53.0

<sup>a</sup> Lifetime prevalence is calculated as the sum of the “once,” “often,” and “occasionally” response categories

**Table 2** Descriptive statistics and Pearson correlations for study variables

Study variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Mean	SD
1. Prayed for oneself																						2.86	1.09
2. Prayed for others	.75 <sup>c</sup>																					3.22	1.00
3. Asked for prayer	.61 <sup>c</sup>	.50 <sup>c</sup>																				2.17	1.18
4. Laying-on-of-hands	.31 <sup>c</sup>	.25 <sup>c</sup>	.42 <sup>c</sup>																			1.50	.91
5. Prayer group	.44 <sup>c</sup>	.49 <sup>c</sup>	.50 <sup>c</sup>	.44 <sup>c</sup>																		2.17	1.20
6. Subjective religiosity	.54 <sup>c</sup>	.62 <sup>c</sup>	.43 <sup>c</sup>	.27 <sup>c</sup>	.48 <sup>c</sup>																	3.00	.99
7. Religious attendance	.45 <sup>c</sup>	.50 <sup>c</sup>	.44 <sup>c</sup>	.30 <sup>c</sup>	.52 <sup>c</sup>	.70 <sup>c</sup>																4.90	2.98
8. Reading scriptures	.44 <sup>c</sup>	.47 <sup>c</sup>	.45 <sup>c</sup>	.36 <sup>c</sup>	.54 <sup>c</sup>	.59 <sup>c</sup>	.65 <sup>c</sup>															4.35	3.01
9. Private prayer	.62 <sup>c</sup>	.67 <sup>c</sup>	.48 <sup>c</sup>	.29 <sup>c</sup>	.52 <sup>c</sup>	.68 <sup>c</sup>	.60 <sup>c</sup>	.65 <sup>c</sup>														4.02	1.82
10. Belief in God	.51 <sup>c</sup>	.60 <sup>c</sup>	.34 <sup>c</sup>	.20 <sup>c</sup>	.33 <sup>c</sup>	.60 <sup>c</sup>	.43 <sup>c</sup>	.40 <sup>c</sup>	.57 <sup>c</sup>													3.52	.96
11. Loving God	.55 <sup>c</sup>	.62 <sup>c</sup>	.42 <sup>c</sup>	.26 <sup>c</sup>	.43 <sup>c</sup>	.62 <sup>c</sup>	.49 <sup>c</sup>	.47 <sup>c</sup>	.63 <sup>c</sup>	.56 <sup>c</sup>												13.79	3.13
12. Meditation	.12 <sup>c</sup>	.11 <sup>c</sup>	.14 <sup>c</sup>	.13 <sup>c</sup>	.19 <sup>c</sup>	.11 <sup>c</sup>	.11 <sup>c</sup>	.18 <sup>c</sup>	.19 <sup>c</sup>	.07 <sup>b</sup>	.09 <sup>c</sup>											.26	.44
13. Non-medical healer use	.07 <sup>b</sup>	.04	.08 <sup>c</sup>	.19 <sup>c</sup>	.09 <sup>c</sup>	.01	-.01	.06 <sup>a</sup>	.07 <sup>b</sup>	.02	.01	.16 <sup>c</sup>										.06	.24
14. Age	.13 <sup>c</sup>	.13 <sup>c</sup>	.06 <sup>b</sup>	-.00	.08 <sup>b</sup>	.19 <sup>c</sup>	.17 <sup>c</sup>	.13 <sup>c</sup>	.12 <sup>c</sup>	.10 <sup>c</sup>	.06 <sup>a</sup>	.00	-.04									55.87	16.24
15. Female	.14 <sup>c</sup>	.17 <sup>c</sup>	.13 <sup>c</sup>	.05	.17 <sup>c</sup>	.11 <sup>c</sup>	.04	.11 <sup>c</sup>	.19 <sup>c</sup>	.12 <sup>c</sup>	.13 <sup>c</sup>	.07 <sup>b</sup>	.08 <sup>c</sup>	.00								.54	.50
16. White	.09 <sup>c</sup>	.07 <sup>a</sup>	.07 <sup>b</sup>	.02	.00	.05	.02	.03	.03	.02	.04	-.00	.01	.22 <sup>c</sup>	.01							.61	.49

**Table 2** continued

Study variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	Mean	SD
17. Married	.04	.06 <sup>a</sup>	.03	.01	.07 <sup>b</sup>	.06 <sup>a</sup>	.10 <sup>c</sup>	.01	-.00	.03	.01	-.02	-.03	-.01	-.08 <sup>b</sup>	-.02						.63	.48
18. Education	-.11 <sup>c</sup>	-.07 <sup>b</sup>	-.08 <sup>b</sup>	-.07 <sup>b</sup>	-.01	-.07 <sup>b</sup>	.03	-.03	-.07 <sup>b</sup>	-.16 <sup>c</sup>	-.08 <sup>b</sup>	.11 <sup>c</sup>	.07 <sup>b</sup>	-.19 <sup>c</sup>	-.06 <sup>a</sup>	-.13 <sup>c</sup>	.14 <sup>c</sup>					4.63	1.62
19. Income	-.13 <sup>c</sup>	-.08 <sup>c</sup>	-.09 <sup>c</sup>	-.12 <sup>c</sup>	-.05	-.11 <sup>c</sup>	-.02	-.14 <sup>c</sup>	-.14 <sup>c</sup>	-.14 <sup>c</sup>	-.11 <sup>c</sup>	-.06 <sup>a</sup>	-.02	-.12 <sup>c</sup>	-.15 <sup>c</sup>	-.12 <sup>c</sup>	.44 <sup>c</sup>	.45 <sup>c</sup>				4.28	1.62
20. Urbanicity	-.09 <sup>c</sup>	-.12 <sup>c</sup>	-.06 <sup>a</sup>	-.04	-.12 <sup>c</sup>	-.08 <sup>b</sup>	-.07 <sup>b</sup>	-.11 <sup>c</sup>	-.11 <sup>c</sup>	-.10 <sup>c</sup>	-.04	.01	.02	-.06 <sup>b</sup>	-.03	-.06 <sup>a</sup>	-.06 <sup>a</sup>	.11 <sup>c</sup>	.12 <sup>c</sup>			2.41	.99
21. Physical health	-.11 <sup>c</sup>	-.06 <sup>a</sup>	-.08 <sup>b</sup>	-.06 <sup>a</sup>	.00	-.04	.06 <sup>a</sup>	-.05	-.07 <sup>b</sup>	-.04	-.03	-.01	-.05 <sup>a</sup>	-.09 <sup>c</sup>	-.04	-.03	.10 <sup>c</sup>	.14 <sup>c</sup>	.20 <sup>c</sup>	-.00		4.21	1.09
22. Mental health	-.01	.00	.01	.02	.06 <sup>a</sup>	.04	.14 <sup>c</sup>	.06 <sup>a</sup>	.01	.02	.03	-.04	-.05 <sup>a</sup>	.17 <sup>c</sup>	-.07 <sup>b</sup>	.05	.11 <sup>c</sup>	.06 <sup>a</sup>	.16 <sup>c</sup>	.01	.38 <sup>c</sup>	4.29	1.00

To conserve space, decimal points are deleted

<sup>a</sup>  $p < .05$ ; <sup>b</sup>  $p < .01$ ; <sup>c</sup>  $p < .001$

(54.1 %) or participated in a prayer group (53.0 %). Only for giving a laying-on-of-hands is the prevalence below half of the population (26.1 %), but, still, this represents over a quarter of all adult Americans.

Table 2 contains descriptive statistics (means and standard deviations) for all study variables, along with a matrix of Pearson correlations among all variables.<sup>3</sup> Several findings are notable. All five healing prayer items are correlated with each other at moderate to high and statistically significant levels ( $r$ 's range from .25 to .75). Likewise, six of the eight religious indicators are significantly associated with all five healing prayer items at moderate to high levels (from .20 to .67). The exceptions are meditation, which is significantly associated with all five healing prayer items, but at more modest levels (from .11 to .19), and use of a non-medical healer, which is not associated with prayer for others and is significantly associated with the other four measures at lower magnitudes (from .04 to .19). Finally, while all sociodemographic variables are significantly associated with at least one healing prayer item, none of these variables is consistently associated with all healing prayer items.

Table 3 presents results of the hierarchical regression analyses of the five healing prayer indicators. At the gross level (Model I), at least half of the religious variables are associated with each of the healing prayer indicators. At the net level (Model II), after controlling for effects of sociodemographic and health variables, some of these religious predictors drop out. However, for each net model, multiple religious predictors remain. The identity of these religious predictors and their magnitude of effect on healing prayer differ across the five healing prayer items in ways that, for the most part, are intuitive. In other words, these patterns of association are mostly consistent with the substantive differences in wording and content among the healing prayer items.

For example, private prayer is a significant net predictor of four healing prayer items ( $\beta$ s range from .11 to .33), all but for laying-on-of-hands. This makes sense, as a propensity for prayer in general would seem likely, on the whole, to predispose one to participate in healing prayer. Touch healing, by contrast, is a distinctive technique that may not be a natural expression of faith for all prayer warriors, nor does it necessarily involve verbally praying. Plus, the prevalence figures for this variable are considerably lower than for the other four items.

Subjective religiosity, a much used variable in religious surveys, is associated at the net level only with prayer for others ( $\beta = .08, p < .05$ ). Perhaps the altruistic act of praying for others and the tendency to rate oneself as a strong person of faith are mutually reinforcing. It is a bit surprising, though, to find that subjective religiosity is unrelated to the other four healing prayer items, notwithstanding statistically significant bivariate associations with each of them ( $r$ 's range from .27 to .62).

The most typically used measure in religion surveys—frequency of religious attendance—has no net impact on praying for oneself or for others, but is significantly associated with asking for prayer ( $\beta = .15, p < .001$ ), laying-on-of-hands ( $\beta = .08, p < .05$ ), and participating in a prayer group ( $\beta = .16, p < .001$ ). This makes sense, as these activities would seem more likely to be reported among people who participate in regular fellowship with others.

<sup>3</sup> These correlations were calculated using pairwise deletion of missing values, to enable the largest possible and most representative sample size. In the regression analyses (see Table 3), by contrast, listwise deletion was required, so the  $N$ 's there are necessarily smaller. Sample sizes for the present bivariate analysis range from 1316 to 1689, the lower numbers primarily due to elevated missing values counts for race and the loving God scale.

**Table 3** Regressions of healing prayer use on religious measures

Independent variables	Healing prayer use indicators					
	Prayed for oneself			Prayed for others		
	Model I	Model II	$\beta$	Model I	Model II	$\beta$
<i>b</i> (SE)	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	<i>b</i> (SE)	$\beta$	
Subjective religiosity	.03 (.04)	.02 (.04)	.02	.09 (.03)	.08 (.03)	.08*
Religious attendance	.01 (.01)	.01 (.01)	.03	.01 (.01)	.01 (.01)	.03
Reading scriptures	.01 (.01)	.01 (.01)	.02	-.00 (.01)	-.00 (.01)	-.00
Private prayer	.19 (.02)	.20 (.02)	.33***	.15 (.02)	.15 (.02)	.29***
Belief in God	.09 (.04)	.09 (.04)	.07*	.09 (.03)	.08 (.03)	.07**
Loving God	.08 (.01)	.08 (.01)	.26***	.09 (.01)	.09 (.01)	.33***
Meditation	-.01 (.05)	-.00 (.06)	-.00	-.02 (.04)	-.01 (.05)	-.01
Non-medical healer use	.19 (.09)	.20 (.10)	.05*	.09 (.07)	.06 (.08)	.02
Age		.00 (.00)	.04		.00 (.00)	.04
Female		.07 (.05)	.04		.15 (.04)	.09***
White		.08 (.05)	.04		.03 (.04)	.01
Married		.11 (.06)	.05*		.06 (.04)	.03
Education		-.01 (.02)	-.01		.01 (.01)	.01
Income		-.02 (.02)	-.02		.03 (.01)	.05
Urbanicity		-.04 (.03)	-.04		-.07 (.02)	-.07***
Physical health		-.04 (.02)	-.04		-.02 (.02)	-.02
Mental health		-.01 (.03)	-.01		-.02 (.02)	-.02
F	105.22	45.65		149.23	67.26	
<i>p</i>	<.0001	<.0001		<.0001	<.0001	
Adjusted R <sup>2</sup>	.38	.40		.47	.50	

**Table 3** continued

Independent variables	Healing prayer use indicators					
	Asked for prayer		Laying-on-of-hands			
	Model I	Model II	Model I	Model II		
<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$	
Subjective religiosity	-.02 (.05)	-.01	.00 (.05)	.00	-.04 (.04)	.00
Religious attendance	.06 (.01)	.14***	.06 (.02)	.15***	.04 (.01)	.13***
Reading scriptures	.06 (.01)	.16***	.05 (.01)	.14***	.07 (.01)	.24***
Private prayer	.10 (.02)	.14***	.08 (.03)	.12**	-.01 (.02)	-.01
Belief in God	-.00 (.04)	-.00	.00 (.05)	.00	-.00 (.04)	-.02
Loving God	.07 (.01)	.19***	.07 (.01)	.18***	.04 (.01)	.12**
Meditation	.07 (.06)	.03	.13 (.07)	.05	.11 (.05)	.05*
Non-medical healer use	.32 (.11)	.07**	.28 (.12)	.06*	.63 (.10)	.17***
Age			-.00 (.00)	-.05	-.00 (.00)	-.09***
Female			.16 (.06)	.07**	-.00 (.05)	-.00
White			.07 (.06)	.03	.03 (.05)	.02
Married			.04 (.07)	.02	.10 (.06)	.05
Education			-.05 (.02)	-.07*	-.02 (.02)	-.04
Income			.03 (.02)	.04	-.03 (.02)	-.04
Urbanicity			-.03 (.03)	-.02	-.02 (.03)	-.02
Physical health			-.08 (.03)	-.07*	-.06 (.03)	-.06*
Mental health			.02 (.03)	.02	.06 (.03)	.07*
F	62.98		24.93		36.76	15.81
<i>p</i>	<.0001		<.0001		<.0001	<.0001
Adjusted R <sup>2</sup>	.27		.27		.17	.18



**Table 3** continued

Independent variables		Healing prayer use indicators	
Prayer group		Prayer group	
Model I		Model II	
<i>b</i> (SE)	$\beta$	<i>b</i> (SE)	$\beta$
.01 (.04)	.01	.05 (.05)	.03
.09 (.01)	.21***	.07 (.01)	.16***
.09 (.01)	.24***	.09 (.01)	.23***
.08 (.02)	.11***	.08 (.03)	.11**
-.04 (.04)	-.03	-.05 (.04)	-.03
.06 (.01)	.15***	.06 (.01)	.16***
.24 (.06)	.09***	.29 (.07)	.11***
.24 (.11)	.05*	.17 (.11)	.04
		-.00 (.00)	-.01
		.28 (.06)	.12***
		-.04 (.06)	-.02
		.08 (.07)	.03
		-.01 (.02)	-.01
		.03 (.02)	.04
		-.10 (.03)	-.08**
		-.01 (.03)	-.01
		.04 (.03)	.04
F	97.59	41.98	
<i>p</i>	<.0001	<.0001	
Adjusted R <sup>2</sup>	.36	.38	

\* *p* < .05; \*\* *p* < .01; \*\*\* *p* < .001

Reading scriptures, like religious attendance, is unrelated to the act of praying for oneself or for others, but is associated with asking for prayer ( $\beta = .14, p < .001$ ), laying-on-of-hands ( $\beta = .24, p < .001$ ), and participating in a prayer group ( $\beta = .23, p < .001$ ). Perhaps familiarity with God's word, and thus His promises of healing and instructions for how to pursue it, are encouraging of seeking out or participating with likeminded others, even if one is not more likely to actually pray.

Just the opposite are the results for belief in God. Greater certainty of God's existence is associated with prayer for oneself ( $\beta = .07, p < .05$ ) and for others ( $\beta = .07, p < .01$ ), but not with the other three healing prayer indicators. Perhaps strong beliefs, being a very private and personal experience, influence other private actions, such as praying, but do not necessarily make one more likely to participate with others.

Meditation is associated only with laying-on-of-hands ( $\beta = .07, p < .05$ ) and prayer group participation ( $\beta = .11, p < .001$ ). Both of these are activities that would seem to be more consonant with the communal alternative or even new-age ethos of many meditators, who, on the whole, may not be as inclined to private devotional activity as a conduit for healing.

People who seek out non-medical healers are more likely to pray for oneself ( $\beta = .05, p < .05$ ), ask for prayer ( $\beta = .06, p < .01$ ), and lay on hands ( $\beta = .18, p < .001$ ), but are not more inclined to pray for or with others. At first glance, this would seem to reference people with a health challenge who are seeking ways to treat themselves. However, these net findings control for physical health, as well as for any stressful or depressive sequelae which might result from illness, so these folks are not necessarily in the midst of a health crisis. Perhaps seeking out healers can be attributed to a more self-focused ethos, much like the popular image of meditators. On the other hand, the association between meditation and non-medical healer use, while statistically significant, is not as strong as one might expect ( $r = .16, p < .001$ ), and, as just noted, meditators in this sample are not more likely to pray for themselves. Utilization of self-professed healers is a provocative and under-investigated subject both in religious studies and in complementary and alternative medicine (Jonas and Crawford 2003; Levin 2008), and merits a closer look, much as the present study has done with healing prayer.

Among the covariates, there are relatively few findings of note, mostly involving small standardized effects. At the net level, age is mostly unrelated to healing prayer, except for a small inverse association with laying-on-of-hands ( $\beta = -.09, p < .01$ ). Perhaps this finding is a function of older adults being less likely to participate in physical activities outside of the home. Women are more likely to pray for others ( $\beta = .09, p < .001$ ), ask for prayer ( $\beta = .07, p < .01$ ), and participate in a prayer group ( $\beta = .12, p < .001$ ). Married adults are more likely to pray for themselves ( $\beta = .05, p < .05$ ), greater education makes one less inclined to ask for prayer ( $\beta = -.07, p < .05$ ), urban dwellers are less inclined to pray for others ( $\beta = -.07, p < .001$ ), and race and income are unrelated to healing prayer use. Good physical health makes one less likely to ask for prayer ( $\beta = -.07, p < .05$ ), which makes intuitive sense, and also to practice laying-on-of-hands ( $\beta = -.06, p < .05$ ), which, interestingly, is more likely among those in good mental health ( $\beta = .07, p < .05$ ).

Finally, despite these differences in how respective religious indicators relate to different measures of healing prayer use, there is one commonality across all of the healing prayer items and all of the regression models: Affirming a loving relationship with God is the strongest and most consistent predictor of frequent use of healing prayer. Indeed, it is the *only* consistent predictor across all healing prayer indicators. It is significantly associated with every healing prayer item bivariate ( $r$ 's range from .26 to .62), at the gross (Model I) level ( $\beta$ 's range from .13 to .31), and at the net (Model II) level ( $\beta$ 's range from

.12 to .33). More so than religious beliefs or practices, or socioeconomic factors, or even health, people who most strongly affirm that they love God and that God loves them are more likely to have used healing prayer in their lifetime and to rely upon it most frequently. These net findings, one should recall, persist even after controlling for the effects of all of the other religious predictors.

## Discussion

These results provide a close look at the use of healing prayer, in various forms, including its prevalence and religious predictors, through data from a nationally representative sample. That the lifetime prevalence of these practices is as high as it is—e.g., over three quarters of adult Americans have prayed for the healing of others and over half have participated in prayer groups—must be considered surprising. In comparison with previous studies which documented use of spiritual healers, participation in healing prayer exceeds those numbers in some instances by an order of magnitude. That over a quarter of Americans have laid on hands is also a surprise. That these practices are influenced by religious belief and practice is not a surprise, but the lack of consistent effects of sociodemographic and health-related variables runs counter to prevailing popular understandings of healing prayer. According to these findings, use of healing prayer is not primarily something relied upon by poor, uneducated, rural folks, or old people, or people who are suffering from a health crisis or who are depressed or stressed out. It is not so much driven by social-structural disadvantage resulting in unmet health needs due to lack of healthcare access. Rather, use of healing prayer is largely a function of religiousness, in some form or another. Model I results show explained variances of 17–47 % due to religious influences across the five healing prayer items. Addition of covariates, in Model II, raises these numbers only slightly, from 18 to 50 % (see Table 3).

Still, among religious predictors, there are few consistent findings. Some religious variables impact on some healing prayer items but not on others, and effect sizes vary. As noted above, the one constant—the one consistent predictor of frequent participation in healing prayer—is a loving relationship with God. People who most experience God's love in their life are more likely to use prayer for purposes of physical healing. This is so regardless of giving or receiving prayer, verbally or through laying on hands, and alone or in a group setting. These results, moreover, emerge even after accounting for the effects of other religious measures.

A look at the most salient religious predictors of each healing prayer use indicator is also enlightening. A loving relationship with God is not just the only religious construct to be consistently associated with each of the healing prayer variables, but, based on the magnitude of respective standardized ( $\beta$ ) coefficients, it is also the strongest net predictor of two of the variables (prayed for others, asked for prayer) and the second or third strongest net predictor for the other three variables (prayed for self, laying-on-of-hands, prayer group).

As far as the study hypotheses outlined earlier, these results provide the strongest confirmation for  $H_6$  (loving God  $\rightarrow$  healing prayer use). The other nine hypotheses receive only partial confirmation at best. All of the would-be religious predictors are associated with most of the healing prayer indicators bivariate; each respective religious predictor is associated with fewer healing prayer measures in the gross models; and, after controlling for covariate effects, some of these associations are explained away at the net level. The

one constant, to restate, is the persistent net effect of loving God on every indicator of healing prayer use.

What is the message here? What does this tell us about the experience of God's love? How does this relate to healing prayer?

For one, these findings suggest that the blessing of a personal and loving relationship with God may motivate some people to externalize their concomitant feelings of grace, acceptance, forgiveness, and concern into concern for others. Those who are blessed may feel obligated to relieve the suffering of others so that they, too, may be blessed and feel the love. Obedience to God, to the source of unlimited divine love (Post 2014), may bring with it a holy compulsion to live out one's discipleship as an agent of healing.

Second, while this study did not address the outcome of prayer, there must be some meaningful level of efficacy to the healing prayers that were found to be so prevalent. It is unlikely that so many people—most of the US population—would continue to pray for themselves and to serve others through prayer, throughout their lifetime, if they did not perceive that something efficacious was happening in response, whatever that might be. With all of the healing prayer going on, and with published evidence of inexplicable healings attributed to mysterious phenomena including spontaneous remission (Hirschberg and O'Regan 1993), efficacious healing prayer may represent a normative if largely undocumented part of the therapeutic backdrop of American life.

Third, setting aside the possibility of a salutogenic property of praying, prayer, or hypothetical associated energies—a controversial topic quite outside the purview of this study—it could be that loving others as God loves us is itself literally healing, emotionally or even somatically (Ornish 1998); or that experiencing or witnessing healing reinforces feelings of divine love and protection by vanquishing fear (Chopra 1997); or that each of us and God are together bound up by connections made out of love, connections that are healing, activated by praying for each other, and that we all know this innately, as the great mystics teach (e.g., Julian, of Norwich 1966). A population-health survey cannot possibly, of course, address these sorts of existential matters, but this study's one most consistent finding, linking loving God with praying for healing, makes a provocative construct for further contemplation.

## Limitations and Implications

Despite the presumptive good in healing prayer—in its instrumentality for healing and as a marker of faith in God—legitimate concern has been expressed over use of healing prayer as a substitute for seeking competent medical care (e.g., Jantos and Kiat 2007). The rationale is that people who pray or solicit prayers for healing are doing so at the expense of using reliable medical care that may be more effective at resolving their symptoms or illness. If this were indeed the case, then results of this study would represent a double-edge sword: People of faith might take the findings as a confirmatory sign that spirituality is alive and well and a force for good among Americans; the public health response might be that religion is serving instead as a malign force distracting suffering people from resources that could relieve their pain. The BRS3 provides an opportunity for a partial test of this concern.

The questionnaire happens to include an item series that states, "Please indicate your level of agreement with each of the following statements if you were to suffer a serious illness or injury that required care—would you:"—followed by four possibilities: "Only seek medical care and not prayer," "Only seek prayer as a last resort," "Only seek medical care as a last resort," and "Seek both medical care and prayer at the onset" (all coded:

1 = “strongly disagree,” 2 = “disagree,” 3 = “agree,” 4 = “strongly agree”). Among respondents who agreed or strongly agreed with each respective statement, an overall lifetime prevalence of healing prayer use was calculated.<sup>4</sup> Findings from this supplemental analysis (not reported in tables) revealed that healing prayer use is very high among those in agreement with each respective statement. The lifetime prevalence for these four items, in order, is 62.3, 71.7, 84.9, and 98.7 %. In other words, healing prayer is fairly ubiquitous, regardless of how people do or do not prioritize medical care over prayer. Even among people who would choose medical care exclusively, nearly two-thirds have participated in healing prayer. To be fair, it could be that these people tried it at some point early in their life, found it unhelpful, and then moved on. This cannot be ascertained from this single item. However, from what can be gleaned here, healing prayer is being used or has been used at some point among people who do so in conjunction with medical care. This is not the most precise way to examine this issue, which merits further exploration, but it does suggest that healing prayer may be more a “complementary” than an “alternative” therapy. Future studies might consider assessing both lifetime and past-year or past-month prevalence of these phenomena, in keeping with conventions in epidemiologic and health services research and for purposes of enabling more precise inferences.

Another limitation is the cross-sectional design of the BRS3. While appropriate for social surveys which seek to provide a snapshot of beliefs, attitudes, or behaviors at a point in time, this approach, referred to in public health as a prevalence-study design, does not enable identification of true risk or odds due to a given exposure, a characteristic aim of research in this field. In this study, however, the aim has been more sociological than epidemiologic: to identify the lifetime prevalence and predictors of a particular set of health-directed behaviors. Therefore, despite this methodological limitation, the prevalence design has enabled the uncovering of a surprising fact: Based on these population numbers, outside of belief in God there may be no more ubiquitous religious expression among Americans than use of healing prayer.

Based on supplemental analysis of an additional background item (not reported in tables), 16.8 % of the BRS3 sample was “very” or “somewhat” self-identified as “charismatic” and/or “Pentecostal.” Given the lifetime prevalence of healing prayer use (e.g., over three quarters of US adults praying for healing for themselves or others), clearly this phenomenon is not solely the province of charismatic and Pentecostal Christians. Lots of other people must be engaging in its practice, and there are not enough Christian Scientists, for one, to make up the difference. An important next step for researchers would be to explore patterns of healing prayer use by categories of religious identity, such as affiliation, denomination, and theological or worldview self-attributions. Another fruitful direction would be to look at self-reports of other putative “miraculous” experiences and associated practices besides healing prayer (e.g., apparitions, charisms, out-of-body experiences, angelic contact, thaumaturgical experiences, and so on). Despite the much reported US trend away from identifying with mainstream organized religions and churches (Pew Research Center 2015), there is evidence of ongoing religious activity beneath the surface, so to speak, that is not typically captured by simple religious affiliation questions in social surveys or opinion polls (see Stark 2015). These findings on the use of healing prayer would seem to validate this observation.

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<sup>4</sup> The overall lifetime prevalence of healing prayer use was a binary variable constructed whereby anyone who answered yes to any of the five healing prayer use items was counted as a yes, and anyone who answered no to all five items was counted as a no. In the BRS3, for the entire sample, overall lifetime prevalence came to 88.5 %.

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### Compliance with Ethical Standards

**Conflict of interest** The author declares that he has no conflict of interest.

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