CHAPTER 22

RELIGION AND HEALTH: A SYNTHESIS

Tyler J. VanderWeele

This review is concerned with the relationships between religion and health. Its principle purpose is to provide an overview of the empirical research literature on this relationship, relating different forms of religious participation, especially religious service attendance, to various health outcomes. However, it also briefly considers theological and religious traditions and themes concerning health, healing, and wholeness. It further reviews interventions related to religious communities that promote health, considers relations between the empirical literature on religion and health and the theological and religious traditions, and discusses where there is convergence, where there is tension, and where various open questions for further reflection and research remain. It concludes with a number of summary propositions attempting to capture the major themes of the present survey.

EMPIRICAL RESEARCH ON RELIGION AND HEALTH

Religious beliefs and participation are ubiquitous within and across populations. Approximately 84% of the world's population report a religious affiliation: 31.5% Christianity, 23.2% Islam, 15% Hinduism, 7.1% Buddhism, 5.9% Folk religions, 0.2% Judaism, and 0.8% Other. Only 16.3% report being religiously unaffiliated (Pew Forum, 2012). Within the United States, 89% believe in God or a universal spirit, 78% consider religion a very important or fairly important part of life, 79% identify with a particular religious group, and 36% report having attended a religious service in the last week (Gallup Poll, 2015–2016). Not only is participation substantial, but as will be described in this review, the associations between religious participation and health are likewise considerable in magnitude. Public health relevance is often described as a function of the prevalence of the exposure and the size of the effect. On these grounds, religious participation, as will be argued in this review, is a powerful social determinant of health. Here we will review the empirical

research on religion that makes clear the important implications for health of this very common and powerful human phenomenon.

BRIEF HISTORICAL OVERVIEW

Modern accounts of religion and health research sometimes begin with Emile Durkheim's work *Suicide*. Durkheim (1897) noted that suicide rates were higher in Protestant areas within Europe than in Catholic areas, and argued that this was due to greater social cohesion and control within the Catholic religion. The study used ecologic (or group-averaged) data and has been criticized on that account subsequently, but the work exerted a powerful influence within sociology. Another substantial influence on research on religion and health was the writing of Sigmund Freud who viewed religion, for the most part, as an irrational neurotic phenomenon. His writing shaped views on religion and health for decades. Early empirical studies on religion and health with individual level data began to appear during the period of 1950–1980, and increased more substantially during the 1980's. As the field continued to gain momentum, substantial critique and skepticism concerning the work emerged during the 1990s, as many of the early studies were methodologically quite weak (cf. Sloan et al., 1999; Chatters, 2000). The research continued to rapidly expand throughout the first decade and a half of the 21st century, with thousands of studies having now been published (Koenig et al., 2012). Many of these studies are methodologically still quite weak, but an increasing number of rigorous studies, in this area, have been published. These too, like the previous literature, suggest evidence for a protective effect of religious participation, especially religious service attendance, on health, for outcomes as diverse as all-cause mortality, depression, suicide, cancer survival, and subjective well-being. Our focus in this chapter will be on quantitative, rather than qualitative, empirical research on religion and health with an eye towards the strongest studies methodologically that help establish the knowledge-base in this field.

RELIGION AND ALL-CAUSE MORTALITY

While religion and spirituality have been defined variously within the religion and health literature (Koenig, 2008; Hill and Pargament, 2003; Chatters, 2000; see Oman, 2013, for a review of various definitions of each term used within psychology), in most of the empirical research relating religion and health, fairly specific measures have been employed. Such measures have included self-assessed measures of religiosity and spirituality, service attendance, private practices such as prayer, Scripture reading and mediation, religious coping, spiritual experience, and specific beliefs (Hill and Hood, 1999; Fetzer, 1999; Pargament et al., 2000; Underwood and Teresi, 2002; Idler et al., 2003; Koenig and Bussing, 2010). We will begin our discussion of the empirical literature on religion and health by reviewing the existing literature on religious participation and all-cause mortality. It is for this health outcome that the evidence concerning the empirical research on the effects of religious participation is arguably the strongest. Within the present literature, the measure that seems most strongly associated with health is service attendance. This holds true both with research on all-cause mortality and, as will be seen later, with research on many other health outcomes. This may be partially because service attendance is the measure most often available, but also perhaps because of the powerful effect of communal participation on health, issues we will return to later in this review.

Studies using individual level data examining associations between religion and mortality with relatively large sample sizes began to appear in the 1970s, 1980s, and 1990s. Religious participation of course does not protect against "death" itself in the end. However, the research suggests that religious participation might increase longevity, that is, decrease the odds of death within a 5-year or 10-year follow-up. Most early studies had small sample sizes and often inconclusive results. One early study with a much larger sample size was conducted by Comstock and Tonascia (1977; cf. Comstock and Patridge, 1972) who examined 38,839 adults in Washington County, Maryland. Attending religious services once or more per week was associated with 39% lower mortality in follow-up than those not attending at all. Rates were adjusted for demographic factors but not for baseline health. As we will discuss further in this chapter, if baseline health status is not controlled for, the direction of causality is difficult to assess because it may be that those with poorer health are less able to attend services and more likely to die.

If we turn to some of the stronger studies—ones that were able to control for baseline health—a study by Hummer et al. (1999) is sometimes pointed to as an important turning point in the rigor of the research on service attendance and all-cause mortality. Their study, using data from the National Health Interview Survey, that surveyed 21,204 adults, was nationally representative. Control was made for age, sex, race, and region, and, importantly, baseline health (activity limitations, self-reported, health-related bed days) was also controlled for, along with socioeconomic status. Those never attending compared to those attending more than once per week had a hazard of dying that was 1.72 ($p < 0.01$)[1] times higher during follow-up. The analyses also suggested a clear "dose-response" relationship with increasingly greater service attendance associated with increasing lower mortality. Compared to those attending more than once per week, those attending only weekly had a hazard ratio (HR) of 1.23, those attending less than weekly of 1.34, and those not attending of 1.72, with all of these being statistically significant. Hummer et al. reported that those attending services more than weekly had a roughly 7 year greater life expectancy at age 20 than did those not attending at all. Although the effect estimates are fairly substantial in this study, Hummer et al. (1999) report that, without control for baseline health, the estimates were even larger. This again emphasizes the importance of controlling for baseline health and other confounders in these analyses of religion and health. Hummer et al. (1999) further controlled for social ties and various health behaviors, such as smoking, and this reduced the hazard ratio estimate comparing never attenders to those attending more than once per week to 1.5 ($P < 0.01$). Social ties and health behaviors may be on the pathway, or mediators, from service attendance to mortality, and this further analysis suggests some evidence for such mediation, a point to which we will later return.

Although the Hummer et al. (1999) study is often pointed to as an important step forward in the literature, there were certainly prior studies that also contributed strong evidence. For

1. We will, throughout this review, make reference to various measures of statistical uncertainty such as p-values and confidence intervals. The p-value is a measure of how likely the outcome obtained, or one more extreme, would be if there were in fact no true association and the result was simply due to chance. More formally, it is the probability of obtaining a result as extreme or more extreme than the one actually obtained if there were in fact no true association. It is a measure between 0 and 1; the value $p = 0.05$ is sometimes used as a cut-off below which the evidence is considered reasonably strong (sometimes also referred to as "statistically significant"); however, the p-value is a continuous measure and the lower the p-value, the stronger the evidence that the result is not simply due to chance variation. A 95% confidence interval is a range of plausible values for an estimate given the statistical uncertainty. More formally, it is constructed so that, under repeating sampling of the same underlying population, the true value of the estimate will lie within the constructed interval at least 95% of the time. Two numbers in brackets that follow estimates will indicate the 95% confidence interval.

example, the same sample was used somewhat earlier by Rogers (1996) who looked at associations with "service attendance in previous two weeks." That paper looked at various associations and did not specifically focus on religion. Fairly strong evidence was also reported by Strawbridge at al. (1997) using data from Alameda county (cf. Oman et al., 2002 for additional analyses) with a somewhat smaller sample size of 5,286. Although this study, unlike the Hummer et al. study, was not a nationally representative sample, there was good confounding control and the evidence, once again, suggested an effect of service attendance on all-cause mortality.

In 2000, McCullough et al. (2000) conducted a meta-analysis of 42 studies in the literature that included 125,826 participants. Their meta-analysis included studies with various measures of religious participation, mostly service attendance, but others as well. All measures were dichotomized for the purpose of this study. In their meta-analysis, they found that being less religious was associated with a 1.29 (95% CI: 1.20, 1.39) higher odds of death during follow-up. There was stronger evidence for an effect for women than men, and there was some evidence that private religious measures were less strongly associated with mortality during follow-up than institutional measures, such as service attendance. The quality of studies in this meta-analysis and the adequacy of control for confounding varied considerably across studies. Not all of the studies were equally rigorous. However, as the literature has developed, an increasing number of rigorous studies, with large sample sizes and with control for baseline health and other confounding variables, have become available. In addition to the Hummer et al. (1999) and Strawbridge et al. (1997) studies mentioned, other prominent studies have included, for example, Gillum et al. (2008) and Musick et al. (2004), which both controlled for baseline health and suggested a 20–35% reduction in mortality for those regularly attending services. The analyses of Musick et al. (2004) suggested also that private religious practices, volunteering, and subjective religiosity were not associated with mortality once control was made for service attendance. Service attendance seemed the more powerful predictor. Further studies on religious participation and mortality are summarized in Idler (2011).

An updated meta-analysis by Chida et al. (2009) of the research on religion and mortality, with somewhat stricter inclusion criteria than the McCullough et al. (2000) study, included results from 44 studies and about 121,000 participants. Those with higher levels of religious participation had 0.82 (95% CI: 0.76, 0.87) lower hazard of death during follow-up. The effect size was more substantial for women, HR = 0.70 (0.55, 0.89) than men HR = 0.87 (0.81, 1.02), and also larger for organizational involvement, HR = 0.77 (0.71, 0.83), than for non-organizational religious activity, HR = 0.95 (0.80, 1.13). Those attending services at least once per week had a 0.73 (0.63, 0.84) lower hazard of death during follow-up.

Similar protective associations between service attendance and all-cause mortality have been found in Denmark (la Cour et al., 2006) and Finland (Teinomen, 2005), in Taiwan (Yeager et al., 2006) with a predominantly Taoist and Buddhist population, and in Israel (Litwin, 2007) with a predominantly Jewish population. Further research is still needed for other religious groups. The effect sizes seems larger for women than for men (Chida et al., 2009; Teinonen et al., 2005; la Cour et al., 2005); they appear larger for African Americans than for the white population (Hummer et al., 1999; Chatters, 2000; Dupre et al., 2006) and there is perhaps some evidence that the effect of attendance is larger earlier in life (Dupre et al., 2006), but this has arguably not yet firmly been established. The effect sizes on all-cause mortality are similar to or only slightly less substantial than those for many other important health exposures such as physical activity, tobacco smoking

cessation, the use of beta-blockers for congestive heart failure, screening for mammography, and fruit and vegetable consumption (Lucchetti et al., 2011).[2]

RELIGION AND DEPRESSION

Sigmund Freud believed that religion contributed to neuroses. He wrote that religion works "by distorting the picture of the real world in delusional manner. . . by forcibly fixing [adherents] in a state of psychical infantilism and by drawing them into a mass delusion" (Freud, 1930, pp. 31–32, "Civilization and Its Discontents"). It has been argued that, in part due to Freud, for almost an entire century, religious participation was thought to be associated with poor mental health (Koenig, 2009). A review written by Sanua in 1969 concluded: "The contention that religion as an institution has been instrumental in fostering general well-being. . . is not supported by empirical data. . . there are no scientific studies which show that religion is capable of serving mental health" (Sanua, 1969). The literature on religious participation and mental health over the past couple of decades has shown this contention to be wrong.

In 1992, Larson and co-authors assessed measures of religious commitment in two psychiatric research journals from 1978–1989 and found 35 studies (Larson et al., 1992). Of those 72% reported a positive association between religion and mental health, 16% reported a negative association, and 12% found no association. Since then, there have been over a thousand studies examining religion and mental health. Like much of the research on mortality, many of these studies are methodologically weak. Here we will focus on the literature that examines depression, and we will again see that weak methodology and design is especially problematic, again due to the possibility of reverse causation. We will focus on those studies that, methodologically, are the strongest. See also Blazer (2017) for discussion of research on religious participation and mental health and some of the methodological challenges.

Koenig et al. (2012) summarize the literature on religious participation and depression for research published through 2010. The majority of these suggest that religious participation of various forms is associated with lower rates of depression. Koenig et al. note that of 272 cross-sectional studies published since 2000, 63% suggested a protective effect; only 6% a detrimental effect; and of 45 cohort studies since 2000, 47% suggested a protective effect and only 11% a detrimental effect. Of these studies, then, the vast majority are cross-sectional (i.e., all data are collected at a single point in time) and they thus examine associations between religious participation and depression measured at the same time. There has been meta-analysis of the religion and depression literature (e.g., Smith et al., 2003) that has likewise suggested a protective association but these in general include studies that are cross-sectional or that do not control for baseline depression and so can contribute almost no evidence towards whether the relationships are causal. The problem arises because depression might itself affect service attendance. Without data on service attendance and depression over time, it is impossible to assess the direction of causality. And in fact, there is evidence for an effect in the reverse direction. Maselko et al. (2012),

2. Luchetti et al. (2011) report mortality odds ratios: Physical activity OR = 0.67; Tobacco smoking cessation OR = 0.71; Beta-blocker-congestive heart failure OR = 0.72; Screening for mammography OR = 0.74; Fruit and vegetable consumption OR = 0.74; Service attendance OR = 0.75

using longitudinal data, assessed evidence for an effect of depression on service attendance. They showed that, among women, depression at age 18 predicted lower service attendance subsequently, controlling for baseline service attendance. Because of this effect in the reverse direction, cross-sectional studies evaluating the relationship between service attendance and depression are useless for establishing causality. Even if there were no effect of service attendance on depression, one would find a "protective association" simply because those who became depressed would stop attending (Maselko et al., 2012; VanderWeele, 2013). In order to assess evidence for a causal relationship, one needs to assess service attendance and depression over time, and to control for baseline levels of depression to address issues of reverse causation.

In fact, several studies, though comparatively few in relation to the whole of the literature, have done precisely that; that is, they have used longitudinal data with relatively large sample sizes to assess associations between service attendance and depression with control for depression at baseline (Strawbridge et al., 2001; Van Vorhees et al. 2008; Norton et al., 2008; Balbuena et al., 2013; Li et al., 2016a). These studies too suggest a protective effect of service attendance on depression. Strawbridge et al. (2001) in a study of 2,676 persons in the Alameda Country Study followed from 1965 to 1994, found evidence that service attendance at least once per week for those depressed increased odds of depression recovery by 2.3 (1.23, 4.35) fold; and some evidence that attendance at least weekly was associated with 0.76 (0.55, 1.05) lower odds of becoming depressed. Van Voorhees et al. (2008) using a nationally representative sample of 4,791 adolescents in the AddHealth study, followed for one year, and controlled for race, family income, age, gender, and baseline depressive symptoms. They found those with religious identity had 0.57 (0.34, 0.96) lower odds of depression onset; those praying at least once per week had 0.52 (0.29, 0.94) times lower odds; and those attending services at least once per month had 0.37 (0.15, 0.88) times lower odds. Norton et al. (2008) report analyses in a sample of 2,989 persons that, after controlling for sociodemographic variables, health, and baseline depression, found that those attending more than once per week had 0.51 (0.28, 0.92) lower odds of a depressive episode in 3-year follow-up compared to those not attending services. Balbuena et al. (2013) using a sample of 12,583 persons from the Canadian National Population Health Survey who were not depressed at baseline, and followed for 14 years found that, after controlling for age, household income, family and personal history of depression, marital status, education, and perceived social support, those attending at least monthly had 0.78 (0.63, 0.95) lower rate of depression compared with non-attenders; neither self-reported importance of spiritual values nor identification as a spiritual person was related to major depressive episodes. There thus seems to be evidence for an effect of service attendance on depression. There may in fact be an effect in both directions: service attendance protects against depression, but depression itself also leads to lower levels of service attendance.

The strongest evidence to date for these relationships between service attendance and depression comes from a longitudinal analysis of the Nurses' Health Study data. Li et al. (2016a) used data on 48,984 U.S. nurses followed for 12 years, using statistical models that handle feedback and reverse causation (Robins et al., 2000), controlling for confounding by baseline depression and an extensive demographic, socioeconomic, behavioral, and health variables. The results suggest both that (1) women who attended services more than once per week had a lower risk of becoming depressed (RR = 0.71, 95% CI: 0.62, 0.82) compared with women who did not attend; but also that (2) women with depression were less likely to subsequently attend religious services once or more per week (RR = 0.74, 95% CI: 0.68, 0.80) compared with women who were not depressed.

Once again, the effects seemed to be present in both directions even with the study designs using repeated measures on both service attendance and depression, with a very large sample size, with methods to address feedback, and with extensive confounding control.

While it is again the case that service attendance seems to contribute to health by lessening depression, the results on the effects of depression on service attendance also arguably have important implications for religious communities. Those who become depressed are more likely to stop attending services, which may of course exacerbate depression further. The research perhaps suggests a role for clergy and other members of religious communities to more actively be aware of, or even screen for (Hankerson et al., 2015), those who might be depressed, and to offer help, support, and possible referral, before depression becomes worse. The empirical research helps inform religious communities and clergy that those who may be most in need may be the least likely to be present to receive it; they may need to be sought out.

The results reported here for a protective effect of service attendance on depression also depend at least in part on the context. The effect of attendance on depression seems larger for women than for men (Strawbridge et al., 2001). And in certain contexts, it seems participation can have detrimental effects on depression. There is some evidence that religious participation may be associated with higher depression rates for unwed mothers (Sorenson et al., 1995; Koenig, 2009), and negative interactions at church can lead to higher levels of psychological distress (Krause et al., 1998; Ellison et al., 2009). Such research may also have important implications for religious communities and pastoral practice.

One important lesson for research that emerges from this discussion of the literature on service attendance and depression is that although hundreds of studies have been published on the topic, only a very small number contribute substantially to the evidence base for a causal relationship. We do not need more studies on religion and depression; what we need are more *rigorous* studies. The *associations* between religion and health are clearly established; what is needed is to continue to accumulate evidence for *causation* concerning specific aspects of religious participation and specific health outcomes. There are some strong studies available that provide reasonably good evidence. Additional studies concerning certain aspects of the religion and health relationship might be helpful, but if further studies are to be conducted, they should be such that they contribute to questions that are still open, not merely reiterate a well-documented association that contributes little to the existing knowledge base or our understanding of the actual causal relationships.

RELIGION AND SUICIDE

The major world religions have strong traditions that prohibit suicide. In the major monotheistic religions—Islam, Judaism, and Christianity—this prohibition has, traditionally, been especially strong. Theological and ethical reasons sometimes given for prohibiting suicide include that life is a sacred gift from God, that it injures the community, that it is contrary to love of self and of others, that it might encourage others to follow, and that death itself is a great evil and should not be brought about. As noted in the introduction, one of the very early empirical studies on religion and health was Durkheim's study of suicide comparing Catholics and Protestants. Suicide rates were lower in Catholic countries and geographic regions, which Durkheim attributed to greater social control and social cohesion among Catholics (Durkheim, 1897). There have been over a

hundred empirical studies of religion and suicide since. Koenig et al. (2012) report that in 106 of 141 of studies surveyed (75%), religious participation was associated with fewer suicides and suicide attempts, or less suicide ideation, or more negative attitudes towards suicide. As with depression, many of these studies, especially with attitudes and ideation are cross-sectional; a number of them, including Durkheim's, make use of ecologic (i.e., group-averaged) data and cannot make control for individual level confounding. Some of these use survey data for suicide attempts, but these obviously cannot capture successful suicides. Further methodological challenges arise because suicide, as an outcome, is relatively rare and therefore requires extremely large sample sizes and long follow-up for longitudinal designs to be feasible. There are however a few relatively large longitudinal studies; sometimes case-control designs have also been used to study suicide. We will review a few of the stronger studies here.

Nisbet et al. (2000) analyzed data from the National Followback Study, a case-control study comparing 584 completed suicides and with 4,279 natural deaths as controls. Those who did not attend religious services had 4.34 (2.52, 7.49) higher odds of having died by suicide than those who attended regularly. Thompson et al. (2007) used Add Health data, consisting of a sample of 15,034 adolescents ages 12–17, with 1-year and 7-year follow-up. After controlling for gender, race, problem drinking, self-esteem, impulsivity, depression, and delinquency, adolescents who indicated that religion was very or fairly important at baseline had odds of suicide attempt requiring medical attention 0.54 (0.26, 1.13) times lower than others at 1-year follow-up; and 0.43 (0.19, 0.93) times lower at 7-year follow-up. Rasic et al. (2009) used data from Waves 3 and 4 of the Baltimore Epidemiologic Catchment Area Study with a sample size of 1,091. After control for age, gender, race, education, income, and marital status, as well as baseline suicidal ideation/attempts, comorbid mental disorders, social support, and chronic physical conditions, respondents who attended religious services at least once per year had 0.33, (0.13, 0.84) times lower odds of subsequent suicide attempts compared with those who did not attend religious services.

Spoerri et al. (2010) conducted a longitudinal study linking Switzerland census data in year 2000 to mortality through 2005. The study consisted of about 3.6 million persons (46% Catholic, 42% Protestant, and 12% with no religious affiliation). After adjustment for age, marital status, education, type of household, language and degree of urbanization, the rate of suicide was lower for Catholics than Protestants: Age 35–64 Men: HR = 0.80 (0.73, 0.88); Age 65–94 Men: 0.60 (0.53, 0.67); Age 35–64 Women: 0.90 (0.80, 1.03); Age 65–94 Women: 0.67 (0.59, 0.77). Suicide rates were higher for those with no religious affiliation than for Protestants: Age 35–64 Men 1.09 (0.98, 1.22); Age 65–94 Men 1.96 (1.69, 2.27); Age 35–64 Women 1.46 (1.25, 1.72); Age 65–94 Women 2.63 (2.22, 3.12). The study suggests that Durkheim's observation persists, at least in Switzerland, even with individual level analyses.

Using NHAANES III cohort data involving 20,014 persons and controlling for a number of demographic characteristics and behavioral variables, Kleinman and Liu (2014) report that those attending services at least 24 times per year were about one third as likely to commit suicide (HR = 0.33, $p < 0.05$) than those who attended less frequently. Unfortunately, however, they were not able to control for depression, which is related both to suicide, and as discussed, to service attendance. A similar large cohort analysis was carried out with the Nurses' health data described above, in an analysis using 89,708 women and controlling for numerous demographic, health, and behavioral variables, including depression, and found that attending services at least weekly was associated with an approximately five-fold lower rate of suicide, compared with never attending services

(HR = 0.18, 95% CI: 0.06-0.51; VanderWeele et al., 2016). The results also appeared to differ by religious affiliation. Service attendance once or more per week, versus less often, was associated with a suicide hazard ratio of HR = 0.05 (0.006–0.46) for Catholics, but only HR = 0.37 (0.11–1.19) for Protestants (p-value for heterogeneity = 0.05).

As was the case with depression, here also with suicide, the strongest evidence comes from only a few studies. Even though there have been over one hundred studies on religion and suicide published in the literature, most are weak. The studies suggest that the effects of religious participation on suicide are quite strong, likely larger than mortality, with effects sizes as large as 2- to 5-fold. Affiliation also appears to have an effect, and as of 2010, Durkheim's study had received additional support using individual level data. Proposed mechanisms for a protective effect have included the hypotheses that religious participation reduces depression, is associated with better physical health, increases social support, and reduces drug and alcohol use. Of course, the belief that suicide is wrong likely also affects suicide attempts, and there is some evidence suggesting that this may indeed be an important factor (Oquendo et al., 2005). However, the existing empirical studies that directly assess the mechanisms for the relationship between religious participation and suicide are limited.

OTHER RELIGION-SPIRITUALITY MEASURES AND HEALTH

We have seen then that there is evidence for service attendance being strongly associated with lower mortality, less depression, and lower likelihood of suicide. Religious service attendance is of course only one form of religion and spirituality. The literature on the associations between other form of religious participation and spirituality with all-cause mortality is more limited and mixed. Some of the gap in the literature is likely due to the fact that in most large cohort studies, in which these associations could be examined rigorously with longitudinal data, questions on religion and spirituality, if asked at all, focus almost exclusively on religious service attendance, often as a measure of social integration (Berkman and Syme, 1979). The studies that do have other religion and spirituality measures often tend to be of smaller sample size.

Of the literature that does exist, the results from longitudinal studies for other measures of religion and spirituality are somewhat more mixed. In general, service attendance appears to be the strongest predictor. The Musick et al. (2004) study discussed suggested that private religious practices, such as prayer and Scripture reading, had little association with mortality. Using longitudinal cohort data from the Black Women's Health Study, with mortality as the outcome, VanderWeele et al. (2016b) found no association with religious coping, religious or spirituality identity, or prayer, after multivariate control for demographic and health variables, but strong association with service attendance. Similar weak or null associations between mortality and private religious practices and also with intrinsic religiosity is suggested in systematic review (Chida et al., 2009; Koenig et al., 2012). Some studies of other religion or spirituality measures have suggested a protective association with mortality. Ironson and Kremer (2009) report lower mortality among HIV patients who experience religious transformation. There is some literature on the use of religious coping in the face of illness. In clinical populations, there is some evidence that positive coping is associated with lower all-cause mortality in follow-up (Oxman et al., 1995) but other studies find weaker results (Pargament et al., 2001). There is also evidence from longitudinal analyses that negative religious

coping is related to higher mortality (Pargament et al., 2001). There may also be a difference in the effects of various forms of religion and spirituality for ill clinical populations versus the general population. Schnall et al. (2010), in a large longitudinal study of 92,395 women, report an association between service attendance and all-cause mortality, but much weaker, and in many cases null, associations between strength and comfort from religion and all-cause mortality. It is also possible that with non-clinical populations, high levels of religious coping and prayer in fact also serve as markers for health problems or threats already present, thus partially confounding the association.

With depression, the Balbuena et al. (2013) study mentioned found reduced depression incidence for those attending religious services but neither self-reported importance of spiritual values nor identification as a spiritual person was related to major depressive episodes. Likewise, in a study of 8,318 medical patients in several European countries, Leurent (2013) found either no association or mild causative association between self-assessed religiosity/spirituality and depression. A longitudinal study by Koenig et al. (1998) found that, for a clinical population, measures of intrinsic religiosity were associated with a quicker time to depression remission. More research is needed on the relationships with other measures of religious participation and spirituality with mortality, depression, suicide and other health outcomes. While there is some suggestive evidence from cross-sectional studies for some other measures—for example, belief in life after death appears to be cross-sectionally associated with better mental health outcomes (Flannelly et al., 2006)—it is also the case, as has already been discussed, that such cross-sectional data contributes little to evidence for causality. Future work could also examine whether specific religious beliefs, intrinsic religiosity, practices of forgiveness (Fetzer, 1999), and also religious/spiritual experiences (Underwood and Teresi, 2002; Underwood, 2011), are predictors of mortality. It would also be of interest to see whether such associations persist after controlling for service attendance, since religion and spirituality measures will be associated with each other and service attendance is clearly a strong predictor for many health outcomes. Incorporating such measures into existing cohort studies could be a very powerful way to examine these associations with large sample sizes and adequate confounding control.

OTHER HEALTH OUTCOMES

There is a large literature on other health outcomes as well. Koenig et al. (2012) summarize evidence that suggests that religious participation is, in over half of published studies, for each outcome, related to lower blood pressure, better cardiovascular function, less coronary artery disease, better immune function, better endocrine function, better social support, greater marital stability, greater purpose in life, and overall higher levels happiness and subjective well-being. Other outcomes that have been examined with some evidence of a protective effect of service attendance include lower usage rates of cigarettes or marijuana or alcohol among pregnant and postpartum women, and lower rates of low infant birth weight (Page et al. 2009; Burdette et al. 2012); lower rates of smoking and drug use among adolescents attending services (Koenig et al., 2012; Idler, 2014a); lower rates of disability among the elderly for those who attend services, even after adjustment for baseline disability (Idler and Kasl, 1997), and slower decline for those with Alzheimer's among those attending (Koenig et al., 2012; Coin et al., 2010; Idler, 2014a).

Of course, many of these studies summarized are again cross-sectional and methodologically weak. Some of the outcomes, such as disability or Alzheimer's disease or cardiovascular health,

may themselves affect service attendance. Longitudinal studies, and careful control for confounding, including control for baseline outcome, are thus needed. For some outcomes, the relationship may not stand up against more rigorous scrutiny. For example, in what is arguably the strongest and largest study of cardiovascular health, Schnall et al. (2010), using Women's Health Initiative data, with a sample of 92,395 women, find that although service attendance is associated with lower all-cause mortality, there is essentially no effect (if anything a slightly detrimental effect) of service attendance on the incidence of coronary heart disease. Similar results of a near-null association between religious service attendance and incidence of cardiovascular disease were also obtained with the Nurses Health Study data (Li et al., 2016b; VanderWeele et al., 2016c). In this case, at least with two rigorous studies, the results from the weaker studies did not seem robust to more careful analysis. In other cases, such as with the effect of attendance on disability, the evidence from longitudinal studies, even when controlling for baseline disability outcome, may be more robust (Idler and Kasl, 1997), but each of these outcomes needs careful assessment as to the strength of the available evidence from rigorous longitudinal studies. The evidence for mortality, depression, and suicide is relatively strong, but other outcomes may still need more careful examination. An important step forward in religion and health research would be a series of meta-analyses for different health outcomes in which restriction was made to longitudinal studies, with good confounding control, including control for baseline outcome (e.g., controlling for initial immune function when examining subsequent immune function outcomes).

For most health outcomes, the evidence suggests a protective effect of religious participation on health, but such protective associations are not universal and do depend on context. There is some evidence that the effect of attendance is less pronounced and even detrimental in countries which restrict freedoms, or in countries in which religious participation is less common (Hayward and Elliott, 2014). One study suggested that students in schools where their own religious affiliation was in the minority were 2 to 4 times more likely to attempt suicide or self-harm (Young et al. 2011). We noted earlier that another study presented some evidence that religious participation was associated with higher depression rates for unwed mothers (Sorenson et al., 1995; Koenig, 2009). Spiritual struggles have also been shown to be associated longitudinally with worse health (Pargament et al., 2001, 2004; Winkelman et al., 2011), and negative congregational interactions are associated with lower measures of well-being (Krause et al., 1998; Ellison et al., 2009). While much of the evidence thus points to a beneficial effect of religious participation on health, it is clear that there are contexts and settings for which this is not so. Such research can also be of importance to religious communities in informing communal and pastoral practices.

OTHER OUTCOMES RELATED TO WELL-BEING

Service attendance is also associated with a number of other important outcomes that are not generally considered to fall under "health," a point to which we will return later, but do concern well-being more broadly. Numerous studies have examined service attendance and life satisfaction or subjective well-being. Unfortunately, almost all of these studies are cross-sectional (Koenig et al., 2012) and contribute little evidence towards causality. The associations, at least with service attendance, appear to hold up under much better longitudinal designs as well. For example, Lim and Putnam (2010) report that religious service attendance is strongly associated longitudinally

with higher life satisfaction, after control for baseline life satisfaction and other confounders, and they provide some evidence that the development of within-congregation friendships constitutes an important mechanism for this effect.

Another important outcome for which religious service attendance appears to have a protective effect is divorce. Numerous studies have examined associations between attendance and divorce, but, as with other outcomes, many of those studies are cross-sectional or weak methodologically (Koenig et al., 2012; Mahoney et al., 2008). A few, however, use strong longitudinal designs and supply compelling evidence (Call and Heaton, 1997; Amato and Rogers, 1997; Strawbridge et al., 1997, 2001). Call and Heaton (1997) provide some evidence that the wife's attendance has a stronger influence on the likelihood of divorce than the husband's, but that any difference between the attendance patterns of the two also has a detrimental effect. The Nurses Health Study data described likewise gives evidence for an effect of attendance on reducing divorce. After extensive covariate control, service attendance once per week was associated with a 0.57 (0.45, 0.71) times lower risk of divorce during follow-up and service attendance more than once per week with a 0.51 (0.38, 0.69) times lower risk of divorce during follow-up. Other studies have examined social support. Again, most of these are cross-sectional but some good longitudinal studies can be found in the literature (Strawbridge et al., 1997; Lim and Putnam, 2010). For example, the Strawbridge et al. (1997) study mentioned found that the service attendance was longitudinally associated with a greater number of close friends, non-religious community membership, and likelihood of staying married (Strawbridge et al., 1997).

Yet other studies have examined meaning and purpose. The vast majority of these have suggested that various forms of religious participation and service attendance are associated with a greater sense of meaning or purpose in life, but, once again, the vast majority of these studies are cross-sectional (Koenig et al., 2012). However, there is at least some evidence, using stronger longitudinal designs (Krause and Hayward, 2012), examining service attendance and meaning in life which likewise provide evidence that service attendance is associated over time with greater meaning in life, even after control for social and demographic covariates and baseline meaning in life.

Other studies have examined virtue and character as outcomes. This literature is somewhat more complex than in the other areas above which relied entirely on observational studies. With questions of virtue and character, there have been numerous randomized priming experiments suggesting at least short term effects of religious prompts on pro-social behavior (Shariff et al., 2016), possibly with "affiliation" primes having an effect only on in-group behavior but "God" primes on both in-group and out-group pro-social behavior (Preston et al., 2010; Preston and Ritter, 2013), but also evidence that religious primes may increase aggression (Bushman et al., 2007). There is longitudinal evidence that those who attend services are subsequently more generous and more civically involved (Putnam and Campbell, 2012). There is also some experimental evidence that encouragement to prayer increases forgiveness, gratitude, and trust (Lambert et al., 2009, 2010, 2012).

In the research on these other outcomes such as life satisfaction, divorce, social support, and meaning and purpose, although there are a few strong longitudinal studies that suggest attending religious services may lead to better outcomes in these dimensions, the current evidence base, at present, comes from a very small number of studies and so the results are at best tentative. More research using good designs and rigorous analytic methodology is needed on the relationships between service attendance, and other forms of religious participation, and these various outcomes related to well-being. See also VanderWeele et al. (2016c) for further

discussion of rigorous methodology for causal inference using longitudinal data in religion and health research.

CRITIQUE AND RESPONSE

As noted, many of the early studies on religion and health were methodologically fairly weak and thus subject to criticism. In 1999, Sloan et al. (1999) published a critique in which it was argued that in the empirical studies on religion and health it was often the case that confounding control was inadequate, that often when control for confounding was adequate the associations would disappear, that there was typically failure to control for multiple comparisons, that results were inconsistent across studies and measures of religion, that the studies raised ethical concerns regarding whether physicians might start "prescribing religion," and that physicians overstep boundaries in addressing religion. The paper further objected to the suggestion that physicians should ask how they can support patients' faith, proposing that religion should not be "intervened upon" (as would be the case also, say, with marriage, which has been linked to health), and that the religion and health links might inappropriately suggest that illness is due to religious or moral failure; the critique granted that some discussion may be more appropriate when it is clear that the physician and patient share a common faith.

Many of the methodological critiques were, at the time, reasonable concerning the literature taken as a whole. However, the field was rapidly advancing, and has advanced since. The relatively strong Hummer et al. (1999) study had been published just that year. The Strawbridge et al. (1997) study discussed, had been published a couple of years earlier. Even at that earlier stage in the development of the literature, Koenig et al. (1999) offered a rebuttal of some of the points. Koenig et al. agreed with Sloan et al. that control needed to be made for confounding, that adjustment needed to be made for multiple comparisons, and that the ethical questions are complicated, but further argued that Sloan et al. had presented a very selective review and had omitted evidence from some of the strongest studies, that they had inaccurately reported some results, that they had failed to distinguish between confounding variables and mediating variables (i.e., those that may be on the pathway) in "explaining away" associations, that the claim of inconsistent results in the literature had failed to distinguish between different populations and different measures and aspects of religion and spirituality, and that, taken as a whole, the strongest evidence suggested that certain forms of religious participation had a beneficial effect on health. They briefly addressed Sloan et al.'s ethical concerns, arguing that health care providers deal with other private practices, and other settings where moral failure is seen as an issue, as is perhaps sometimes may be viewed as being the case with inability to quit smoking. We will return to some of these ethical concerns later in this review.

The timing of this debate and critique is important to keep in mind. It essentially took place at the first appearance of the strongest evidence for a relationship between religious participation and health beginning to appear. The first edition of Koenig et al.'s *Handbook on Religion and Health* was in press at the time. The McCullough et al. (2000) meta-analysis came out the following year. However, many of Sloan's critique were reasonable with respect to the vast majority of the literature, and many of these same critiques are still applicable to much of the literature today. However, as discussed, the strongest studies do seem to suggest a relatively strong protective relationship between forms of religious participations, especially religious service attendance and health.

IS IT CAUSAL?

One of Sloan et al.'s critiques was that confounding control in many of the studies on religion and health was weak. For many studies, this critique was reasonable. However, we have also noted that there are now numerous longitudinal studies examining service attendance and mortality, depression, and suicide, with very good control for potential confounders; and in these studies, the associations still persist. Nevertheless, these studies still make use of observational data, and it is always possible that unmeasured or residual confounding may explain some of these associations. It is, however, possible to use sensitivity analysis to examine how strong such unmeasured confounding would have to be to explain away the associations. For example, in using the Nurses' Health Study data to examine associations between service attendance and mortality, after extensive confounding control, Li et al. (2016b) reported that those attending services more than weekly had 0.67 (0.62, 0.71) lower rate of mortality in follow-up than those not attending. Using sensitivity analysis, they further noted that for an unmeasured confounder to explain away the association, the unmeasured confounder would have to both increase the likelihood of service attendance and decrease the likelihood of mortality by 2.35-fold, above and beyond the measured confounders. Such substantial confounding by unmeasured factors seems unlikely, given adjustment already made for an extensive set of covariates. While causality cannot be definitely established, the evidence that some of the association is causal seems fairly strong.

Likewise, for depression, Li et al (2016a) reported that for an unmeasured confounder to explain away the estimate that those attending services multiple times per week were 0.71 (0.62, 0.82) less likely to become depressed, an unmeasured confounder would have to both increase the likelihood of service attendance and decrease the likelihood of depression by 2.1-fold, above and beyond the measured confounders. Similarly, for suicide, VanderWeele et al. (2016a) reported that for an unmeasured confounder to explain away the estimate that those attending services at least weekly were 0.18 (95% CI: 0.06, 0.51) times less likely to commit suicide, an unmeasured confounder would have to both increase the likelihood of service attendance and decrease the likelihood of suicide by 10.5-fold, above and beyond the measured confounders. In this case, extremely strong unmeasured confounding would be required. With observational data, one can never be certain about causality, but the results of sensitivity analysis, after extensive control for measured covariates, suggest that the evidence that some of the association is causal is quite strong.

Another form of evidence that some of the associations between religion and health are causal is that there are a number of plausible mechanisms by which religious participation may affect health and it is to these that we now turn.

POTENTIAL MECHANISMS

Numerous mechanisms have been suggested for what might be responsible for the associations between religious participation and health (George et al., 2002; Koenig et al., 2012). For example, for mortality and service attendance, it has been suggested that social support, less smoking, lower depression, greater self-regulation, hope and optimism, and meaning and purpose may be potential mechanisms. There is some empirical evidence that some of these might indeed explain some of the relationship. For example, in a number of studies examining service attendance and mortality (Strawbridge et al., 1997; Hummer et al., 1999; Musick et al., 2004; la Cour et al., 2006), after

control is made for social support, the magnitude of the associations decreases by about 20–30%, which is sometimes interpreted as social support mediating about 20–30% of the effect. There are some difficulties with analyses of this type. First, to interpret such analyses as evidence of mediation require confounding control not only for service attendance, but also for factors that might be confounding the relationship between the mediator and the outcome; for example, with social support as a mediator one would want to control for common causes of social support and mortality (VanderWeele, 2015). Second, while it is the case that service attendance probably does increase social support, it is also possible that social support might increase the likelihood of attendance. There may be effects in both directions. Said another way, social support may be both a confounder and a mediator of the relationship. Social support may mediate the effect of prior service attendance but confound the effect of subsequent service attendance. Assessing the extent of mediation and quantifying the importance of a mechanism in the presence of such two-way effects, can be done, but is much more challenging (VanderWeele, 2015). With repeated measures one can make progress but additional analytic methods are needed.

It is nonetheless somewhat easier to qualitatively establish mechanisms than it is to precisely quantify their exact contributions. For example, we discussed how there is fairly strong evidence, from longitudinal studies with good confounding control, that service attendance is related to lower smoking, less depression, more social support, and a greater sense of meaning and purpose. It is also known from other studies that these variables are related to mortality, thereby establishing fairly strong evidence that smoking, depression, social support, and meaning and purpose, are mechanisms that relate service attendance to mortality. However, more work using newer, more sophisticated methods (VanderWeele, 2015) that assess mediation with time-varying exposures and mediators with time-varying confounding will be needed to adequately *quantify* the relative contributions of these different mechanisms.

Likewise, a number of mechanisms have been suggested relating religious participation to better mental health including higher social support, better physical health, comfort from religion, systems of meaning, and relaxation of nervous system through prayer/meditation (Koenig et al., 2012). Several mechanisms have likewise been suggested governing associations between service attendance and suicide including social support, less alcohol, less depression, less drug use, and the moral belief that suicide is wrong (Dervic et al., 2004; Oquendo et al., 2005; Koenig et al., 2012). Qualitatively many of these mechanisms can be established by similar arguments to those we have given for mortality. However, once again, further research will be needed to quantify the relative contributions of these various potential mechanisms. That these plausible mechanisms are present does, however, contribute some further evidence that some of the association between service attendance and health is in fact causal, and helps elucidate further how this is so.

FORGIVENESS AND HEALTH

A final topic on the empirical research on religion and health that we will cover in this review and that has received considerable attention in past years is the relationship between forgiveness and health. Many religious traditions encourage some form of forgiveness. As we will see, the empirical research literature has suggested that forgiveness itself is closely tied to health.

There are difficult conceptual issues regarding what forgiveness itself is, and how it is defined. It is sometimes seen as a victim's replacing resentment towards the wrongdoer with compassion,

or the reduction of negative thoughts, emotions, and behaviors and replacing these with positive thoughts, emotions, and behaviors towards the offender (cf. Worthington, 2005; Worthington et al., 2013). Distinctions are sometimes drawn between "trait forgiveness," the degree to which a person tends to forgive across time and situations, and "state forgiveness" a person's forgiveness of a specific offense. Distinctions are likewise sometimes drawn between "decisional forgiveness," the behavioral intention to forgo revenge and to treat the offender as a person of value, and "emotional forgiveness," the replacement of negative unforgiving emotions with positive other-centered emotions (Worthington, 2006). Decisional forgiveness will often precede emotional forgiveness; one can decide to forgive even with unforgiving emotions like resentment, bitterness, hostility, hatred, anger, fear, and desire for vengeance. Forgiveness takes place in time and there may be both general trends in the temporal process of forgiveness but also daily fluctuations (McCullough et al., 2003). Repeated offenses may also alter dynamics (Worthington et al., 2013). Forgiveness itself is sometimes distinguished from communicating forgiveness which may occur at a different occasion. Forgiveness is likewise often distinguished from condoning, reconciling, forgetting, forbearing, justifying, not demanding justice, and excusing, points we will return to later. Most of the empirical literature on forgiveness is focused on forgiveness of another for an offense committed. Other forms of forgiveness include self-forgiveness—that is, the forgiving of oneself for doing wrong to another or falling short of one's own standards—though some argue this would be better formulated as self-acceptance (Vitz and Meade, 2011; cf. Kim and Enright, 2014); and divine forgiveness, a person's sense of being forgiven by the deity that they consider to be sacred. Some discussion has been given to settings in which forgiveness might be seen as problematic such as contexts in which forgiveness and restoration of relationships may facilitate dynamics of prolonged intimate partner violence (Gordon et al., 2004). Various empirical measures have been developed to assess forgiveness (McCullough et al., 2006; Thompson et al., 2005; Brown, 2003). Sample items from these scales include "Even though his/her action hurt me, I have goodwill for him/her" or "I'll make him/her pay" or "I have released my anger so I can work on restoring our relationship to health."

Numerous analyses, and also meta-analysis, suggest that religiousness and spirituality measures are associated with greater levels of forgiveness (Davis et al., 2013). There is some evidence that religiousness is more consistently associated with forgiveness than is spirituality (DeShea et al., 2006), and also some evidence that spirituality is more strongly associated with self-forgiveness than is religiosity (Davis et al., 2013). There is some evidence that forgiveness varies across religious groups (Cohen et al., 2006). However, these studies are cross-sectional and so the direction of causality is difficult to determine and it is hard to rule out a potential common cause. For example, empathy may incline people towards forgiveness and towards religion. Religious participation may likely have some effect on forgiveness, as most religions instruct forgiveness, but more research is needed to establish this empirically.

Forgiveness is itself associated with better health. In a recent review, McCullough et al. (2009) note that forgiveness is associated with lower measures of depression, anxiety, and hostility; reduced risk for nicotine dependence and substance abuse; higher positive emotion; higher satisfaction with life; higher social support; and fewer self-reported health symptoms. The mechanisms are generally thought to be beneficial emotion regulation and forgiveness being an alternative to maladaptive psychological responses like rumination and suppression. There is some evidence that forgiveness of self or others may be associated with better physical health as well, but the associations are less consistent (Toussaint et al., 2015). Once again, however, most of the research is cross-sectional and from such studies it is difficult to determine the direction of causality.

However, in the case of the potential effects of forgiveness on health, various forgiveness interventions have been developed, and in fact even evaluated in randomized trials. Two prominent intervention classes are based on specific models of forgiveness including Enright's Process model and Worthington's REACH model. Most interventions require a trained professional to implement but workbook interventions have also been developed (Harper et al., 2014; Greer et al., 2014). In Enright's Process model, treatment takes place over twenty steps (Enright and Fitzgibbons, 2000) organized into four phases: uncovering negative feelings about the offense, deciding to pursue forgiveness for a specific instance, working towards understanding the offending person, and discovery of unanticipated positive outcomes and empathy for the forgiven person. Interventions using this model have been shown to be effective with groups as diverse as adult incest survivors (Freedman and Enright, 1996), parents who have adopted special needs children (Baskin et al., 2011), and inpatients struggling with alcohol and drug addiction (Lin et al., 2004). In Worthington's REACH model, each letter of "REACH" represents a component of the process (Worthington, 2001): Recall the hurt one has experienced and the emotions associated with it; Empathize with the offender and take the other's perspective in considering reasons for action (without condoning the action or invalidating one's feelings); Altruistic gesture of recalling one's own shortcomings and realizing others have offered forgiveness Commitment to forgive publicly; and Hold onto or maintain the forgiveness through times of uncertainty or through the returning of anger and bitterness.

Numerous randomized trials and intervention studies have made use of these forgiveness models. A recent meta-analysis of 54 studies suggested a fairly sizable average effect on forgiveness among the studies (Wade et al., 2014). The size of the effect depended on length of the intervention; the interventions based on the Enright model were generally of longer duration than those of the Worthington model and thus had larger effects. The same meta-analysis examined the average effects across studies for other outcomes and also found evidence for an effect of the forgiveness interventions on depression, anxiety, and hope. Some smaller individual randomized studies have found effects of forgiveness interventions on aspects of physical health (Waltman et al., 2009; Ingersoll et al., 2009). Although most of these forgiveness interventions require a trained professional, there is some preliminary evidence that even workbook forgiveness interventions, that can be done on one's own, are effective in bringing about forgiveness and perhaps alleviating depression (Harper et at., 2014; Greer et al., 2014). Workbooks have been developed both for the forgiveness of others (Harper et al., 2014; Greer et al., 2014) and for the forgiveness of self (Griffin et al., 2015). Such workbooks are freely available online (http://www.evworthington-forgiveness.com/diy-workbooks). More research is needed, but if these workbook resources prove to be effective, the potential for outreach and promotion of both forgiveness and mental health, may be substantial and could have profound public health implications.

INTERVENTIONS CONCERNING RELIGION AND HEALTH

Our focus thus far in this review has been ways in which religious institutions, and participation in them, contribute to a variety of health outcomes. However there is also a literature on health-focused interventions within religious institutions, and also on religious institutions providing resources for health promotion, such as the work of many faith-based organizations delivering

health care. In this second part of the review we will thus describe potential interventions related to religion and health that have been developed, and also partnerships between religious and public health institutions, to promote health. We will summarize the research literature on religiously oriented interventions that may promote health.

HEALTH PROMOTION INTERVENTIONS IN RELIGIOUS SETTINGS

Various health promotion interventions have been developed for use within specific religious contexts or institutions. In this literature, a distinction is sometimes also drawn between "faith-based" versus "faith-placed" interventions, the former involving some sort of spiritual or religious approach and the latter simply indicating that the intervention is merely taking place at a religious institution (DeHaven et al., 2004; cf. Lasater et al., 1997). Much of the literature on interventions is descriptive in nature. There is a much smaller literature on empirically assessing the effectiveness of interventions. Campbell et al. (2007) review about 60 studies on church-based health promotion and find that most are descriptive with only 13 involving some formal evaluation. Most that do have an evaluative component are within African-American Churches. They report evidence from randomized trials that interventions can increase fruit and vegetable consumption lead to smoking cessation, and perhaps promote weight-loss, and increase cancer screening (cf. Chatters, 2000; Allen et al., 2014).

In reviewing the literature, Campbell et al. (2007) also discuss five important elements of design of such interventions including: true partnerships and trust, adequately constructing membership lists, understanding the social and environmental context of the religious community in designing the intervention, incorporating appropriate spiritual/religious content and involving the community members in delivery, and leaving something behind; for example, providing training, leaving materials behind, or assisting churches is finding funding to continue the program. There are also important questions concerning evaluation in such religious community-based settings for interventions. In evaluating the impact of an intervention, it is not only of interest to discern whether the intervention itself is more effective than a control condition, but also whether the intervention itself is more effective than other religious non-health related meetings, and possibly whether a religiously based intervention is more effective than a secular alternative, a point to which we will return later. See Campbell et al. (2007) for further discussion and review.

HEALTH CARE PROVISION BY RELIGIOUS AND FAITH-BASED INSTITUTIONS

Religious institutions also often provide important resources that make partnerships with public health institutions possible. Such resources include spaces to meet, often with kitchens, regular gatherings with large numbers, a community with relationships of trust, and a shared spiritual and moral message. Idler (2014b) discusses in detail a number of such partnerships. See also Levin (2014, 2016) for further discussion. Examples of partnerships in which the resources or space have been important include soup kitchens and food pantries; Alcoholics Anonymous programs;

H1N1 vaccination and education programs (Kiser and Santibanez, 2014); La Leche (cf. Idler, 2014b) in the promotion of breastfeeding; and breast cancer screening programs (Allen et al., 2014); and church-based health promotion/prevention programs for diabetes, maternal and child health, and hypertension (Chatters, 2000).

Moreover, religious groups and faith-based organizations often have as their mission some health related goal. Religious groups have also often provided material resources and infrastructure for hospitals, clinics, and medical missions. Most 19th-century homes for the aged in the United States were started by Christian and Jewish groups; even in mid-20th century most remained religious (Maves, 1960). L'Arche communities for the disabled had religious origins (cf. Idler, 2014). A recent report (Brown, 2014) indicated that the Catholic Church, as one of the largest global health care providers, operated 5,246 hospitals, 17,530 dispensaries, 577 leprosy clinics, and 15,208 houses for the chronically ill and handicapped worldwide. In a number of African countries, it is estimated that faith-based organizations provide between 30% and 50% of health-related facilities (Mwenda, 2011).

Religious groups have also provided a powerful moral message and advocacy. Important examples include the role of religious institutions in civil rights advocacy in the United States (Morris, 1986) and in the Truth and Reconciliation Commission in South Africa (Tutu, 2000). Yet another example of such efforts include the role religious institutions played in community advocacy concerning the link between environmental pollution and leukemia in Woburn, Massachusetts (Van Ness, 1999; Harr, 1996).

Although there have been a number of very effective partnerships between religious groups and public health institutions, there have also been tensions. A prominent example of tension is the role of religious organizations in providing care for HIV/AIDs patients. Within the United States, some Christian commentary suggested that AIDS was a divine punishment for sins of homosexuality, adultery, or premarital or extramarital sex. It has been argued that this may have affected government funding and policy (Dalmida and Thurman, 2014). However, faith-based hospitals also provided much of the care early in the epidemic and considerable institutional support. In 1986, the Episcopal Church sponsored a national AIDS-related faith gathering. In 1989, Catholic programs united as the Catholic AIDS network. In the 1990's an AIDS National Interfaith Network was formed. Globally, early faith-based efforts focused on care and support for those with HIV/AIDS, but later programs have focused more on education and prevention (Derose et al., 2011). There is some evidence that faith-based organizations may have first contributed to increasing discrimination and stigmatization in Uganda, but later made important contributions to decreasing discrimination and stigmatization (Otolok-Tanga et al., 2007). Religious groups have focused more on providing care, raising awareness, and testing. Partnerships between religious and public health institutions, such as between the Catholic Church and Brazil's National AIDS program (Murray et al., 2011), were also formed. One of the most important controversies in this regard has been the use of condoms, with public health groups advocating for their use in preventing the spread of HIV, and religious groups sometimes advocating against condom use as either encouraging more promiscuous sexual activity, or as wrong in and of itself. See Murray et al. (2011) for discussion of how these tensions were handled, but not eliminated, in partnerships between Brazil's National AIDS Program (NAP) and the Catholic Church, with some willingness on each side to tolerate different ideological perspectives. In a number of instances, partnerships between religious organizations and public health institutions have been powerful and effective, but they have not been without various tensions. See Trinitapoli and Weinreb (2012) for further discussion.

FORGIVENESS INTERVENTIONS

We discussed in the first section of this review that forgiveness interventions have been developed, and that there is evidence from randomized trials that these interventions not only effectively promote forgiveness but also alter depression, anxiety, and hope, and perhaps even promote physical health. There is some evidence that such forgiveness interventions can be effective in even very difficult contexts such as among adult incest survivors (Freedman and Enright, 1996), in reconciliation after the 1994 Rwandan genocide (Staub et al., 2005), and in trials of restorative justice meetings between convicted criminals and their victims (Sherman et al., 2005). While most of the interventions that have been developed require a trained counselor or professional to implement, there have recently been developed "do-it-yourself" workbook interventions to promote forgiveness. These too have been tested in randomized trials with some preliminary evidence that they also are effective (Harper et al., 2014; Greer et al., 2014; Griffin et al., 2015). Further research is needed, as the sample sizes in the randomized workbook trials were quite small, but if these do prove to be effective, they could constitute powerful forgiveness and public health promotion resources. Further research on intervention development might incorporate perspectives from the philosophical literature (e.g., North, 1987; Holmgren, 1993) on the moral conditions for forgiveness, and help ensure that practical interventions sufficiently distinguish forgiveness from condoning, reconciling, forgetting, forbearing, justifying, not demanding justice, and excusing so as to ensure more effective interventions and to appropriately handle contexts that may be problematic (Gordon et al., 2014).

SPIRITUALLY INTEGRATED MEDICAL CARE AND PSYCHOTHERAPY

A number of religiously based or spiritually integrated psychotherapy interventions have also been developed, and some of these have been assessed in randomized trials. Such interventions are intended to draw upon the spiritual resources, motivations, and coping strategies that may be available to those with religious beliefs. Reasons sometimes given for employing spiritually integrated psychotherapy include the broad participation in religion within America and worldwide and its embeddedness within culture, spirituality itself being a resource to many people, an acknowledgement that spirituality can also be the source of problems and difficulties, and the fact that, when surveyed, patients often state that they would prefer spiritually integrated interventions. See Pargament (2011) for a fuller overview of such spiritually integrated interventions.

In some cases, these spiritually integrated or tailored interventions have been shown to have larger effects, among specific religious samples, than secular alternatives. For example, there is some evidence that, with Christian patients, certain forms of Christian cognitive behavioral therapy may yield higher recovery rates than is achieved with regular cognitive behavioral therapy (Koenig et al., 2009). Likewise, in the forgiveness workbook interventions described, although different samples were used, there was some preliminary evidence that the effect size for the workbook tailored to Christian participants was larger than the more generic forgiveness workbook intervention (Harper et al., 2014; Greer et al., 2014). However, in other cases, these larger effect sizes for religiously tailored interventions are not observed (Rye et al., 2005; Koenig et al., 2015). Koenig et al. (2015) do, however, report evidence for an interaction between

religiously integrated therapy and the religiosity of patients, in which the religiously integrated therapy is somewhat more effective for more religious patients. Even in cases in which effects do not differ, however, it may be preferable to use a spiritually integrated or religiously-based psychotherapy intervention if it is likely to have broader outreach among certain religious populations who might otherwise be skeptical of, and hesitant to participate in, more secular types of psychotherapy.

Considerable research has been devoted to providing spiritual care in end-of-life health care settings. Spiritual care is included in many national and international palliative care guidelines (World Health Organization, 2004; National Consensus Project, 2009; Joint Commission 2013). Spiritual care can take many forms, including taking a spiritual history, referrals to hospital chaplaincy, and inviting conversation regarding religious and spiritual issues, among others (Hanson et al., 2008). The provision of spiritual care by medical teams has been shown to be associated with better quality of life at the end of life, less aggressive treatment, and lower costs (Astrow et al., 2007; Balboni et al., 2010, 2011), and is desired by patients (Steinhauer et al., 2000). However, it continues to be given infrequently (Phelps et al., 2012; M. J. Balboni et al., 2013). Training is an important predictor of the provision of spiritual care, but training itself is received by health care providers infrequently (M. J. Balboni et al., 2013). Interventions have been developed to provide training in the provision of spiritual care and have been assessed observationally (Zollfrank et al., 2015), but randomized trials are needed to adequately assess the effectiveness of these interventions on increasing the provision of care and on patient outcomes.

Research on spiritual care provided by a patient's religious community in the end-of-life context with terminal illness somewhat surprisingly indicates that the provision of such care is associated with seeking more aggressive treatment (T. A. Balboni et al., 2013), perhaps indicating that when spiritual care and medical care are not integrated, and the prognosis is not taken into account in spiritual care, patients may be more likely to believe a miracle is possible and that all aggressive treatment options ought to be sought out. Further research on integrating spiritual care and medical care would be of importance, along with the development of training interventions for clergy providing end-of-life care, to be assessed in randomized trials.

The development of training interventions for the provision of spiritual care is relevant also outside of the end-of-life context. The majority of patients in the United States would like to receive some form of such care (King& Bushwick, 1994; Astrow et al., 2007). Guidelines on and tools for taking a spiritual history in a medical context are available (Koenig, 2000b; Puchalski, 2014) and now some form of spiritual care training is available in over 80% of U.S. Medical School curricula (Koenig et al., 2010; Puchalski et al., 2012). Guidelines for competencies in spirituality and health for medical education have been developed (Puchalski et al., 2014). However, the majority of the courses available in medical curricula are electives, and most physicians report not having received any training (M. J. Balboni et al., 2013). Curricular and training interventions have been developed but their efficacy remains, for the most part, unclear (Fortin and Barnett, 2004). It may be necessary to incorporate spiritual care training and competencies throughout medical school and residency, rather than only as a single module (Puchalski et al., 2014; Sulmasy, 2009). Future research could consider the development of more effective training interventions for the provision of spiritual care, potentially integrating these with training on having "difficult conversations" with patients, and assessing the effects of these interventions on provision of spiritual care and also patient outcomes in randomized trials.

SERVICE ATTENDANCE INTERVENTIONS?

In the first part of this review, we summarized some of the strongest evidence from observational studies concerning the associations between religious service attendance and health outcomes such as mortality, depression, and suicide. It is often pointed out in the literature that it is not possible to randomize service attendance or other forms of religious involvement; it would be both unethical and infeasible; and thus that one must rely on observational data to explore the relationships between religious participation and health. We saw that, based on numerous large studies, with reasonably good methodology and study design, the evidence for the relationships between service attendance and mortality, depression, and suicide being causal was, if not conclusive, at least fairly strong. The sensitivity analysis for unmeasured confounding supported this conclusion. The evidence for other health outcomes was often less definitive.

While it is true that it is not possible to randomize service attendance directly, the impossibility of direct intervention is sometimes dealt with in the intervention literature by what is called an encouragement trial. In such encouragement trials, rather than attempting to intervene directly on the actual behavior or activity of interest, the intervention instead consists of some form of encouragement for the activity under study. With careful design and selection of study population, it would seem that such a design might in fact be possible also for religious service attendance, partially circumventing the issue that service attendance is not possible to randomize directly. Careful thought would need to be given to a number of practical and ethical issues. However, a study could potentially be designed to be conducted among those who already self-identify with a particular religious affiliation, but who may not regularly attend services. Each participant could be randomized to receive either written encouragement to attend religious services (e.g., mailings summarizing the empirical research on service attendance and health, perhaps accompanied also by more religiously oriented reasons for participating, prepared say by the religious group under study, along with a listing of the names and addresses of relevant religious groups nearby) or alternatively randomized to receive some neutral reading material (e.g., a summary of the most recent sporting event). The design might involve multiple such mailings. Follow-up could examine whether the mailings did in fact alter religious service attendance participation and also various health outcomes. An alternative design, in the setting of therapy for depression, but again for a study population who already self-identifies as religious, might be to randomize individuals to either receive standard cognitive behavioral therapy or to receive the same cognitive behavioral therapy but supplemented with discussion of participation in faith communities. In designs such as this, a relatively large sample size would likely be needed for such a trial to have adequate power to detect relevant effects, in part because many who self-identify with a particular religious affiliation would likely already be attending, and in part because the effectiveness of a mailing may be limited in changing longer term participation. The former difficulty could potentially be partly addressed by only including, within the study, those who did not attend or were only occasionally attending. Even with a large sample, the effects would have to be carefully interpreted as the effects of encouraging attendance rather than attendance itself, and would be specific to the religious group or groups under study. Some of the ethical issues regarding such a trial would be at least partially addressed by limiting the study population to those who already self-identify with the particular religious tradition being studied.

The ethical issues related to encouraging religious service attendance have also been raised within the medical literature on religion and health. In 2000, Sloan and colleagues published a

New England Journal of Medicine Sounding Board piece entitled "Should physicians prescribe religious activities?" (Sloan et al., 2000). In it, the authors argue that prescription of religious service attendance is unethical since the content of religious services varies considerably, religion can also often cause tensions and antagonism, religious views often differ across patients and physicians, physicians are not trained in such matters, and that the empirical literature on religion and health is a veiled attempt to validate religion by associations with health and that this literature moreover trivializes religion itself. The piece, which raised many important issues, elicited also numerous letters to the editors. Koenig (2000a) argued that Sloan et al. approach the question by setting up and attacking an extreme position, that physicians should prescribe religious activities, and that this is very different from a recognition that such activities may be important in the patient's life and understanding of illness. He notes that this is again different from current recommendations (Koenig, 2000b) for physicians to take a short four-question spiritual history and that for those who are not religious, the discussion can quickly move on. Other responses were of a more personal nature. Nicklin (2000), a family physician, responded that in 16 years of practice none of his inquiries about patients' religious or spiritual lives in the face of progressive, incurable or fatal illness led to a negative response, and that often they had been helpful.

The issue of addressing religious concerns within the medical and public health context has been, as can be seen, somewhat controversial. A detailed review of the literature on the topic is beyond the scope of this review. Encouraging religious community participation for those who already hold the specific beliefs of the religious community may be somewhat more appropriate as a source of community involvement, social support, and shared framework of meaning and understanding. However, careful thought would certainly have to be given to these ethical issues if the effects of service attendance itself were to be studied in a randomized encouragement trials as described.

RANDOMIZED TRIALS OF PRAYER

We will conclude our description of religion and health interventions with a brief discussion of what is perhaps an even more controversial topic: randomized trials of prayer. The standard design of these trials is that patients are randomized to receive intercessory prayer from someone else; patients themselves, however, are often "blinded" in the sense that they don't know whether or not they are being prayed for. Some of these randomized trials have suggested an effect of prayer; other studies have suggested no effect; and the research remains controversial. Two reviews have attempted to synthesize all available evidence but they themselves are divided. Astin et al. (2000) conducted a systematic review with fairly broad inclusion criteria and include 23 randomized trials. Astin et al.'s review concluded that there was some evidence for an effect: 57% (13 studies) reported an effect; 39% (9 studies) no effect; 4% (1 study) a negative effect. Meta-analysis has also been done by the Cochran Collaboration and has been repeated a number of times (Roberts et al., 2000, 2007, 2009). Using stricter inclusion criteria than the Astin et al. (2000) study, the Cochran meta-analysis in 2000 was inconclusive; the meta-analysis in 2007 suggested an effect on mortality with summary odds ratio OR = 0.88 (95% CI: 0.80, 0.97) but no effect on clinical state or complications. The meta-analysis in 2009 still had a protective odds ratio, OR = 0.77 (95% CI: 0.51, 1.16), but one for which the confidence interval included the null of no effect. The conclusion

seemed to depend somewhat on what studies were included. Moreover, much commentary on the studies themselves and the meta-analyses questions the objectivity of those conducting these randomized trials of prayer.

Reactions to such research range from dismissal to intrigue to outrage. Objections to this research on prayer come from those both with and without religious commitments. Some object to this research on the grounds that it is the wasting money and valuable research resources that could be redirected to questions which have true benefit to health. Yet others claim that such research is nearly impossible to carry out rigorously, that the investigators conducting such studies almost always have an agenda—for or against—and that the research will thus rarely be credible. Those who do believe in prayer have also leveled objections against this research. Some object to the research on the grounds that such research is "putting God to the test"; such research, using these randomized trials, seems to assume that God, if he exists, is somehow outside of the trial; that he does not know it is happening; that he wouldn't be able to determine the outcome but is somehow constrained by what "usually happens." Yet others object to these trials on the grounds that they seem to implicitly assume that those in the control arm are not being prayed for by anyone (e.g., family and friends outside of the trial), which may not be a reasonable assumption. Another objection to these trials is that the forms of prayer examined in these "double blinded" trials do not correspond to the forms of prayer that are actually practiced within religious communities. Prayer for healing within religious communities often occurs within the context of a relationship and often involves the laying on of hands, which is very different it is claimed from what is being studied in the randomized trials. Clearly objections exist to such research from very different perspectives. The research employing randomized trials to examine the effects of intercessory prayer seem to bring us to the boundary of what questions can actually be studied empirically concerning religion and health. Whether the methodology is appropriate and whether the subject matter lends itself to empirical study is likely to remain controversial. See Brown (2012) for further discussion of various aspects of the study of prayer.

THEOLOGICAL THEMES CONCERNING RELIGION AND HEALTH

In this section we will provide a brief overview of various religious and theological themes concerning religion and health. We will describe some important common elements concerning views of health shared by many of the world religions, we will briefly summarize certain Biblical themes on religion and health from the Christian tradition, we will give an overview of some work within philosophy on forgiveness, and finally discuss religious objections that have been put forward concerning the empirical research on religion and health. The focus of this brief summary will be the themes most relevant to the empirical research literature on religion and health surveyed, in order to, in the final section of this review, consider points of convergence and tension, and where the empirical and theological and philosophical literatures might inform each other.

RELIGION AND HEALTH IN THE WORLD RELIGIONS

The topic of the conceptions of health within the various world religions is very broad, and it is far beyond the scope of this review to even attempt to adequately represent each religious tradition. Here we will only proceed with a summary of some common elements that emerge from the various conceptions of health encountered in many of the world religions. We will summarize some of the various conclusions suggested in other work.

Ketchell et al. (2011), summarizing various literatures and also a prior book-length survey on world religions and health (Sullivan, 1989), consider perspectives on physical, mental, social and spiritual health from Buddhist, Confucian, Hindu, Islamic, Judaic, and Shamanic traditions and summarize three major themes across traditions. First, that disharmony between the individual, community, and Ultimate Reality is the principal source of suffering and illness. Second, the various world religions offer a variety of remedies or pathways to healing for this disharmony including prayer, meditation, good deeds, rituals and ceremonies, and practical institutions of health and social support. And third, that community health is integrally related to individual health. It is noted that in many ancient societies, priests both met religious needs and also provided healing, again tying together religion and health. We have already seen, to a certain extent, some of these themes in our survey of the empirical literature on religion and health and in the final section of this review we will consider in more detail the relation between the various religious themes and the empirical research.

Fuller consideration of major distinct themes concerning religion and health in each of the world's religions is again beyond the scope of this review. The interested reader is referred to Desai (1989) for a review of themes and ideas on religion and health from within the Hindu tradition, Rahman (1987) from an Islamic tradition, Fledman (1986) from a Jewish tradition, Birnbaum (1989) from a Buddhist tradition, and the collected volume by Sullivan (1989) for summaries of these and many other individual religious traditions. See also McCarty and Kinghorn (2017) for discussion of how Islamic, Jewish and Christian theology has shaped and continues to shape medical institutions and practice.

BIBLICAL TRADITIONS CONCERNING RELIGION, HEALTH, AND HEALING

As most of the empirical literature on religion and health has been conducted within the United States, and thus pertains to predominantly Christian populations, we will briefly survey, in somewhat more detail, some of the themes concerning religion and health within Christianity, focusing here on Biblical traditions. Specifically, we will consider eight themes which have some prominence in the Hebrew Bible or Old Testament, and within the New Testament. These themes will include broad conceptual relations such (1) health as wholeness, (2) sin as the cause of ill health and brokenness, (3) God as the source of healing, and (4) relations between health and salvation; along with pathways to healing and health including (5) healing as response to prayer, (6) healing and forgiveness, (7) healing and community, and (8) healing and caregiving. See Kee (1992), Kelsey (1995), Avalos (1999), Wilkinson (1998), and Pilch (2000) for fuller treatments of this

topic, upon which the summary that follows is based. The aim of this section will be, once again, to eventually relate some of the theological themes on religion and health to the empirical literature on religion and health, and to explore where these literatures converge, where there are tensions, and how one might inform the other.

With regard to the concept of health found in the Biblical texts, there is a close connection between health and wholeness. The Hebrew word *rapha* is often translated "heal," and connotes a "restoring to normal." The Hebrew word perhaps closest to "health" is *marpe*, but it is used relatively infrequently. Instead the Hebrew word *shalom,* often translated as "peace," is frequently employed and conveys a sense of general well-being or right relation to self, others, and God. Three Greek words are predominantly used in the New Testament for "heal": *therapevo, iaomai*, and *sozo. Therapevo* is associated with care or attention; *iaomai* is associated with cure or restoration; and *sozo* more literally means "save." The Greek word for "to be in health," *hygiano*, is somewhat similar to the concept in English, "to be whole, sound and well." Both the Hebrew and Greek concepts of health thus relate closely to well-being generally or wholeness. As will be discussed further, healing in the Biblical accounts often concerned the whole person and included both physical and spiritual healing.

The Biblical narrative suggests that sin, wrongdoing, and rejection of God is ultimately the root cause of brokenness, illness, and death. While certainly not every instance of ill health is attributed to wrongdoing, the connection between the two is portrayed in various ways. Ill health is pictured as the consequence of sin sometimes directly by someone's actions harming another. At other times, the relationship is depicted as disordered behaviors and actions bringing about ill health for oneself or, as in the Proverbs, through a deficiency in character and virtue. Sometimes the relationship between sin and ill-health is pictured as divine punishment. Perhaps more profoundly, the relationship is sometimes pictured as the general all-pervasive fallenness and brokenness of the created order being the consequence of sin and the rejection of God.

Healing in the Bible is often seen as the work of God and of those whom he empowers. In many of the Biblical stories, God heals after intercessory prayer is made by another. The prophetic books speak of the renewal, restoration, and healing of the entire people of Israel. Many of the Gospel accounts are occupied with accounts of Jesus' healing by God's power. Jesus' death on the cross and his resurrection is pictured as being for the healing and salvation of the world with, once again, God pictured as agent. The Spirit of God is also spoken of as accomplishing transformation of one's character and person, bringing about a restoration to wholeness.

Closely related to this point, healing is often also tied to salvation in the Biblical accounts. The prophetic books speak of the "healing" of apostasy and faithlessness; healing and restoration or salvation are also often spoken of in parallel in the prophetic books. In the healing accounts of the Gospels, in several instances when Jesus uses the words "your faith has healed you," it is the Greek word sozo that is used and the more direct translation would thus be "your faith has saved you." Jesus' care for the physical ailments of those he heals highlights the importance of the body, but the healings themselves often symbolically point towards, or are accompanied by speech concerning, spiritual healing and salvation. The New Testament Epistles also suggest a link between salvation and healing with faith leading to conversion and transformation of character, by following the example of Jesus, and by the work of the Spirit. While healing is never completely accomplished in this life, ultimate healing and restoration is pictured as coming fully and finally in the resurrection of the dead.

Our discussion thus far has focused on broad conceptual relations between religion and health: health and wholeness, sin as the root cause of brokenness and ill-health, God as the agent of healing, and healing coming from salvation. The Biblical account, however, also suggests a number of more concrete pathways to healing including prayer, forgiveness, caregiving, and community.

As already noted, prayer is pictured as a pathway to healing in many of the Biblical stories. In some of the healing accounts, such prayer is accompanied by the laying on of hands; it is often tied to faith in God. The book of James suggests that this prayer for healing may be in a congregational context and accompanied by anointing with oil. Prayer does not always result in healing in the Biblical accounts, but it is clearly one pathway to it.

Forgiveness is pictured as another pathway to healing. Healing and forgiveness are spoken of in parallel in the prophetic books. The New Testament pictures Jesus' life and death as being for the forgiveness of sins and restoration of the person to wholeness and communion with God. Emphasis is also placed in the New Testament on forgiving others, which is to be done irrespective of the number of offenses, and is important for community and religious life. Forgiveness of others is to follow from God's forgiveness, a connection explicitly made in Jesus' parables and in the Lord's Prayer. In some of the Gospel healing accounts, Jesus likewise ties healing to the forgiveness of sins. Illness itself can become the path to conversion, forgiveness, and true healing. In the book of James, healing is tied to confession and the forgiveness of sins in the context of congregational life. The various writings thus suggest that forgiveness from God brings healing, wholeness and salvation; one's forgiveness of others brings healing to oneself, to the offender, and to the community; and confession of sins to God and to the community, and accompanying forgiveness, can likewise bring healing.

In the Biblical accounts, care and healing are also to take place in ways that are more physical and direct, through care-giving. The prophets command care for the sick and crippled and rebuke the people when they do not do so. Jesus expected that his followers would be involved in healing, and in the care for the sick. In Paul's letters, healing is spoken of as one of the gifts of the Spirit, and it is suggested that even one's own suffering and illness can be for the consolation of others. The giving of care to those in need is thus also pictured as an important pathway for healing.

Relatedly, throughout the Biblical account, the community itself was understood as the context within which salvation, forgiveness, and healing would come. The community was to provide for the needs of each other, to issue rebuke for wrong action when necessary, to participate together in religious life and ritual, and to love, support and encourage one another. The community was thus itself an important part of salvation and healing. Spiritual healing would bring one into this community and the community itself was a source of healing. In Jesus' healings of those with leprosy or hemorrhaging, the healing was not only physical, but also constituted a full restoration to community and religious life which illness had prevented. Jesus' life, death, and resurrection, with the healing and salvation which this brought, was to be remembered within the community by a common meal following the model of the last supper of Jesus with his disciples. Love was to be the central defining feature of this community, following Jesus' life and example, with Jesus himself having also summarized the whole of the law as love of God and love of one's neighbor. In Paul's writing, love was described as the greatest end of communal and religious life.

Subsequent developments of many of these Biblical themes concerning health and healing, as it relates to wholeness, sin, God, salvation, prayer, forgiveness, caregiving, and community have taken place within theology. For example, later theology ties the sacraments quite closely to healing and

the aforementioned modes of healing. The Catechism of the Catholic Church (2000) connects the sacrament of the Eucharist to community, forgiveness, and healing and restoration; it relates the sacrament of the anointing of the sick to prayer, forgiveness, caregiving, and healing; and it relates the sacrament of penance and reconciliation to forgiveness, prayer, community, and conversion and healing. Due to space limitations and the focus of this review, we will not, however, further survey the subsequent theological development of these various themes. See McCormick (1984) for further discussion of health and medicine from the Catholic tradition; Smith (1986) from an Anglican tradition; Vaux (1984) from a Reformed tradition; Sweet (1994) from an evangelical tradition; Marty (1983) from a Lutheran tradition; Fledman (1986) from a Jewish tradition; and also shorter summaries in Numbers and Amundsen (1985) for these and various other Western religious traditions. We will return to some of these themes in the final section of this review, and we will consider their relation to the empirical research on religion and health that we surveyed.

PHILOSOPHICAL LITERATURE ON FORGIVENESS

In the first two sections of this review (Empirical Research on Religion and Health; and Critique and Response) we discussed some of the empirical research on forgiveness and forgiveness interventions. Here we will summarize some of the philosophical literature, focused primarily on the nature of forgiveness and the conditions under which forgiveness is to be considered morally appropriate. We will examine two fairly prominent philosophical articles on forgiveness in the work of North (1987) and Holmgren (1993).

In our summary of the empirical research on forgiveness, we noted that forgiveness itself is often distinguished from condoning, reconciling, forgetting, forbearing, justifying, the foregoing of justice, and excusing. North (1987) provides some justification for these distinctions and argues that punishment is not in fact inconsistent with forgiveness. Forgiveness, she argues, is the overcoming of resentment by endeavoring to view the wrongdoer with compassion, benevolence and love, while recognizing that the wrongdoer has, in some sense, willfully abandoned his right to them. Forgiveness thus does not necessarily logically exclude punishment. She notes that forgiveness recognizes a wrong has been done and thus is different from excusing someone. While punishment is not inconsistent with forgiveness, she also argues that neither punishment nor repentance is necessary for forgiveness, though they might sometimes help facilitate it. North further notes that forgiveness recognizes that a wrong has been done and thus requires effort; it is not given lightly. Someone might have a forgiving disposition but this is only established through considerable development of character. She concludes by noting that forgiveness has moral worth in that it (1) recognizes a wrong has been done; (2) is a step towards reconciliation; and (3) helps promote mutual affection, trust, and sympathy that are fundamental human values at the root of our relations with one another.

Holmgren (1993) is concerned principally with the morality of forgiveness, under what circumstances it is to be considered morally appropriate, and what morality requires in terms of forgiveness. She argues that forgiveness itself involves several interrelated components: someone injured, wrong-doing on the part of the offender, an overcoming of negative feelings with the intent of reaching an appropriate attitude, and an internal acceptance of the wrongdoer. Genuine

forgiveness, it is argued, involves numerous steps including the recovering of self-esteem, a recognition that a wrong has been done, an acknowledgement of one's feelings, possibly an opportunity to express beliefs and feelings to the wrongdoer, assessing the situation and the future relationship with respect to the offender, and determining whether or not to seek restitution. Holmgren argues that essentially all of this ought to happen prior to forgiveness in order for forgiveness to be genuine. After these steps are complete, genuine forgiveness, the replacement of negative feelings by compassion and good will for the offender, can take place. She moreover argues that, provided these conditions are met, unconditional forgiveness is *always* appropriate and does not depend on the action or beliefs of the wrongdoer.

She further argues that such genuine forgiveness is beneficial to the one forgiving, that it retains self-respect, that it respects morality, that it respects the wrong-doer as a moral agent, and that it builds character and virtue. Genuine forgiveness is beneficial to the one forgiving because it frees the victim from the past, does not make the victim dependent on the wrongdoer, and further promotes love compassion, acceptance, and harmony in human relations. Such genuine forgiveness furthermore retains self-respect because esteem is established, needs are addressed, the wrong is acknowledged, and the victim is no longer dependent on the wrongdoer; moreover, the perpetrator's perspective, even if confused, is acknowledged without the victim necessarily having responsibility for changing it. Such genuine forgiveness, it is argued, also respects morality because it acknowledges a wrong, it separates the sin and the sinner, and it gives the wrongdoer space to change.

Genuine forgiveness, Holmgren argues, further respects the wrongdoer as a moral agent. As sentient and morally free, human persons ought to be respected as persons, and forgiveness does this by creating an attitude of empathy and understanding while acknowledging the other's freedom. Because of these things, forgiveness, it is argued, is thus not only compatible with respect for oneself, morality, and the wrongdoer as a moral agent, but it is, in fact, *required* by these things. The pursuit of these things and of forgiveness thus builds virtue and character. In attempting to synthesize some of the empirical and theological and philosophical literature, we will return to some of these arguments and positions again.

RELIGIOUS OBJECTIONS TO EMPIRICAL RESEARCH ON RELIGION AND HEALTH

We considered some of the methodological critiques of the empirical religion and health literature earlier in this review, and mentioned some of the ethical questions that were raised by such research and we will return to these again later. Some objections to this type of research, however, have also been raised by those from religious communities concerning the entire enterprise of empirical research on religion and health. For example, Bishop (2009) argues that the empirical research on religion and health tends to strip religion of its distinctive content, and that the measures used are often too generic. He notes that religion itself is generally concerned with questions of salvation, the nature of God, and worship. However, the empirical research generally does not address such questions and instead replaces them with much more generic and functional notions of religion. Bishop argues that, in doing so, such research poses the danger of taking a utilitarian or functional view of religion. It risks making use religion for health while in fact neglecting religion's

own goals and internal goods. Related arguments are put forward by Shuman and Meador (2002) who argue that the religion and health research likewise risks replacing the true meaning of faith with a self-interested individualism which enlists faith to simply get what we want.

From the perspective of a religious community, Bishop's and Shuman and Meador's concerns arguably are reasonable. Often relatively generic measures of religion and spirituality have been used in such research, and the research often is not focused on the primary goals and ends of religious communities. However, these concerns can also be, at least partially, addressed by more appropriately shaping this research area. More specific religious measures could be introduced and used concerning particular beliefs, or measures of particular relevance to specific denominations or religious traditions. Questions concerning notions of salvation, or beliefs such as that in life-after-death or the nature of right and wrong, could be developed and incorporated into research studies. Future empirical research studies, perhaps with the involvement of religious communities, could focus more on the particular goals and ends of religious communities, taking religious variables not simply as "exposures" but also as "outcomes," viewed as ends in their own right. Such research could arguably be of use to religious communities, and not simply serving generic functional or utilitarian ends.

Moreover, it is arguably the case that some of the empirical research on religion and health is potentially already of use to religious communities. The empirical research on service attendance and health gives religious communities a powerful message that it is not simply solitary spirituality that matters, but that the communal religious experience has important and powerful effects. The empirical research on service attendance and health thus may provide a message to help religious communities call people back to communal life. As a second example, the research on service attendance and depression, suggested that not only did service attendance decrease the likelihood of depression but also that those who were depressed were more likely to stop attending services. Such knowledge suggests that religious communities might take steps to seek out those struggling with depression, before the depression gets so severe that they cease attending, perhaps thereby exacerbating depression further. Such research may have important implications for pastoral practice; screening programs for depression within churches have also begun to be developed (Hankerson et al., 2015). As a third example, the research on forgiveness, not only highlights the importance of the practice of forgiveness, but also provides powerful and effective tools and interventions to promote forgiveness, tools and interventions that can be used by religious communities. With further engagement from religious communities, more of the empirical research could be made useful, not simply to academics and health care providers, but to religious communities themselves. Greater engagement from religious communities may be necessary to counter functionalist views of religion and to make clear the ultimate ends which religious traditions pursue.

SYNTHESIS

In this final section of the review we will consider the relations between the empirical research on religion and health and some of the theological and philosophical themes on this topic, and various aspects of convergence and tension across the different literatures. We will also consider how the empirical research on religion and health can inform theological perspectives, as well as how

the theological and philosophical ideas might shape subsequent empirical research. We will conclude with a few summary propositions emerging from this review of the literature.

We saw in our discussion of the relations between religion and health across the world religions, as well as specifically in the more detailed consideration of the Christian and Jewish Biblical texts, that community emerged as a prominent theme tying religious participation to health. There was clear indication in these literatures that individual health is closely tied to the health of the community, that community participation is itself an aspect of health or wholeness, and that community is often the means through which caregiving and healing come. The empirical research on religion and health likewise appeared to indicate that it was communal forms of religious participation that appeared to matter most for health. Many of the substantial and well-established associations with health in the empirical literature concerned religious service attendance. Religious service attendance seemed to be a stronger protective predictor of subsequent mortality, depression, suicide, and other outcomes, than was individual spiritual or religious practice or identity. The associations with many of these other religious or spiritual variables were generally weak and often diminished further when control was made for religious service attendance. The literature highlights the powerful effects of communal aspects of religious participation. The importance of religious community in health is thus one area in which there is fairly clear convergence between the empirical and theological literatures on religion and health. Communal religious life contributes to health.

We have described how the empirical research indicated that forgiveness itself was strongly related to mental health outcomes such as depression, anxiety, and hope, and possibly related to physical health as well. The empirical research literature in psychology has not only established these associations, but has developed interventions to help promote forgiveness that have been rigorously tested in randomized trials, concerning both forgiveness of others (Harper et al., 2014; Greer et al., 2014), and forgiveness of self (Griffin et al., 2015). Forgiveness was likewise an important theological theme in the Biblical literature surveyed. In that literature, forgiveness from God constituted a central part of healing and restoration to wholeness; it was a central aspect of the very notion of salvation. Forgiveness of others was strongly emphasized as well, following from forgiveness granted by God. Forgiveness of others was tied both to the health of the individual and to the health of the community. The relationship between forgiveness and health might thus also be seen as another area in which there is strong convergence between the empirical and theological literatures. Forgiveness is important for health.

Our survey of the theological literature also emphasized caregiving from religious communities as an important pathway to health and wholeness. The very notion of love as seeking the good of another entails caring for those in need; caring for those who are ill and seeking their health and healing was a prominent theme in its own right. We saw also, in our survey of partnerships between public health institutions and religious institutions, that such caregiving by religious groups plays an important role in the overall public health and medical landscape, both historically and today. In parts of Africa such efforts include as much as half of all health care services. The theme of religious persons and institutions caring for the ill is thus very clearly manifest in actual current health care and caregiving practices, and constitutes a third area of convergence of the empirical and theological literatures. Religious institutions support, and provide, caregiving which contributes to health.

In addition to these areas in which the empirical and theological literatures appear to converge there were also areas in which tensions were in one way or another manifest. We have discussed tensions between the Catholic Church and Brazil's National AIDS Program over condom use in the prevention of HIV/AIDs. Similar tensions are manifest in other partnerships or potential partnerships between religious and public health institutions in harm reductions programs such as needle exchange programs or safer sex condom distribution programs, which, to religious groups, may appear also to implicitly condone risky actions that they would judge immoral. In these settings, the values and ends in view differ between public health institutions and religious institutions, with public health institutions focused principally on what are perceived to be as better health outcomes, while religious institutions often place equal or greater weight on moral belief and religious teachings. See Van Ness (2013) for discussion of how utilitarian versus deontological views of ethics are likely manifest within the tensions present in such partnerships. Such tensions are, in some cases at least, unlikely to be able to be resolved entirely and partnerships will often require both parties tolerating some level of difference in ideological perspective. Research on how to facilitate partnerships, in the face of irreconcilable tensions, may prove to be important. These tensions may also be present in religion and health research in less politically and ideologically charged forms. For example, Pargament et al. (2004) notes that those experiencing spiritual struggles have higher mortality in follow-up, but the same study reports that these individuals also experience more spiritual and character growth. While, from a perspective focused on physical health, rapid elimination of these spiritual struggles may seem desirable, the individual facing these struggles may consider them an important part of their religious experience and development, fostering character and spiritual growth and transformation. There are prominent spiritual traditions concerning the "dark night of the soul" (Saint John of the Cross, 1585; May, 2004). Clearly here the health goals, at least with health viewed in a narrow sense, may well be in tension with broader religious values. While many religious groups emphasize and seek to promote health, physical health is typically not taken as the highest or most important value; other considerations and ends are given more importance. Here, health, viewed narrowly, and religion may be in tension.

Other types of tensions, concerning the very possibility of empirical study, are also manifest. We discussed empirical attempts to assess the efficacy of intercessory prayer. We noted that even though such research had been subjected to numerous randomized trials, investigator biases and agendas arguably make this research difficult to carry out objectively. Religious objections included that the trials arguably assess a form of prayer very different from what is in fact practiced by many religious communities. In contrast to what is often done in a blinded trial, in which the patients do not know whether or not they are being prayed for, prayer in many religious communities takes place in the context of long-term well-established relationships and may involve the laying on of hands. Other religious, even epistemological, objections to the research include noting that God, if he exists, would not be "unaware" of what was taking place or bound by acting in any specific manner. Prayer thus appears to be an area in which, while there is emphasis on prayer and healing in many religious traditions, empirical research on the topic may be challenging to adequately carry out.

We also saw that there are objections, from religious communities and persons, not simply to the research on prayer, but to the entire broader enterprise of empirical research on the relationships between religion and health. Religious objections that are sometimes put forward concerning this research are that it is too utilitarian in purpose, seeking to use religion for more secular

ends, rather than focusing on the ends that religions and religious groups deem important, and that, moreover, the existing empirical research often uses very generic measures of religion and spirituality, stripping religions of their distinctive and, often, most central content. While the objections carry some weight, it may be possible to partially address these objections by involving religious communities in the empirical religion and health research itself, from study design, to planning, to research agendas, so as to use more specific and distinctive religious measures, and to focus more on the goals and ends of religious communities. Nevertheless, it is clear that the study questions involved, the measures used, and the uses to which empirical religion and health research is put, are potential areas of tension.

In addition to areas of convergence and tensions, we have also, in the review, highlighted at least some areas in which the empirical literature and the theological literature may benefit from perspectives and themes of the other. A prominent theme across world religions, and in the more specific Biblical material surveyed, was the notion of health as wholeness. Indeed, the notion of health as wholeness appears elsewhere as well, including the World Health Organization (WHO) definition of health as: "Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity," (World Health Association, 1948), a definition which manifests similar concern with health taken holistically and may well have been influenced by broader perspectives on health from religious communities. See Larson (1996) for discussion of possible expansion of the World Health Organization definition to include a spiritual dimension to health. Religious understandings of health and wholeness are, arguably yet broader still than the WHO definition, focusing also on right relationship to, or communion with, the divine, and notions of salvation. While such understandings of health may not be universally shared, they do point to, and emphasize, the potential breadth of the notion of health, and emphasize further how values and ends of individuals and communities may extend well beyond physical health. In seeking to develop effective interventions for health, it may be important to consider the whole range of a person's or community's goals and ends. We noted how, in some cases, other values and ends may be considered more important than, and in tension with, physical health. The theological literatures on health emphasizes and reminds the research community of the potential need for a broad conception of health and well-being.

The theological and philosophical literatures are, have been, and likely will continue to be, helpful for the conduct of empirical research in other ways as well. We discussed how philosophical perspectives on forgiveness, and the conditions under which forgiveness is morally grounded, might be integrated into existing forgiveness interventions and how theological themes likewise can be included in such interventions. Indeed the adaptation of the forgiveness workbook interventions to specifically Christian communities is one such example of this (Greer et al., 2014). Spiritually integrated psychotherapy (Pargament, 2011) is likewise an example of theological ideas finding an important place in the development of interventions that are to be tested empirically. Religious communities and theological ideas may also, as discussed, be important in developing better, and more specific and distinctive measures of religious participation, beliefs, understanding, and identity, and in helping direct the empirical research to consider not only health-related ends but also other ends and outcomes relevant to religious communities themselves.

While the theological and philosophical literature can, and has, helped shape and inform empirical research efforts, it is also the case that empirical research itself may be of use and can help inform religious communities. The empirical research on religion and health such as relating

religious service attendance to lower all-cause mortality, lower depression, less suicide, and better health outcomes generally provides a powerful message for religious communities to convey concerning the importance of the communal aspects of religious participation. In an era in which an increasingly large number of persons, at least in the West, self-identify as spiritual but not religious, religious communities can point to empirical data that suggest that it is not just belief that matters but attendance and community participation as well. Community matters, not just theologically, but empirically for physical health also. The empirical research on service attendance and depression likewise suggests a protective effect of attendance but, in this relationship, there was also an important effect in the reverse direction: those who become depressed are more likely to cease attending services. This empirical research likewise is important to religious communities in that it suggests that efforts might be made to reach out to members who become depressed before they potentially leave their community, perhaps exacerbating depression further. We also saw that the empirical research literature had developed effective forms of forgiveness interventions that have been tested in randomized trials. Forgiveness itself is an important emphasis for many religious communities, and the interventions that have been developed may be effective tools for promoting forgiveness within these communities. Workbook forms of these interventions have been developed to allow for easy and more widespread use, and the workbooks have been tailored also to address specifically religious contexts, currently in the form of Christian workbook interventions, but others could also potentially be developed. Here too the empirical research contributes to and helps inform the life of religious communities.

There are thus areas in which the empirical and theological literatures converge, there are areas of tensions, and also areas in which one literature can inform, and help shape, the other. However, for certain aspects of the religion and health connection, the relation between the empirical research and the theological themes is less clear. In our survey of theological themes, sin and fallenness are the sources of ill-health and brokenness was important in the Biblical conception of health. Likewise, health and healing were itself tied to the notion of salvation, with God ultimately being the source of both healing and salvation. Such ideas provide a powerful interpretative framework for religious communities, and help make sense systematically of the Biblical material and narratives. However, the relation of these interpretative ideas to empirical research is much less clear. To assess the potential truth claims of these interpretative frameworks, there is no empirical study that can directly provide evidence. At best, the interpretative frameworks themselves have to be assessed through other modes of inquiry such as inference to the best explanation, generally within the context of the entire religious system of meaning and understanding (Pannenberg, 1976). The interpretative ideas are powerful but not subject to direct empirical inquiry.

In summary, we have seen a number of areas in which the empirical and theological literature on religion and health suggest convergence including community and health, forgiveness and health, and caregiving and health. We have seen other areas in which there are various forms of tensions including empirically evaluating intercessory prayer, different goals and values of public health and religious institutions in partnerships, as well as potentially different agendas and goals in carrying out the research. The tensions sometimes concern the limits of the very possibility of studying empirically various religious practices, and sometimes concern different goals, ends, and values of research of public health and religious communities. We have also seen areas in which theological or philosophical perspectives might enhance religion and health research including broadening the very notion of health; using theological and philosophical perspectives

on forgiveness to help improve forgiveness interventions; and potentially working with religious communities to use more specific and distinctive measures of religious participation and to address questions, goals, and values of religious communities themselves. We have also seen areas in which the empirical literature can contribute to the life of religious communities including providing a powerful message, corroborated by empirical evidence, for the importance of communal aspects of religious participation; empirical demonstration of the need to reach out to members of religious communities who are suffering from depression before they leave their communities, perhaps exacerbating depression yet further; and further the potential power of forgiveness interventions to facilitate forgiveness in settings in which this might otherwise be difficult. We have further noted some areas in which there seems to be relatively little potential overlap between the empirical and theological literatures, such as the notion of sin as the ultimate source of ill-health, and the relationship between healing and salvation. Here, the theological literature offers more of an interpretative perspective that is difficult to assess directly empirically. Finally, as discussed in the second part of this review, it is clear that there are concrete, religiously based, interventions that can contribute to well-being including, for example, church-based health promotion interventions, religious and faith-based organizations providing health care and public health services, spiritual care in end-of-life and medical settings, forgiveness interventions, and possibly also encouragement to attend services and participate in community life.

Having surveyed the literature on religion and health, we will close with a series of summary propositions, encapsulating much of the discussion of the present review, but offered so as to be subject to further discussion, refinement and potential empirical inquiry:

1. Religion is concerned with health in its broadest sense, that of wholeness or well-being.
2. Religious participation contributes to physical and mental health, and subjective well-being, through shaping behavior, creating systems of meaning, altering one's outlook on life, building community and social support, supporting moral beliefs, and through an experience of the transcendent.
3. It is communal forms of religious participation, rather than merely private practices, that most powerfully affect health.
4. Religious communities and persons can promote health through caregiving, health-promotion interventions, spiritual care in medical and end-of-life settings, forgiveness interventions, and by simply offering a form of meaningful communal participation.
5. A religious understanding of health, illness, and well-being, and of the actions needed to promote health, will often make appeal to theological concepts such as sin, salvation, character, love, divine action, and forgiveness.

From the perspective of faith, religion itself may be seen as essential in complete wholeness and well-being, in coming to a communion with God. From a more strictly empirical perspective, the literature surveyed in this review suggests that religious participation is an important determinant of health: it is strongly associated, over time, with a variety of health outcomes. Religious participation, on these grounds, thus ought to be included in discussions of, and analyses of, health, as is already common practice for other social determinants of health such as race, gender, or income. Religion affects individual behavior, shifts cognition and emotion, shapes communities and public life, and offers justification for values and moral discourse. In these and other ways, it has a

profound effect on health. While much of the past empirical research was weak, there is now, for outcomes such as mortality, depression, and suicide, a reasonably strong knowledge base, built upon good study designs and rigorous analyses. Further research, using longitudinal designs, is still needed for other health outcomes, and for measures of religious participation other than service attendance. However, it is clear that certain forms of religious participation do affect health, that religious institutions play an important role in the provision of health care and public health services, and that religious groups have formed broad, and sometimes profound, conceptions of health itself. Religious participation affects health, it should be considered in discussions of and approaches to health, and it is ultimately concerned with health in its very broadest sense.

ACKNOWLEDGMENTS

The author thanks Harold Koenig, Michael Balboni, and John Peteet for insightful comments on an earlier version of this chapter.

REFERENCES

Allen JD, Pérez JE, Tom L, Leyva B, Diaz D, Torres MI. (2014). A Pilot Test of a church-based intervention to promote multiple cancer-screening behaviors among Latinas. Journal of Cancer Education; 29(1): 136–143.

Amato PR, Rogers SJ. (1997). A longitudinal study of marital problems and subsequent divorce. Journal of Marriage and Family, 59:612–624.

Astin JA, Harkness E, Ernst E. (2000). The efficacy of "distant healing": A systematic review of randomized trials. Annals of Internal Med. 2000;132:903–910.

Astrow AB, Wexler A, Texeira K, He MK, Sulmasy DP. (2007). Is failure to meet spiritual needs associated with cancer patients' perceptions of quality of care and their satisfaction with care? Journal of Clinical Oncology 25(36):5753–5757.

Avalos H. (1999). Health Care and the Rise of Christianity. Peabody, MA: Hendrickson Publishers.

Balboni MJ, Sullivan A, Amobi A, Phelps AC, Gorman D, Zollfrank A, . . . Balboni TA. (2013). Why is spiritual care infrequent at the end of life? Spiritual care perceptions among patients, nurses, and physicians and the role of training. Journal of Clinical Oncology, 30:2538–2544.

Balboni TA, Paulk ME, Balboni MJ, et al. (2010) Provision of spiritual care to patients with advanced cancer: associations with medical care and quality of life near death. Journal of Clinical Oncology, 28: 445–452.

Balboni, TA, Balboni, MJ, Phelps, AC, Wright, AA, Peteet, JR, Block, SD, Lathan C, VanderWeele TJ, Prigerson HG. (2011). Support of terminal cancer patient spiritual needs and associations with medical care costs at the end of life. Cancer, 117:5383–5391.

Balboni TA, Balboni MJ, Enzinger AC, Gallivan K, Paulk ME, Wright A, . . . Prigerson HG. (2013). Provision of spiritual support to advanced cancer patients by religious communities and associations with medical care at the end of life. JAMA Internal Medicine, 73:1109–1117.

Balbuena L, Baetz M, Bowen R. (2013). Religious attendance, spirituality, and major depression in Canada: a 14-year follow-up study. Canadian Journal of Psychiatry 58:225–232.

Baskin TW, Rhody M, Schoolmeesters S, Ellingson C. (2011). Supporting special-needs adoptive couples assessing an intervention to enhance forgiveness, increase marital satisfaction, and prevent depression. The Counseling Psychologist 39:933–955.

Berkman LF, Syme SL. (1979), Social networks, host resistance, and mortality: A nine-year follow-up study of Alameda County residents. American Journal of Epidemiology 109(2):186–204.

Birnbaum R. (1989). Chinese Buddhist traditions of healing and the life cycle. In L. Sullivan (ed.), Healing and Restoring: Health and Medicine in the World's Religious Traditions (pp. 33–58). New York: Macmillan.

Bishop JP. (2009). Biopsychosociospiritual medicine and other political schemes. Christian Bioethics, 15: 254–276.

Blazer DG. (2017). The empirical study of religion/spirituality and psychiatric disorders: Implications for clinical practice. In Balboni MJ, Peteet J (eds.), Spirituality and Religion within the Culture of Medicine: From Evidence to Practice. Oxford University Press.

Brown C G. (2012). Testing Prayer. Boston: Harvard University Press.

Brown PJ. (2014). Religion and global health. In Idler E, (ed.), Religion as a Social Determinant of Public Health. New York: Oxford University Press.

Brown RP. (2003). Measuring individual differences in the tendency to forgive: Construct validity and links with depression. Personality and Social Psychology Bulletin, 29:759–771.

Burdette AM, Weeks J, Hill TD, Eberstein IW (2012). Maternal religious attendance and low birth weight. Social Science & Medicine, 74: 1961–1967.

Bushman BJ, Ridge RD, Das E, Key CW, Busath GM. (2007). When God sanctions killing: Effect of scriptural violence on aggression. Psychological Science 18(3):204–207.

Call VRA, Heaton TB. (1997). Religious Influence on Marital Stability. Journal for the Scientific Study of Religion, 36:382–392.

Campbell MK, Hudson MA, Resnicow K, et al. (2007). Church-based health promotion interventions: Evidence and lessons learned. Annual Review of Public Health 28:213–234.

Catholic Church. Catechism of the Catholic Church. 2nd ed. Libreria Editrice Vaticana, 2000.

Chatters LM (2000). Religion and health: Public health research and practice. Annual Review of Public Health 21:335–367.

Chida Y, Steptoe A, Powell LH. (2009). Religiosity/spirituality and mortality. A systematic quantitative review. Psychotherapy and Psychosomatics 78(2):81–90.

Cohen AB, Malka A, Rozin P, Cherfas L (2006). Religion and unforgiveable offenses. Journal of Personality and Social Psychology 74:85–117.

Coin A, Perissinotto E, Najjar M, Girardi A, Inelmen EM, Enzi G. . . .Sergi G. (2010). Does religiosity protect against cognitive and behavioral decline in Alzheimer's dementia? Current Alzheimer Research, 7:445–452.

Comstock GW, Partridge KB. (1972). Church attendance and health. Journal of Chronic Disease 25: 665–672.

Comstock GW, Tonascia JA. (1977). Education and mortality in Washington County, Maryland. Journal of Health and Social Behavior, 18(1):54–61.

Dalmida SG, Thurman S. (2014). HIV/AIDS. In E. Idler (ed.), Religion as a Social Determinant of Health. New York: Oxford University Press, 369–381.

Davis DE, Worthington EL Jr., Hook JN, Hill PC. (2013). Research on religion/spirituality and forgiveness: A meta-analytic review. Psychology of Religion and Spirituality, 5(4), 233–241.

DeHaven MJ, Hunter IB, Wilder L, Walton JW, Berry J. (2004). Health programs in faith-based organizations: Are they effective? American Journal of Public Health 94(6):1030–36.

Derose KP, Mendel, PJ, Palar K, Kanouse DE, et al. (2011). Religious congregations' involvement in HIV: A case study approach. AIDS and Behavior, 15:1220–1232.

Dervic K, Oquendo MA, Grunebaum MF, Eliis S, Burke AK, Mann JJ. (2004). Religious affiliation and suicide attempt. American Journal of Psychiatry 161:2303–2308.

Desai PN. (1989). Health and Medicine in the Hindu Tradition: Continuity and Cohesion. New York: Crossroad Publishers.

DeShea L, Tzou J, Kang S, Matsuyuki M (2006). Trait forgiveness II: Spiritual vs. religious college students and the five-factor model of personality. Poster presented at the annual conference of the Society for Personality and Social Psychology, Palm Springs, CA.

Dupre ME, Franzese AT, Parrado EA. (2006). Religious attendance and mortality: Implications for the black-white mortality crossover. Demography 43(1): 141–164.

Durkheim E. (1897/1951). Suicide: A Study in Sociology. New York: Free Press.

Ellison CG, Zhang W, Krause N, Marcum JP (2009). Does negative interaction in the church increase psychological distress? Longitudinal findings from the Presbyterian Panel Survey. Sociology of Religion 70 (4): 409–431.

Enright RD, Fitzgibbons RP. (2000). Helping Clients Forgive: An Empirical Guide for Resolving Anger and Restoring Hope. Washington, DC: American Psychological Association.

Fetzer Institute. (1999). Multidimensional measurement of religiousness/spirituality for use in health research: A report of the Fetzer Institute/National Institute on Aging Working Group. Kalamazoo, MI: Author.

Flannelly KJ, Koenig HG, Ellison CG, Galek K, Krause N. (2006). Belief in life after death and mental health: Findings from a national survey. Journal of Nervous and Mental Disease 194(7): 524–529.

Fledman DM. (1986). Health and Medicine in the Jewish Tradition: L'Hayyim—To Life. New York: Crossroad Publishers.

Fortin AH, Barnett KG. (2004). Medical school curricula in spirituality and medicine. Journal of the American Medical Association 291 (23): 2883.

Freedman SR, Enright RD. (1996). Forgiveness as an intervention goal with incest survivors. Journal of Consulting and Clinical Psychology, 64:983–992.

Freud S. (1930/1962). Civilization and Its Discontents. In Standard Edition of the Complete Psychological Works of Sigmund Freud, ed. and trans. by J. Strachey. London: Hogarth Press, 25, 36.

Gallup Poll. (2015–2016). http://www.gallup.com/poll/1690/religion.aspx. Accessed July 28, 2016.

George LK, Ellison CG, CG Larson CG. (2002). Explaining the relationships between religious involvement and health. Psychological Inquiry, 13:190–200.

Gillum RF, King DE, Obisesan TO, Koenig HG (2008). Frequency of attendance at religious services and mortality in a U.S. national cohort. Annals of Epidemiology, 18(2):124–129.

Gordon KC, Burton S, Porter L. (2004). Predicting the intentions of women in domestic violence shelters to return to partners: Does forgiveness play a role? Journal of Family Psychology, 18: 331–338.

Greer CL, Worthington EL Jr, Lin Y, Lavelock CR, BJ Griffin BJ. (2014). Efficacy of a self-directed forgiveness workbook for Christian victims of within-congregation offenders. Spirituality in Clinical Practice, 1(3):218–230.

Griffin BJ, Worthington EL Jr, Lavelock CR, Greer CL, Lin Y, Davis DE, Hook JN. (2015). Efficacy of a self-forgiveness workbook: A randomized controlled trial with interpersonal offenders. Journal of Counseling and Psychology, 62(2):124–136.

Hankerson SH, Lee YA, Brawley DK, Braswell K, Wickramaratne PJ, Weissman MM. (2015). Screening for Depression in African-American Churches. American Journal of Preventive Medicine, 49: 526–533.

Hanson LC, Dobbs D, Usher BM, Williams S, Rawlings J, Daaleman TP. (2008). Providers and types of spiritual care during serious illness. Journal of Palliative Medicine, 11(6):907–914.

Harper Q, Worthington EL, Griffin BJ, Lavelock CR, Hook JN, Vrana SR, Greer CL (2014). Efficacy of a workbook to promote forgiveness: A randomized controlled trial with university students. Journal of Clinical Psychology 70:1158–1169.

Harr J (1996). A Civil Action. New York: Random House.

Hayward RD, Elliott M. (2014). Cross-national analysis of the influence of cultural norms and government restrictions on the relationship between religion and well-being. Review of Religious Research, 56:23–43.

Hill PC, and Hood RW. (1999). Measures of Religiosity. Birmingham, AL: Religious Education Press.

Hill PC, Pargament K I. (2003). Advances in the conceptualization and measurement of religion and spirituality: Implications for physical and mental health research. American Psychologist 58(1): 64–74.

Holmgren MR. (1993). Forgiveness and the intrinsic value of persons. American Philosophical Quarterly, 30: 341–352.

Hummer RA, Rogers RG, Nam CB, Ellison CG. (1999). Religious involvement and US adult mortality. Demography, 36(2):273–285.

Idler EL. (2011). Religion and adult mortality: Group-and individual-level perspectives. In R Rogers, E Crimmins, eds., International Handbook of Adult Mortality. New York, Berlin: Springer, pp.345–377.

Idler EL. (2014a). Religion and physical health from childhood to old age. In EL Idler, ed., Religion as a Social Determinant of Public Health. New York: Oxford University Press.

Idler EL. (2014b). Ingenious institutions: religious origins of health and development organization. In EL Idler, ed., Religion as a Social Determinant of Public Health. New York: Oxford University Press.

Idler EL, Kasl SV. (1997). Religion among disabled and nondisabled elderly persons II: Attendance at religious services as a predictor of the course of disability. Journal of Gerontology: Social Sciences 52B:S306–S316.

Idler EL, Musick MA, Ellison CG, George LK, Krause N, Ory MG, et al. (2003). Measuring multiple dimensions of religion and spirituality for health research: Conceptual background and findings from the 1998 General Social Survey. Research on Aging 25(4): 327–365.

Ingersoll-Dayton B, Campbell R, Ha J (2009). Enhancing forgiveness: A group intervention for the elderly. Journal of Gerontological Social Work 52:2–16.

Ironson G, Kremer H. (2009). Spiritual transformation, psychological well-being, health, and survival in people with HIV. International Journal of Psychiatry in Medicine 39: 263–281.

Joint Commission. (2013). Spirituality, Religion, Beliefs and Cultural Diversity to JCAHO's Standards/Elements of Performance. Manual for Hospitals.

Kee HC. (1992). Medicine and healing. In DN Freedman (ed.), Anchor Bible Dictionary. New York: Doubleday.

Kelsey MT (1995). Healing and Christianity. Minneapolis, MN: Ausburg.

Ketchell A, Pyles L, Canda E. (2011). World Religious Views of Health and Healing. http://spiritualdiversity.ku.edu/sites/spiritualitydiversity.drupal.ku.edu/files/docs/Health/World%20Religious%20Views%20of%20Health%20and%20Healing.pdf

Kim J, Enright RD (2014). A theological and psychological defense of self-forgiveness: Implications for counseling. Journal of Psychology and Theology, 42:260–268.

King DE, Bushwick B. (1994). Beliefs and attitudes of hospital inpatients about faith healing and prayer. Journal of Family Practice 39 (4): 349–352, 1994.

Kiser M, Santibanez S. (2014). Influenza pandemic. In Idler EL, ed, Religion as a Social Determinant of Public Health. New York: Oxford University Press.

Kleinman EM, Liu RT. (2114). Prospective prediction of suicide in a nationally representative sample: Religious service attendance as a protective factor. British Journal of Psychiatry, 204:262–266.

Koenig HG. (2000a). Medicine and religion, Letter to the editor. New England Journal of Medicine, 343:1339.

Koenig, H.G. (2000b). Religion, spirituality, and medicine: Application to clinical practice. JAMA, 284(13):1708.

Koenig, HG. (2008). Medicine, religion, and health: Where science and spirituality meet. West Conshohocken, PA: Templeton Foundation Press.

Koenig, HG. (2009). Research on religion, spirituality and mental health: A review. Canadian Journal of Psychiatry 54(5): 283–291.

Koenig HG, Büssing A. (2010). The Duke University Religion Index (DUREL): A five-item measure for use in epidemiological studies. Religions, 1:78–85.

Koenig HG, George LK, Peterson, BL. (1998). Religiosity and remission of depression in medically ill older patients. American Journal of Psychiatry, 155:536–542.

Koenig HG, Hooten EG, Lindsay-Calksin E, Meador KG. (2010). Spirituality in medical school curricula: Findings from a national survey. International Journal of Psychiatry in Medicine 40(4): 391–398.

Koenig HG, Idler E, Kasl S, Hays JC, George LK, Musick MA. (1999). Religion, spirituality, and medicine: A rebuttal to skeptics. International Journal of Psychiatry in Medicine, 29:123–131.

Koenig HG, King DE, Carson VB. (2012). Handbook of Religion and Health. 2nd ed. Oxford, New York: Oxford University Press.

Koenig HG, Pearce MJ, Nelson B, Shaw SF, Robins CJ, Daher NS, . . . King MB. (2015). Religious vs. conventional cognitive behavioral therapy for major depression in persons with chronic medical illness: A pilot randomized trial. Journal of Nervous and Mental Diseases, 203(4):243–251.

Krause N, Ellison CG, Wulff KM (1998). Church-based emotional support, negative interaction, and psychological well-being: Findings from a national sample of Presbyterian. Journal for the Scientific Study of Religion 37:725–741.

Krause N, Hayward RD. (2012). Religion, meaning in life, and change in physical functioning during late adulthood. Journal of Adult Development, 19: 158–169.

la Cour P, Avlund K, Schultz-Larsen K. (2006). Religion and survival in a secular region. A twenty year follow-up of 734 Danish adults born in 1914. Social Science and Medicine, 62(1):157–164.

Lambert NM, Fincham F, Braithwaite SR, Graham S, Beach S. (2009). Can prayer increase gratitude? Psychology of Religion and Spirituality, 1, 39–49.

Lambert NM, Fincham FD, LaVallee DC, Brantley CW. (2012). Praying together and staying together: Couple prayer and trust. Psychology of Religion and Spirituality. 4:1–9.

Lambert NM, Fincham F, Stillman T, Graham S, Beach S. (2010). Motivating change in relationships: Can prayer increase forgiveness? Psychological Science, 21, 126–132.

Larson DB, Sherrill KA, Lyons JS, Craige FC, Thielman SB, Greenwold MA, Larson SS (1992). "Dimensions and valences of measures of religious commitment found in the American Journal of Psychiatry and the Archives of General Psychiatry, 1978–1989." American Journal of Psychiatry, 149: 557–559.

Larson JS (1996). The World Health Organization's definition of health: Social versus spiritual health. Social Indicators Research 38:181–192.

Lasater TM, Becker DM, Hill MN, Gans KM. (1997). Synthesis of findings and issues from religious-based cardiovascular disease prevention trials. Annals of Epidemiology, 7(57):S47–53.

Levin J. (2014). Faith-based initiatives in health promotion: History, challenges, and current partnerships. American Journal of Health Promotion, 28:139–141.

Levin J. (2016). Partnerships between the faith-based and medical sectors: Implications for preventive medicine and public health. Preventive Medicine Reports, 4:344–350.

Li S, Okereke OI, Chang SC, Kawachi I, VanderWeele TJ (2016a). Religious service attendance and lower depression among women: A prospective cohort study. Annals of Behavioral Medicine. 50:876-884.

Li S, Stamfer M, Williams DR, VanderWeele TJ. (2016b). Association between religious service attendance and mortality among women. JAMA Internal Medicine, 176(6):777–785.

Lim C, Putnam RD. (2010). Religion, social networks, and life satisfaction. American Sociological Review, 75:914–933.

Lin WF, Mack D, Enright RD, Krahn D, Baskin TW. (2004). Effects of forgiveness therapy on anger, mood, and vulnerability to substance use among inpatient substance-dependent clients. Journal of Consulting and Clinical Psychology, 72:1114–1121.

Litwin H. (2007). What really matters in the social network-mortality association? A multivariate examination among older Jewish-Israelis. European Journal of Ageing 4(2): 71–82.

Lucchetti G, Lucchetti ALG, Koenig HG (2011). Impact of spirituality/religiosity on mortality: Comparison with other health interventions. Explore, 7:234–238.

Mahoney A, Pargament KI, Tarakeshwar N, Swank AB. (2008). Religion in the home in the 1980s and 1990s: A meta-analytic review and conceptual analysis of links between religion, marriage, and parenting. Psychology of Religion and Spirituality, S(1), 63–101.

Marty ME (1983). Health and Medicine in Lutheran Tradition: Being Well. New York: Crossroad Publishing.

Maselko J, Hayward RD, Hanlon A, Buka S, Meador K. (2012). Religious service attendance and major depression: A case of reverse causality? American Journal of Epidemiology 175(6):576–83.

Maves PB (1960). Aging, Religion, and the Church. Handbook of Social Gerontology. Chicago, IL: University of Chicago Press.

May GG. (2004). The Dark Night of the Soul. A Psychiatrist Explores the Connection Between Darkness and Spiritual Growth. New York City: HarperCollins.

McCarty B, Kinghorn W. (2017). Medicine, religion, and spirituality in theological context. In MJ Balboni, J Peteet J, eds., Spirituality and Religion within the Culture of Medicine: From Evidence to Practice. Oxford University Press.

McCormick, RA. (1984). Health and Medicine in the Catholic Tradition: Tradition in Transition. New York: Crossroad Publishing.

McCullough ME, Hoyt WT, Larson DB, Koenig HG, Thoresen C. (2000). Religious involvement and mortality: A meta-analytic review. Health Psychology. 19(3):211.

McCullough ME, Fincham FD, Tsang J. (2003). Forgiveness, forbearance, and time: The temporal unfolding of transgression-related interpersonal motivations. Journal of Personality and Social Psychology, 84, 540–557.

McCullough ME, Root LM, Cohen AD. (2006). Writing about the benefits of an interpersonal transgression facilitates forgiveness. Journal of Consulting and Clinical Psychology, 74(5):887–897.

McCullough ME, Root LM, Tabak B, Witvliet CVO. (2009). Forgiveness. In SJ Lopez, CR Snyder, eds., Handbook of Positive Psychology, 2nd ed., (pp. 427–435). New York: Oxford.

Morris, AD (1986). Origins of the Civil Rights Movements. New York: Free Press.

Murray LR, Garcia J, Munoz-Laboy M, Parker RG. (2011). Strange bedfellows: The Catholic Church and Brazilian National AIDS Program in the Response to HIV/AIDS in Brazil. Social Science and Medicine 72:945–952.

Musick MA, House JS, Williams DR. (2004). Attendance at religious services and mortality in a national sample. Journal of Health and Social Behavior, 45(2):198–213.

Mwenda S. (2011). The African Christian Health Association Platform: Showcasing the Contributions of CHAs. Contact 190:2.

National Consensus Project (2009). NCP Clinical Practice Guidelines for Quality Palliative Care. http://www.nationalconsensusproject.org/guideline.pdf. Accessed March 15, 2014.

Nicklin DE (2000). Medicine and religion, letter to the editor. New England Journal of Medicine, 343:1340.

Nisbet PA, Duberstein PR, Conwell Y, Seidlitz L. (2000). The effect of participation in religious activities on suicide versus natural death in adults 50 and older. Journal of Nervous and Mental Disorders, 188(8): 543–546.

North J (1987). Wrongdoing and forgiveness. Philosophy 62: 499–508.

Norton MC, Singh A, Skoog I, et al. Church attendance and new episodes of major depression in a community study of older adults: The Cache County study. Journal of Gerontology B: Psychological Science and Social Science 63(3):P129–P137.

Numbers RL Amundsen DW (1985). Caring and Curing: Health and Medicine in the Western Religious Traditions. London: Macmillan Publishing.

Oman D (2013). Defining religion and spirituality. In RF Paloutzian, CL Park eds., Foundations of the Psychology of Religion. New York: Guilford Press.

Oman D, Kurata JH, Strawbridge WJ, Cohen, RD. 2002. Religious attendance and cause of death over 31 years. International Journal of Psychiatry in Medicine 32(1):69–89.

Oquendo MA, Dragatsi D, Harkavy-Friedman J, et al. (2005). Protective factors against suicidal behavior in Latinos. Journal of Nervous and Mental Diseases 193:438–443.

Otolok-Tanga E, Atuyambe L, Murphey CK, Ringheim KE, Woldehanna S. (2007). Examining the actions of faith-based organizations and their influence on HIV/AIDS-related stigma: a case study of Uganda. African Health Sciences 7(1): 55–60.

Oxman TE, Freeman DH Jr., Manheimer ED. (1995). Lack of social participation or religious strength and comfort as risk factors for death after cardiac surgery in the elderly. Psychosomatic Medicine, 57(1):5–15.

Page RL, Ellison CG, Lee J. (2009). Does religiosity affect health risk behaviors in pregnant and postpartum women? Maternal Child Health Journal 13: 621–632.

Pannenberg W (1976). Theology and the Philosophy of Science. St. Louis, MO: Westminster Press.

Pargament KI (2011). Spiritually Integrated Psychotherapy: Understanding and Addressing the Sacred. New York: Guilford Press.

Pargament KI, Koenig HG, Perez LM. (2000). The many methods of religious coping: Development and initial validation of the RCOPE. Journal of Clinical Psychology, 56(4):519–543.

Pargament KI, Koenig HG, Tarakeshwar N, Hahn J. (2001). Religious struggle as a predictor of mortality among medically ill elderly patients: A two-year longitudinal study. Archives of Internal Medicine, 161: 1881–1885.

Pargament KI, Koenig HG, Tarakeshwar N, Hahn J. (2004). Religious coping methods as predictors of psychological, physical and spiritual outcomes among medically ill elderly patients: A two-year longitudinal study. Journal of Health Psychology, 9:713–730.

Pew Forum. (2012). The Global Religious Landscape. http://www.pewforum.org/files/2014/01/global-religion-full.pdf

Phelps AC, Lauderdale KE, Alcorn S, Dillinger J, Balboni MT, Van Wert M, . . . Balboni TA (2012). Addressing spirituality within the care of patients at the end of life: Perspectives of advanced cancer patients, oncologists, and oncology nurses. Journal of Clinical Oncology, 30:2538–2544.

Pilch JJ (2000). Healing in the New Testament. Minneapolis, MN: Fortress Press.

Preston JL, Ritter RS, Hernandez JI. (2010). Principles of religious prosociality: A review and reformulation. Social and Personality Psychology Compass 4(8):574–590.

Preston JL, Ritter RS. (2013). Different effects of religion and God on prosociality with the ingroup and outgroup. Personality and Social Psychology Bulletin, 39:1471–1483.

Puchalski CM, Rumbold B, Cobb M, Zollfrank A, Garlid CF. (2012). Curriculum development, courses, and CPE. In CM Puchalski, M Cobb, B Rumbold B, eds., Oxford Textbook of Spirituality in Healthcare, New York, London: Oxford University Press,.

Puchalski CM. (2004). The FICA spiritual history tool. Journal of Palliative Medicine, 17(1):105–106.

Puchalski CM, Blatt B, Kogan M, Butler A. (2014). Spirituality and health: The development of a field. Academic Medicine, 89(1):10–16.

Putnam RD, Campbell DE. (2012). American Grace. New York: Simon & Schuster.

Rahman F. (1987). Health and Medicine in the Islamic Tradition: Change and Identity. New York: Crossroad Publishers.

Rasic DT, Belik SL, Elias B, Katz LY, Enns M, Sareen J. (2009). Spirituality, religion and suicidal behavior in a nationally representative sample. Journal of Affective Disorders, 114:32–40.

Roberts L, Ahmed I, Hall S. (2000). Intercessory prayer for the alleviation of ill health. Cochrane Database of Systematic Reviews 2000, Issue 2.

Roberts L, Ahmed I, Hall S. (2007). Intercessory prayer for the alleviation of ill health. Cochrane Database of Systematic Reviews 2007, Issue 1.

Roberts L, Ahmed I, Hall S, Davison A. (2009). Intercessory prayer for the alleviation of ill health. The Cochrane Library 2009, Issue 3.

Robins JM, Hernán M, Brumback B. (2000). Marginal structural models and causal inference in epidemiology. Epidemiology, 11(5);550–560.

Rogers RG. (1996). The effects of family composition, health, and social support linkages on mortality. Journal of Health and Social Behavior, 37(4);326–338.

Rye MS, Pargament KI, Pan W, Yingling DW, Shogren KA, Ito M. (2005). Can group interventions facilitate forgiveness of an ex-spouse? A randomized clinical trial. Journal of Consulting and Clinical Psychology, Oct;73(5):880–892.

Saint John of the Cross. (1585). The Dark Night of the Soul.

Sanua VD. (1969). Religion, mental health, and personality: A review of empirical studies. American Journal of Psychiatry, 125:1203–1213.

Schnall E, Wassertheil-Smoller S, Swencionis C, et al. (2010). The relationship between religion and cardiovascular outcomes and all-cause mortality in the Women's Health Initiative Observational Study. Psychology and Health, 25(2):249–263.

Shariff AF, Willard, AK, Andersen T, Norenzayan A. (2016). Religious priming: A meta-analysis with a focus on prosociality. Personality and Social Psychology Review 20(1):27–48.

Sherman LW, Strang H, Angel C, Woods D, Barnes GC, Bennett S, Inkpen N. (2005). Effects of face-to-face restorative justice on victims of crime in four randomized, controlled trials. Journal of Experimental Criminology 1:367–395.

Shuman JJ, Meador KG. (2003). Heal Thyself: Spirituality, Medicine, and the Distortion of Christianity. New York: Oxford University Press.

Sloan RP, Bagiella E, Powell T. (1999). Religion, spirituality, and medicine. Lancet, 353(9153):664–667.

Sloan RP, Bagiella E, VandeCreek L, et al. (2000). Should physicians prescribe religious activities? New England Journal of Medicine, 342:1913–1916.

Smith D. (1986). Health and Medicine in the Anglican Tradition: Conscience, Community, and Compromise. New York: Crossroad Publishing.

Smith TB, ME McCullough ME, and Poll J. (2003). Religiousness and depression: Evidence fora main effect and the moderating influence of stressful life events. Psychological Bulletin 129(4): 614–636.

Sorenson AM, Grindstaff CF, Turner RJ. (1995). Religious involvement among unmarried adolescent mothers: A source of emotional support? Sociology of Religion, 56:71–81.

Spoerri A, Zwahlen M, Bopp M, Gutzwiller F, Egger M.; Swiss National Cohort Study. (2010). Religion and assisted and non-assisted suicide in Switzerland: National Cohort Study. International Journal of Epidemiology, 39(6):1486–1494.

Staub E, Pearlman LA, Gubin A, Hagengimana A. (2005). Healing, reconciliation, forgiving and the prevention of violence after genocide or mass killing: An intervention and its experimental evaluation in Rwanda. Journal of Social and Clinical Psychology, 24:297–334.

Steinhauer KE, Christakis EC, Clipp EC, et al. (2000). Factors considered important at the end of life by patients, family, physicians, and other care providers. Journal of the American Medical Association, 284:2476–2482.

Strawbridge WJ, Cohen RD, Shema SJ, Kaplan GA. (1997). Frequent attendance at religious services and mortality over 28 years. American Journal of Public Health, 87(6):957–961.

Strawbridge W J, Shema SJ, Cohen RD, Kaplan GA. (2001). Religious attendance increases survival by improving and maintaining good health behaviors, mental health, and social relationships. Annals of Behavioral Medicine 23(1): 68–74.

Sullivan LE (1989). Healing and Restoring: Health and Medicine in the World's Religious Traditions. New York: Macmillan.

Sulmasy DP. (2009). The Rebirth of the Clinic: An Introduction to Spirituality in Health Care. Washington, DC. Georgetown University Press, 2009.

Sweet L. (1994). Health and Medicine in the Evangelical Tradition: "Not by Might Nor Power." Philadelphia, PA: Trinity Press International.

Teinonen T, Vahlberg T, Isoaho R, Kivela SL. (2005). Religious attendance and 12-year survival in older persons. Age and Ageing 34(4): 406–409.

Thompson, LY, Snyder CR, Hoffman L, Michael ST, Rasmussen HN, Billings LS, . . .Roberts DE. (2005). Dispositional forgiveness of self, others, and situations. Journal of Personality 73: 313–359.

Thompson MP, Ho CH, Kingree JB. (2007). Prospective associations between delinquency and suicidal behaviors in a nationally representative sample. Journal of Adolescent Health, 40(3):232–237.

Toussaint LL, Worthington EL, Williams DR. (2015). Forgiveness and Health. New York: Springer.

Trinitapoli J, Weinreb A. (2012). Religion and AIDS in Africa. New York: Oxford University Press.

Tutu, D. (2000). No Future Without Forgiveness. New York: Image.

Underwood LG (2011). The daily spiritual experience scale: Overview and results. Religions, 2:29–50.

Underwood LG, Teresi JA. (2002). The daily spiritual experience scale: Development, theoretical description, reliability, exploratory factor analysis, and preliminary construct validity using health-related data. Annals of Behavioral Medicine 24(1): 22–33.

VanderWeele TJ. (2013). Re: "Religious service attendance and major depression: a case of reverse causality?" American Journal of Epidemiology, 177(3):275–276.

VanderWeele TJ (2015). Explanation in Causal Inference: Methods for Mediation and Interaction. New York: Oxford University Press.

VanderWeele TJ, Li S, Tsai A, Kawachi I. (2016a). Association between religious service attendance and lower suicide rates among US women. JAMA Psychiatry, 73:845-851.

VanderWeele TJ, Yu J, Cozier YC, Wise L, Rosenberg L, Shields AE, Palmer JR. (2016b). Religious service attendance, prayer, religious coping, and religious-spiritual identity as predictors of all-cause mortality in the Black Women's Health Study. American Journal of Epidemiology, 03 March 2017; DOI: https://doi.org/10.1093/aje/kww179.

VanderWeele TJ, Jackson JW, Li S. (2016c). Causal inference and time-varying exposures: A case study of religion and mental health. Social Psychiatry and Psychiatric Epidemiology, 51:1457–1466.

Van Ness PH. (1999). Religion and public health. Journal of Religion and Health, 38:15–26.

Van Ness PH. (2013). Religion, public health, and the revaluation of risk. HSPH Lecture Series on Religion and Health March 29, 2013. http://webapps.sph.harvard.edu/accordentG3/episeminar-20130329/main.htm?layout=default&type=ms&archived=visible&bandwidth=high&audioonly=no

Van Voorhees BW, Paunesku D, Kuwabara SA, et al. (2008). Protective and vulnerability factors predicting new-onset depressive episode in a representative of U.S. adolescents. Journal of Adolescent Health, 42(6):605–616.

Vaux KL. (1984). Health and Medicine in the Reformed Tradition: Promise, Providence, and Care. New York: Crossroad Publishing.

Vitz PC, Meade JM. (2011). Self-forgiveness in psychology and psychotherapy: A critique. Journal of Religion and Health, 50:248–263.

Wade NG, Hoyt WT, Kidwell JE, Worthington EL. (2014). Efficacy of psychotherapeutic interventions to promote forgiveness: A meta-analysis. Journal of Consulting and Clinical Psychology, 82:154–170.

Waltman MA, Russell DC, Coyle CT, Enright RD, Holter AC, Swoboda CM. (2009). The effects of a forgiveness intervention on patients with coronary artery disease. Psychology and Health, 24:11–27.

Wilkinson J. (1998). The Bible and Healing. Grand Rapid, MI: WM. B. Eerdmans Publishing.

Winkelman WD, Lauderdale K, Balboni MJ, Phelps AC, Block SD, VanderWeele TJ, Balboni TA (2011). The relationship of spiritual concerns to the quality of life of advanced cancer patients. Journal of Palliative Medicine, 14:1022–1028.

World Health Association. (1948). Preamble to the constitution of the World Health Organization. In International Health Conference (Official records of the World Health Organization, no. 2, p. 100). New York, NY: World Health Association.

World Health Organization. (2004). Palliative care: Symptom management and end of life care. Integrated management of adolescent and adult illness. Available from http://www.who.int/hiv/pub/imai/generic-palliativecare02004.pdf. Accessed March 15, 2014.

Worthington E.L Jr. (2001). How can I ever forgive? Catholic Digest, 65 (7), 34–43.

Worthington EL. (2005). Handbook of Forgiveness. New York: Brunner-Routledge.

Worthington EL. (2006). Forgiveness and Reconciliation: Theory and Application. New York: Routledge.

Worthington EL, Davis DE, Hook JN, Van Tongeren DR, Gartner AL, Jennings II DJ, Greer CL, Lin Y. Religion and spirituality and forgiveness. (2013). In R Paloutzian, C Park, eds., Handbook of Religion and Spirituality, 2nd ed. New York: Guilford Press, pp. 476–497.

Yeager D, Glei DA, Au M, Lin H-S, Sloan RP, and Weinstein M. (2006). "Religious involvement and health outcomes among older persons in Taiwan. Social Science and Medicine 63(8):2228–2241.

Young R, Sweeting H, Ellaway A. (2011). Do schools differ in suicide risk? The influence of school and neighbourhood on attempted suicide, suicidal ideation and self-harm among secondary school. BMC Public Health, 11:874.

Zollfrank AA, Trevino KM, Cadge W, Balboni MJ, Thiel MM, Fitchett G., . . . Balboni TA. (2015). Teaching healthcare providers to provide spiritual care: A pilot study. Journal of Palliative Medicine, 18:408–414.