

Religious Commitment and Health Status

A Review of the Research and Implications for Family Medicine

Dale A. Matthews, MD; Michael E. McCullough, PhD; David B. Larson, MD, MSPH;
Harold G. Koenig, MD, MHSc; James P. Swyers, MA; Mary Greenwold Milano

The empirical literature from epidemiological and clinical studies regarding the relationship between religious factors (eg, frequency of religious attendance, private religious involvement, and relying on one's religious beliefs as a source of strength and coping) and physical and mental health status in the areas of prevention, coping, and recovery was reviewed. Empirical studies from the published literature that contained at least 1 measure of subjects' religious commitment and at least 1 measure of their physical or mental health status were used. In particular, studies that examined the role of religious commitment or religious involvement in the prevention of illness, coping with illnesses that have already arisen, and recovery from illness were highlighted. A large proportion of published empirical data suggest that religious commitment may play a beneficial role in preventing mental and physical illness, improving how people cope with mental and physical illness, and facilitating recovery from illness. However, much still remains to be investigated with improved studies that are specially designed to investigate the connection between religious involvement and health status. Nevertheless, the available data suggest that practitioners who make several small changes in how patients' religious commitments are broached in clinical practice may enhance health care outcomes.

Arch Fam Med. 1998;7:118-124

Surveys of the US population during the past 60 years have established that religion holds a central place in the lives of many Americans.¹ Ninety-five percent of Americans believe in God. More than 50% pray daily, and more than 40% attend church weekly. Almost three quarters of Americans say that their approach to life is grounded in their religious faith.^{2,3}

Some clinical research suggests that the strength and prevalence of religious beliefs and practices in the US population should be considered in clinical decision making for physical and mental health.⁴ Indeed, some researchers have recommended that physicians consider the re-

ligious orientations of their patients when designing or implementing a clinical treatment plan.⁵⁻⁹ Patients also want physicians to take their religious commitment into account in treatment planning. In a recent survey, more than 75% of patients believed that their physician should address spiritual issues as part of their medical care.¹⁰ About 40% of patients want their physician to discuss their religious faith with them.^{10,11} Almost 50% of patients want their physician to pray with them.¹⁰

Until recently, assessing patients' religious belief systems was often viewed as unnecessary and even inappropriate.¹²⁻¹⁴ A vocal minority of scholars in the mental health professions has suggested that religious commitment is a risk factor for psychiatric problems.¹⁵⁻¹⁷ While many factors may have contributed to the estrangement of religion and clinical science, this traditional division could be considered

From the Division of Internal Medicine, Georgetown University School of Medicine, Washington, DC (Dr Matthews); the National Institute for Healthcare Research, Rockville, Md (Drs McCullough and Larson and Ms Milano); the Departments of Psychiatry, Duke University Medical Center, Durham, NC (Drs Larson and Koenig), and Northwestern University Medical School, Chicago, Ill (Dr Larson); and James P. Swyers Enterprises, Takoma Park, Md (Mr Swyers).

symptomatic of the dichotomy between religion and science that has pervaded the western intellectual spirit for 400 years.

Although religion has traditionally been dismissed by the health professions as having little positive (or perhaps even a negative) effect on physical and mental health status, this situation has changed substantially during the past few years. Scholars have recently begun to call for the inclusion of religious education in the medical school curriculum.¹⁸ In addition, the American Psychiatric Association's Board of Trustees passed a resolution stating that "it is useful for clinicians to obtain information on the religious or ideologic orientation and beliefs of their patients so that they may properly attend to them in the course of treatment."¹⁹ This resolution represents a shift from earlier assumptions in the psychiatric community about the irrelevance or even pathological nature of religious commitment in the clinical setting.^{9,20} Furthermore, in March 1994, the Accreditation Council for Graduate Medical Education distributed the new *Program Requirements for Residency Education in Psychiatry*, which all training programs were required to comply with beginning January 1, 1995.²¹ Two new requirements specifically related to adequate training regarding religious commitment were included.

This recent change regarding the relevance and importance of addressing the religious orientation of patients as a routine component of clinical care coincides with societal changes that have (1) placed currency on sensitivity to and appreciation of ethnocultural differences; (2) eroded confidence in the possibility of a "value-free" scientific method that is bereft of reflection on ethical, philosophical, and spiritual values; and (3) increased interest in religious and spiritual pursuits among the general population. The change also coincides with the growing number of studies demonstrating the potentially positive role that religious commitment may play in promoting physical and mental health. For example, Larson et al²² analyzed the association (whether positive, negative, or neutral) be-

tween religious commitment and mental health status in studies published in 2 leading psychiatric journals from 1978 to 1989. They found that 84% of the religion-mental health associations indicated that religious commitment was clinically beneficial, while only 16% of the results suggested that religious commitment was either harmful (2.7%) or neutral (13.5%).

In a systematic review of research published in the *Journal of Family Practice* over a 10-year period, Craigie et al²³ drew additional attention to the positive relationship between religious commitment and physical health. Similar to Larson et al,²² they found that 81% of the relevant studies showed a positive association between religious commitment and health status. In contrast, only 15% of studies found a neutral relationship between religious commitment and health status and only 4% of studies found a negative association. These positive associations between religious commitment and health status have been found among study populations with diverse characteristics (eg, clinical disorder, age, sex, race or ethnicity, nationality, and religious affiliation) and with different experimental methods.²⁴⁻²⁸

Until recently, the literature on the relationship between religious commitment and physical and mental health has been overlooked by the medical community at large.⁴ Thus, this review devotes attention to this growing research. This review highlights studies linking religious commitment to (1) prevention of disease, (2) coping with illness, and (3) recovery from illness. Two conceptual issues that formed boundaries for this review are (1) the need to distinguish between religious commitment and spirituality and (2) the potential problem of publication bias in the research on religious commitment and health status.

DIFFERENTIATING BETWEEN RELIGIOUS COMMITMENT AND SPIRITUALITY

While terms such as "religion" and "religious" are often used in the same breath as terms like "spirituality" and "spiritual," the focus of this review

is on religious commitment rather than spirituality. Religious commitment refers to the participation in or endorsement of practices, beliefs, attitudes, or sentiments that are associated with an organized community of faith.^{23,24} Spirituality might be loosely defined as "personal views and behaviors that express a sense of relatedness to the transcendental dimension or to something greater than the self."²⁹

As important as spirituality may be to medical practice,^{30,31} we based our decision to exclude spirituality from our review on 3 factors. First, little consensus exists in the scientific community on how to define spirituality (whereas scientists have managed to develop greater consensus about how to define religious commitment). Second, instruments for measuring spirituality in the clinical context are only beginning to be developed³² (while many more measures of religious commitment have been applied in the clinical context). Third, as Levin³³ has noted, empirical research on spirituality and health indexes is limited (whereas empirical research on religious commitment and health status is more abundant). Thus, this review highlights the conclusions from this latter corpus of published literature.

DOES PUBLICATION BIAS EXIST IN THE LITERATURE ON RELIGIOUS COMMITMENT AND HEALTH STATUS?

In most areas of empirical research, findings are more likely to be published when they attain statistical significance and cohere with the expectations that the field has developed about an area of research.^{34,35} At first glance, it would seem likely that the research on religious commitment and health status suffers from a similar publication bias, leading to an overly optimistic corpus of literature on the relationship between religious commitment and health status. Two factors cast doubt on the possibility that this corpus of literature is plagued by publication bias. First, about 80% of the published studies find that religious commitment is related to better health status and outcomes. Many unpublished studies finding

neutral effects for religious commitment would be necessary to overturn the weight of the published evidence.

Second, religious commitment has been peripheral or secondary in most of the medical studies that have addressed religious commitment. Evidence about the effects of religious commitment is often found buried in a table or described as an afterthought in the "Discussion" section of an article. Because the decision to publish studies in which religious commitment was a peripheral or secondary variable was probably not contingent on the significance of the effects of religious commitment, publication bias in religious commitment research may actually be less than in areas that have been the primary foci for much empirical research.

PREVENTION OF ILLNESS

Recent research suggests that religious commitment may help prevent many clinical problems, including depression, substance abuse, physical illness, and early mortality.^{36,37}

Depression

Religious commitment has been associated with a decreased prevalence of depression.³⁸⁻⁴³ Research has also demonstrated that, in addition to protecting against depression, higher levels of religious commitment may afford protection against one of the most severe outcomes of depression: suicide. Gartner et al²⁸ conducted a review of empirical studies on the relationship between religious commitment and mental health and found that religious commitment was inversely related to suicide in 13 (81%) of 16 of the reviewed studies. No study found that higher levels of religious commitment increased the risk of suicide. For example, in a population study of Washington County, Maryland, Comstock and Partridge⁴⁴ found that people who did not attend church were 4 times as likely to kill themselves as frequent churchgoers. Several studies have also documented an association between increases in suicide rates nationwide

and a corresponding national decline in church attendance.⁴⁵⁻⁴⁷ Stack⁴⁵ found that the rate of church attendance within a given population predicted suicide rates more effectively than any other factor studied, including unemployment.

Despite its continued use, frequency of church attendance is not a good measure for investigating the causal connection between religious commitment and suicide, as many health conditions (including depression) cause reductions in activities (including church attendance) and a greater likelihood of suicide. Additionally, depressed or socially isolated persons may feel less welcome in church than nondepressed persons and, thus, may be discouraged from attending church. While it would be unwarranted from the available data to conclude that religious attendance causes reductions in the risk of depression or suicide, the available data are promising enough to warrant more sophisticated investigations of religious commitment, depression, and suicide.

Substance Abuse

Religious commitment may also be related to a lower incidence of substance abuse. Numerous studies have linked alcohol and other drug abuse to a lack of purpose in life,^{48,49} which is often associated with low levels of religious involvement. Larson and Wilson⁵⁰ demonstrated this religious void in their study of the religious life of alcoholics. When surveying a group of alcoholics about their religious histories, the researchers discovered that 89% of the alcoholics had lost interest in religion during their teenaged years, whereas among the control group, 48% had an increased interest in religion and 32% had remained unchanged.

Individuals with high degrees of religious commitment are also less likely to use alcohol and other drugs and, even if they do so, are less likely to engage in heavy use and suffer its clinical and social consequences.^{28,51-53} Moore et al⁵³ evaluated the status of 1337 men who were medical school students at The Johns Hopkins University School of Medicine, Balti-

more, Md, between 1948 and 1964. During their medical school training, respondents provided information on their religious affiliation (ie, affiliation with a religious faith), along with their age, family ancestry, and health habits. In 1986, the medical students—who were by then physicians—provided data on their alcohol consumption. Moore et al⁵³ found that being unaffiliated with a religious group in medical school was a strong predictor of the future development of an alcohol problem. More recently, Koenig et al⁵⁴ examined the associations between religious variables and alcohol abuse and dependence among approximately 3000 North Carolina residents aged 18 years and older and found that recent and lifetime alcohol disorders were less frequently found among weekly churchgoers and among people who considered themselves "born again."

Gorsuch and Butler⁵¹ conducted a literature review to identify social and psychological factors that may predispose individuals to abuse drugs. The researchers found that whenever religious commitment was included in a study, religious commitment predicted who had not used an illicit drug—regardless of whether the research was conducted prospectively or retrospectively and "regardless of whether the religious variable is defined in terms of membership, active participation, religious upbringing, or the meaningfulness of religion as viewed by the person."⁵¹ Gartner et al²⁸ replicated this finding in their review of the published literature on substance abuse, which was published 15 years after the Gorsuch and Butler review. In 11 of the 12 published studies dealing with alcohol and other drug abuse, Gartner et al²⁸ found that religious commitment was linked to reduced risk for alcohol and other drug abuse.

Hays et al⁵² also identified religious commitment as a factor that could decrease the risk of substance abuse in adolescents. These researchers analyzed data from a national probability sample of 13- to 18-year-old adolescents to examine the relationship between predictors of risk, such as personality, environmental and behavioral factors,

and alcohol and other drug use among adolescents. They assessed the following risk factors for alcohol and other drug abuse: parental support and affection, parental approval of friends, religiousness, self-esteem, social conformity and commitment, and perceived alienation. Conformity, commitment, and religiousness were the factors most strongly and negatively correlated with alcohol, marijuana, and other drug use.

The mechanisms by which religious involvement (and particularly religious attendance) exerts an effect on alcohol and other drug abuse are not completely understood. However, several possible mechanisms exist. First, attendance at religious services may influence attendees' adherence to the norms of religious groups that discourage alcohol and other drug use. Second, religious attendance may influence individuals to develop friendships with peers who do not themselves abuse alcohol or other drugs. Third, religious attendance may promote greater mental health and well-being, which militates against the initiation of substance abuse. Fourth, alcohol and other drug users simply may not feel welcome in church and, thus, attend less frequently than do nonabusers. Perhaps the next generation of studies on the relationship between religious commitment and alcohol and other drug use will help researchers to evaluate these possible explanations.⁵⁵

Physical Illness

Numerous recent studies have suggested that religious commitment is associated with a lower prevalence of several chronic diseases as well. Levin and Schiller²⁴ reviewed clinical research examining the relationship between religion and disease status. Most studies that they located found positive relationships between religious commitment and physical health. In another review, Levin and Vanderpool²⁵ specifically examined the relationship between religious attendance and physical health. In 81% of the reviewed studies, the frequency of religious attendance (eg, attendance at worship services at a church, syna-

gogue, or mosque) was positively associated with health status. This finding was consistent across an array of illnesses ranging from cancer to cardiovascular disease. In the remaining 19% of studies, the authors found overall trends indicating a beneficial effect of religious attendance on health status, although these trends were not statistically significant.

Some have suspected that the relationship between frequency of religious attendance and health status is a spurious one, as most studies to date have used cross-sectional designs. Also, it has been suspected that frequent religious attendance is simply a proxy for functional ability, especially in older adults whose health may prevent them from regular religious attendance.^{56,57} However, in at least one prospective cohort study with older adults, public religious involvement at baseline was negatively associated with disability at 1-, 2-, and 3-year follow-ups, even after controlling for baseline disability.⁵⁸ Thus, it appears that the relationship between church attendance and health status cannot be explained exclusively as a methodological artifact.

In a later review, Levin and Vanderpool⁵⁹ examined research on the relationship between religious commitment and blood pressure. Levin and Vanderpool found that most published studies showed that more religiously committed patients had lower blood pressures. In addition, they found that the rates of hypertension-related morbidity and mortality were significantly lower in typically conservative religious groups such as Seventh-Day Adventists and Mormons than in comparison populations. Based on this finding, Levin and Vanderpool posited that adherence to health-promoting behaviors, such as abstaining from alcohol, red meat, and tobacco, could partially explain the lower incidence of disease that has been observed among members of conservative religious groups. Additionally, they suggested that devout religious commitment may promote greater peace, self-confidence, and purpose, all of which characterize the "type B" behavior pattern that seems to protect against coronary heart disease.⁶⁰

While both of these hypotheses offer potential explanations for the lower incidence of disease among the religiously committed, further research has indicated that the health benefits of religion may extend beyond health-promoting behaviors and beliefs. One study⁶¹ explored the relationship between religion and hypertension by comparing the blood pressures of religious smokers and nonsmokers with the blood pressures of nonreligious smokers and nonsmokers. Smokers who rated religion as being important to them were more than 7 times less likely to have an abnormal diastolic pressure than smokers whose religion was not personally important. Smokers who attended church at least once a week were 4 times less likely to have an abnormal diastolic pressure than smokers who attended church infrequently. Thus, religious commitment might contribute to the prevention of health problems even among people who engage in risky behaviors such as smoking.

Mortality

Religious commitment may increase longevity. Several prospective studies^{44,58,62-64} have assessed the longitudinal relationship between religious commitment (eg, frequency of religious attendance or number of people known in one's congregation) and longevity. For example, Comstock and Partridge⁴⁴ analyzed the 5-year mortality rates among adults in Washington County, Maryland, to assess whether church attendance was related to longevity. They found that the risk of dying from arteriosclerotic heart disease for men who attended church at least once a week was only 60% of the risk of men who attended church infrequently. This finding persisted after adjusting for other risk factors known to contribute to cardiovascular disease. For women, the risk of dying from arteriosclerotic heart disease was about twice as high among infrequent church attendees as among those who attended church at least weekly.

The same study also found that death rates from pulmonary emphysema were more than twice as high for white men who attended church

infrequently compared with white men who attended church at least once a week. In addition, deaths due to cirrhosis of the liver for the same comparison group were almost 4 times as high among infrequent church attendees compared with those who attended church at least weekly.

In at least one study, religious commitment was associated with shorter, rather than longer, survival. Janoff-Bulman and Marshall⁶⁴ attempted to identify psychosocial predictors of mortality in a sample of 25 institutionalized older adults. Along with measures of perceived control, well-being, purpose in life, and demographic variables, the investigators also assessed the importance that participants ascribed to their religious beliefs and the relative change in the importance of those beliefs since their institutionalization. The probability of being alive at a 30-month follow-up was negatively related to self-rated importance of one's religious beliefs at baseline. This study had several methodological flaws that cast doubt on the validity of its conclusions (including a small sample size and 18 inferential tests evaluated at $P < .05$). Nevertheless, this negative association between religious commitment and mortality suggests that the nature of the relationship between religion and mortality cannot be assumed to be completely straightforward. Future research should examine methodological and substantive explanations for the discrepancies among these studies.

COPING WITH ILLNESS

Religious commitment seems to become especially important once an illness—particularly a life-threatening illness—is diagnosed in a person. Indeed, many patients who become ill rely heavily on their religious beliefs as a coping strategy. Those who use religious means of coping seem to cope more effectively with illness than those who do not use religious means of coping.^{43,65-70}

For example, in a prospective study of 720 adults, Williams et al⁴³ found that the deleterious psychi-

atric effects of stress were inversely related to attendance at religious services, even when other predictive characteristics, such as age, education, and marital status, were controlled. As the frequency of attendance at worship services increased, the adverse psychiatric consequences of stress were reduced. This finding suggests that religious worship might buffer people against the health-compromising effects of stress.

Another study of 100 hospitalized patients about to undergo surgery for cardiac disease also identified religious practices as important for coping with the stress of impending surgery.⁶⁶ The researchers found that 96% of the patients used prayer as a coping mechanism in dealing with their surgery. When asked how helpful they found prayer to be, 70% of these patients indicated that prayer was "extremely helpful."

In a study of 850 elderly, hospitalized men, Koenig et al⁶⁸ similarly demonstrated the importance of religious beliefs in coping with illness. Twenty percent of the surveyed patients spontaneously mentioned religious factors as important elements in enabling them to cope with their condition. Furthermore, the researchers found that using one's religious beliefs as a coping resource was related to a reduced likelihood of major depression. The link between religious coping and depression was maintained even after controlling for other predictors of depression, such as social support, functional status, history of psychiatric problems, and age.

The relationship between an individual's religious commitment and coping seems to be most substantial among people with high levels of disability. For example, Idler⁶⁹ reported that the relationship between physical illness and functional disability (as assessed by activities of daily living and physical performance measures) was moderated by the respondent's level of religiousness. As religiousness increased, a greater level of physical illness was required to produce any given level of perceived disability. Similarly, as religiousness decreased, particularly among men, less and less physical illness was re-

quired to maintain the same level of disability. Religious commitment also seemed to moderate the relationship between disability and depression: as religious commitment increased, the relationship between disability and depression became weaker. Koenig et al⁶⁸ replicated Idler's findings using data from elderly, hospitalized veterans and again found that the positive correlation between disability and depression was strongest among the least religiously involved subjects and progressively weakened among individuals who were most likely to use religion as a coping strategy.

RECOVERY FROM ILLNESS

A few studies demonstrate that religious commitment may play a role in improving illness recovery. The observation that a religious perspective could enhance the recovery process was supported in a study⁷⁰ that examined 232 patients aged 55 years and older who were preparing to undergo elective heart surgery. Prior to surgery, the patients' religious commitment was assessed by their religious affiliation, frequency of attendance at religious services, number of people known in their congregation, and religious attitudes. Six months following surgery,²¹ 9% of the original 232 patients had died. However, none of the 37 patients who prior to the operation had described themselves as "deeply religious" died during this same period (vs 11% of the rest of the sample). Furthermore, only 5% of those who attended church at least every few months died in the 6 months following the operation (vs 12% of those who rarely or never attended church prior to the operation). Neither religious affiliation nor number of people known in one's congregation predicted postoperative survival.

Similarly, a study by Pressman et al⁴² of elderly women recovering from surgery for hip fractures suggested that religious factors could aid in a patient's recovery. Thirty older adult women who were undergoing hip surgery completed measures of their religious commitment and depressive symptoms prior to surgery. The religious commitment mea-

asures consisted of 3 items that assessed the frequency of attendance at religious services, self-rated religiousness, and the degree to which religion was a source of strength and comfort. They also completed measures of their depression and ambulation status within 24 hours prior to discharge from the hospital. The researchers found that those patients who had stronger religious beliefs and practices were less depressed and could walk a greater distance at discharge from the hospital than patients with lower levels of religious commitment. Additional analyses suggested that religious beliefs influenced ambulation status on discharge from the hospital by reducing patients' depressive symptoms following surgery.

An early review by Andreassen⁵ described the potential clinical benefit of considering patients' religious commitment in the treatment of depression. Since that review, at least 5 studies have examined the effects of incorporating religious content into psychotherapy for depression. Propst et al⁷¹ randomly assigned religious patients with depression to either cognitive-behavioral therapy with religious content or cognitive-behavioral therapy without religious content. Religious and nonreligious therapists were then divided between the religious and nonreligious treatment. They found that patients receiving therapy with religious content had better scores on measures of posttreatment depression and adjustment than did religiously committed patients whose therapy did not include religious content. An earlier study by Propst⁷² found that religious patients with depression responded better to a treatment that involved the use of religious imagery than a treatment that involved nonreligious imagery.

Three other published studies have found that religious approaches to the treatment of depression were neither more nor less effective than nonreligious treatments.⁷³⁻⁷⁵ Nevertheless, the 5 studies previously described illustrate that treatments that accommodate patients' religious world views are at least as effective as, and are in some cases superior to, nonaccommoda-

tive treatments.⁷⁶ More studies of religious interventions are needed to determine the circumstances under which religion-accommodative treatment enhances clinical outcomes.

COMMENT AND CONCLUSIONS

The findings in the published literature suggests that religious commitment might play a role in enhancing illness prevention, coping with illness, and recovery. Family practitioners might adopt several practices that will help them assess the health-relevant aspects of patients' religious commitment.

First, family physicians might integrate 2 questions into their initial interview. Clinicians might ask, "Is your religion (or faith) helpful to you in handling your illness?" If the answer is yes, they might follow with this question, "What can I do to support your faith or religious commitment?"^{30,77} Were physicians to ask these questions (and appropriate follow-up questions) more routinely in medical care, they would gain access to potentially valuable information on how to integrate religious factors into the care plans of particular patients—particularly those patients suffering from chronic or severe medical illness.

Second, family physicians can encourage patients to make use of potentially health-promoting religious resources from patients' own religious traditions. Where appropriate, religious patients might be encouraged to pray more—whether individually or with others. If already attending a church, synagogue, or mosque, they might be encouraged to continue. They might be encouraged to meditate. They might be encouraged to attend worship, engage in religiously based mourning rituals, seek and ask forgiveness from significant others,⁶⁰ or read holy writ. In short, it would seem that many religious practices that patients find potentially meaningful and congruent with their own value systems might become resources for enhanced prevention, coping, and recovery.

Finally, family physicians can refer patients to clergy or chaplains

as an adjunct to standard medical care. The involvement of clergy might be an especially important source of support for patients who, by virtue of their disability or suffering, need extra community support. The adoption by family physicians of any of the practices suggested is likely to lead to enhanced quality of care and patient satisfaction.

Accepted for publication February 17, 1997.

This study was supported in part by the John M. Templeton Foundation, Radnor, Pa; and King Pharmaceuticals, a division of Monarch Pharmaceuticals, Bristol, Tenn.

Reprints: David B. Larson, MD, MSPH, National Institute for Healthcare Research, 6110 Executive Blvd, Suite 908, Rockville, MD 20852.

REFERENCES

1. Gallup G. *Religion in America: 1990*. Princeton, NJ: Princeton Religious Research Center; 1990.
2. Begin AE, Jensen JP. Religiosity and psychotherapists: a national survey. *Psychotherapy*. 1990;27:3-7.
3. Princeton Religious Research Center. *Religion in America, 1993-1994*. Princeton, NJ: Princeton Religious Research Center; 1994.
4. Larson DB, Larson SS. *The Forgotten Factor in Physical and Mental Health: What Does the Research Show*. Rockville, Md: National Institute for Healthcare Research; 1994.
5. Andreassen NJ. The role of religion in depression. *J Religion Health*. 1972;11:153-166.
6. Chu C, Klein HE. Psychological and environmental variables in outcome of black schizophrenics. *J Natl Med Assoc*. 1985;77:793-796.
7. Frank JD. *Persuasion and Healing: A Comparative Study of Psychotherapy*. Rev ed. Baltimore, Md: The Johns Hopkins University Press; 1973.
8. Katkin S, Zimmerman V, Rosenthal J, Ginsburg M. Using volunteer therapists to reduce hospital readmissions. *Hosp Community Psychiatry*. 1975;26:151-153.
9. Lukoff D, Lu F, Turner R. Toward a more culturally sensitive *DSM-IV*: psychoreligious and psychospiritual problems. *J Nerv Ment Dis*. 1992;180:673-682.
10. King DE, Bushwick B. Beliefs and attitudes of hospital patients about faith healing and prayer. *J Fam Pract*. 1994;39:349-352.
11. Maugans TA, Wadland WC. Religion and family medicine: a survey of physicians and patients. *J Fam Pract*. 1981;23:210-213.
12. Chandy JC. Faith, hope, and love in medicine. *Pharos*. 1988;51:12-17.
13. McKee DD, Chappel N. Spirituality and medical practice. *J Fam Pract*. 1992;35:201-208.
14. Strommen MP. Psychology's blind spot: a religious faith. Presented at the American Psychological Association Meeting; August 1983.
15. Deikman A. Comments on the GAP report on mysticism. *J Nerv Ment Dis*. 1977;165:213-217.

16. Ellis A. Psychotherapy and atheistic values: a response to A. Begin's 'psychotherapy and religious values.' *J Consult Clin Psychol.* 1980;48:635-639.
17. Watters W. *Deadly Doctrine: Health, Illness, and Christian God Talk.* Buffalo, NY: Prometheus Books; 1992.
18. Barnard D, Dayringer R, Cassel CK. Toward a person-centered medicine: religious studies in the medical curriculum. *Acad Med.* 1995;70:806-813.
19. American Psychiatric Association Committee on Religion and Psychiatry. Guidelines regarding the possible conflict between psychiatrists' religious commitment and psychiatric practice. *Am J Psychiatry.* 1990;197:542.
20. Lovinger RJ. *Working With Religious Issues in Therapy.* New York, NY: Jason Aronson; 1984.
21. *Graduate Medical Education Directory 1995-1996: Program Requirements for Residency Education in Psychiatry.* Chicago, Ill: American Medical Association; 1995.
22. Larson DB, Sherrill KA, Lyons JS, et al. Associations between dimensions of religious commitment and mental health reported in the *American Journal of Psychiatry* and *Archives of General Psychiatry*: 1978-1989. *Am J Psychiatry.* 1992;149:557-559.
23. Craigie FC, Larson DB, Liu IY. References to religion in *The Journal of Family Practice*: dimensions and valence of spirituality. *J Fam Pract.* 1990;30:477-480.
24. Levin JS, Schiller PL. Is there a religious factor in health? *J Religion Health.* 1987;26:9-35.
25. Levin JS, Vanderpool HY. Is frequent religious attendance really conducive to better health? toward an epidemiology of religion. *Soc Sci Med.* 1987;24:589-600.
26. Schiller PL, Levin JS. Is there a religious factor in health care utilization? a review. *Soc Sci Med.* 1988;27:1369-1379.
27. Levin JS, ed. *Religion in Aging and Health: Theoretical Foundations and Methodological Frontiers.* Thousand Oaks, Calif: Sage Publications Inc; 1994.
28. Gartner J, Larson DB, Allen G. Religious commitment and mental health: a review of the empirical literature. *J Psychol Theol.* 1991;19:6-25.
29. Reed P. Spirituality and well-being in terminally ill hospitalized adults. *Res Nurs Health.* 1987;9:35-41.
30. Kuhn CC. A spiritual inventory of the medically ill patient. *Psychiatr Med.* 1988;6:87-100.
31. Levin JS. 'New age' healing in the US. *Soc Sci Med.* 1986;23:889-897.
32. MacDonald DA, LeClair L, Holland CJ, Alter A, Friedman HL. A survey of measures of transpersonal constructs. *J Transpersonal Psychol.* 1995;27:171-235.
33. Levin JS. How religion influences morbidity and health: reflections on natural history, salutogenesis, and host resistance. *Soc Sci Med.* 1996;43:849-864.
34. Cooper HM. *The Integrative Research Review.* Beverly Hills, Calif: Sage Publications Inc; 1984.
35. Light RJ, Pillemer DB. *Summing Up.* Cambridge, Mass: Harvard University Press; 1984.
36. Payne IE, Begin AE, Bielema KA, Jenkins PH. Review of religion and mental health: prevention and enhancement of psychosocial functioning. *Prev Hum Serv.* 1991;9:11-40.
37. Levin JS, Vanderpool HY. Religious factors in physical health and the prevention of illness. *Prev Hum Serv.* 1991;9:41-64.
38. Brown DG, Lowe WL. Religious beliefs and personality characteristics of college students. *J Soc Psychol.* 1951;33:103-129.
39. Hertsgaard D, Light H. Anxiety, depression, and hostility in rural women. *Psychol Rep.* 1984;55:673-674.
40. McClure RF, Loden M. Religious activity, denomination membership, and life satisfaction. *Psychol Q J Hum Behav.* 1982;19:13-17.
41. Mayo CC, Puryear HP, Richeck HG. MMPI correlates of religiousness in late adolescent college students. *J Nerv Ment Dis.* 1969;149:381-385.
42. Pressman P, Lyons JS, Larson DB, Strain JJ. Religious belief, depression, and ambulation status in elderly women with broken hips. *Am J Psychiatry.* 1990;147:758-760.
43. Williams DR, Larson DB, Buckler RE, Hechman RC, Pyle CM. Religion and psychological distress in a community sample. *Soc Sci Med.* 1991;32:1257-1262.
44. Comstock GW, Partridge KB. Church attendance and health. *J Chronic Dis.* 1972;25:665-672.
45. Stack S. The effect of the decline in institutionalized religion on suicide: 1954-1978. *J Sci Study Religion.* 1983;22:239-252.
46. Martin WT. Religiosity and United States suicide rates, 1972-1978. *J Clin Psychol.* 1984;40:1166-1169.
47. Stark R, Doyle D, Rushing J. Beyond Durkheim: religion and suicide. *J Sci Study Religion.* 1983;22:120-131.
48. Black WA. An existential approach to self-control in the addictive behaviors. In: Heather N, Miller WR, Greeley J, eds. *Self Control and the Addictive Behaviors.* Sydney, Australia: Maxwell-McMillan Publishing; 1991:262-279.
49. Crumbaugh JC, Maholick LT. *The Purpose in Life Test.* Chicago, Ill: Psychometric Affiliates; 1969.
50. Larson DB, Wilson WP. The religious life of alcoholics. *South Med J.* 1980;73:723-727.
51. Gorsuch RL, Butler MC. Initial drug use: a view of predisposing social psychological factors. *Psychol Bull.* 1976;3:120-137.
52. Hays RD, Stacy AW, Widaman DMR, Downey R. Multistage path models of adolescent alcohol and drug use: a reanalysis. *J Drug Issues.* 1986;16:357-369.
53. Moore RD, Mead L, Pearson T. Youthful precursors of alcohol abuse in physicians. *Am J Med.* 1990;88:332-336.
54. Koenig HG, George LK, Meador KG, Blazer DG, Ford SM. Religious practices and alcoholism in a Southern adult population. *Hosp Community Psychiatry.* 1994;45:225-231.
55. Burkett SR. Perceived parents' religiosity, friends' drinking, and hellfire: a panel study of adolescent drinking. *Rev Religion Res.* 1993;35:134-153.
56. Comstock GS, Tonascia JA. Education and mortality in Washington County, Maryland. *J Health Soc Behav.* 1977;18:54-81.
57. Levin JS, Vanderpool HY. Religious factors in physical health and the prevention of illness. *Prev Hum Serv.* 1987;9:41-64.
58. Idler EL, Kasl SV. Religion, disability, depression, and the timing of death. *Am J Sociol.* 1992;97:1052-1079.
59. Levin JS, Vanderpool HY. Is religion therapeutically significant for hypertension. *Soc Sci Med.* 1989;29:69-78.
60. Kaplan BH. Social health and the forgiving heart: the type B story. *J Behav Med.* 1992;15:3-14.
61. Larson DB, Koenig HG, Kaplan BH, Greenberg RS, Logue E, Tyroler HA. The impact of religion on men's blood pressure. *J Religion Health.* 1989;28:265-278.
62. House JS, Robbins C, Metzner HL. The association of social relationships and activities with mortality: prospective evidence from the Tecumseh community health study. *Am J Epidemiol.* 1982;116:123-140.
63. Zuckerman DM, Kasl SV, Ostfeld AM. Psychosocial predictors of mortality among the elderly. *Am J Epidemiol.* 1984;119:410-423.
64. Janoff-Bulman R, Marshall G. Mortality, well-being, and control: a study of a population of institutionalized aged. *Pers Soc Psychol Bull.* 1982;8:691-698.
65. Pargament KI, Ensing DS, Falgout K, Olsen B, Van Haitsma K, Warren R. God help me (I): religious coping efforts as predictors of the outcomes to significant life events. *Am J Community Psychol.* 1990;18:793-824.
66. Saudia TL, Kinney MR, Brown KC, Young-Ward L. Health locus of control and helpfulness of prayer. *Heart Lung.* 1991;20:60-66.
67. O'Brien ME. Religious faith and adjustment to long-term hemodialysis. *J Religion Health.* 1982;21:68-80.
68. Koenig HG, Cohen HJ, Blazer DG, et al. Religious coping and depression in elderly, hospitalized medically ill men. *Am J Psychiatry.* 1992;149:1693-1700.
69. Idler EL. Religious involvement and the health of the elderly: some hypotheses and an initial test. *Soc Forces.* 1987;66:226-238.
70. Oxman TE, Freeman DH, Manheimer ED. Lack of social participation or religious strength and comfort as risk factors for death after cardiac surgery in the elderly. *Psychosom Med.* 1995;57:5-15.
71. Propst LR, Ostrom R, Watkins P, Dean T, Mashburn D. Comparative efficacy of religious and non-religious cognitive-behavioral therapy for the treatment of clinical depression in religious individuals. *J Consult Clin Psychol.* 1992;60:94-103.
72. Propst LR. The comparative efficacy of religious and nonreligious imagery for the treatment of mild depression in religious individuals. *Cognitive Ther Res.* 1980;4:167-178.
73. Johnson WB, Ridley CR. Brief Christian and non-Christian rational-emotive therapy with depressed Christian clients: an exploratory study. *Counseling Values.* 1992;36:220-229.
74. Johnson WB, Devries R, Ridley CR, Pettorini D, Peterson DR. The comparative efficacy of Christian and secular rational-emotive therapy with Christian clients. *J Psychol Theol.* 1994;22:130-140.
75. Pecheur D, Edwards KJ. A comparison of secular and religious versions of cognitive therapy with depressed Christian college students. *J Psychol Theol.* 1984;12:45-54.
76. Johnson WB. Outcome research and religious psychotherapies: where are we and where are we going? *J Psychol Theol.* 1993;21:297-308.
77. Strayhorn JM, Weidman CS, Larson DB. A measure of religiousness and its relation to parent and child mental health variables. *J Community Psychol.* 1990;18:34-43.