

Religion, Health and Medicine in African Americans: Implications for Physicians

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Recent years have seen a burgeoning of research and writing on the connections between religion and health. The very best of this work comes from epidemiologic studies of African Americans. This paper summarizes results of these investigations, including findings identifying effects of religious participation on both physical and mental health outcomes. Evidence mostly supports a protective religious effect on morbidity and mortality and on depressive symptoms and overall psychological distress among African Americans. This paper also carefully discusses what the results of these studies mean and do not mean, an important consideration due to frequent misinterpretations of findings on this topic. Because important distinctions between epidemiologic and clinical studies tend to get glossed over, reports of religion-health associations oftentimes draw erroneous conclusions that foster unrealistic expectations about the role of faith and spirituality in health and healing. Finally, implications are discussed for clinical practice, medical education and public health.

Key words: religion ■ epidemiology ■ health ■ medicine ■ African Americans

For the past two decades, researchers have systematically investigated connections between aspects of religious faith and spiritual expression and indicators of physical health status and mental and emotional well-being.¹ This work, some of it funded by research grants from the National Institutes of Health (NIH), has been conducted for the most part by social and behavioral scientists; epidemiologists; and physicians; mostly geriatricians, psychiatrists and family practitioners. Published empirical studies now exceed 1,200 in number, about 75–90% revealing a generally salutary association at the population level,² depending upon the health outcome under consideration.

These findings are especially pertinent to *JNMA* readers. Unlike so many other areas of health research, there is no paucity of published data on religious determinants of morbidity, mortality, and physical and mental health status among African Americans. Indeed, the very best studies in terms of methodological sophistication, the widest range of health outcomes, and focused programmatic effort have been conducted in this population.^{3–5}

Several factors contribute to the increasing prominence of this research, including mainstream media attention and publicity, controversy aroused by medical researchers engaging concepts related to God and faith, and the occasional zeal of both opponents and proponents of this work. Invariably, overstatement and misstatement of study results and implications occur in which much more is read into empirical results than the findings merit.⁶ Specifically, the caveats of population-based health research often get lost in the translation, as qualifications and reservations related to research design and interpretation familiar to epidemiologists are glossed over in efforts to generalize findings past where they can be reliably taken.⁷

Accordingly, the objective of this paper is to provide a comprehensive summary of empirical research on religion and health among African Americans. First, an overview is provided of existing study findings for both physical and mental health. Second,

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comments address precisely what these findings mean and what they do not mean. Finally, implications of this work for physicians are emphasized, including their relevance for clinical practice, medical education and public health.

RELIGION AND PHYSICAL HEALTH

Over the past century, hundreds of published studies have identified religious differences in a wide range of physical health outcomes and have examined effects of religiousness on health status indicators and measures of disease states.^{2,8-9} Nearly every major disease entity and cancer site has been studied in relation to religion; especially large bodies of published data exist for morbidity due to coronary heart disease, hypertension and stroke, cancer, and for overall and cause-specific mortality. This literature on the “epidemiology of religion”¹⁰ is part of a larger set of findings also linking expressions of religiousness to mental health, psychological well-being, healthy lifestyle behaviors, healthcare utilization and other health-related outcomes.¹¹⁻¹²

Results from these studies identify a consistently salutary relationship between religious participation and health status. This is expressed in two ways. First, observable differences in rates of morbidity and overall and cause-specific mortality exist across major categories of religious affiliation, with lower rates typically found among members of religions or denominations that make strict behavioral demands. Examples include Seventh-Day Adventists and Latter-Day Saints. Second, higher levels of active religious participation or observance are associated, on average, with less illness and with better health, according to a variety of scales or indices. The consistency of findings across a diversity of samples, designs, methodologies, religious measures, health outcomes and population characteristics serves to strengthen the inference of a positive association between religion and health.

This finding has been observed in studies of old, middle-aged and young subjects, both men and women, from the United States, Europe, Africa and Asia. Studies have been published in every decade since the late 19th Century, using retrospective case-control, prospective cohort, cross-sectional prevalence and longitudinal panel designs. Subjects have included Protestants, Catholics, Jews, Muslims, Buddhists and Parsis, with religiousness assessed in any of over a dozen ways (e.g., church attendance, affiliation, private prayer, Bible reading, church membership, self-rated religiousness). Analyses have ranged from t-tests and bivariate correlations to sophisticated multivariable statistical modeling procedures. Finally, U.S. studies have included subjects drawn from Anglo-white, Hispanic, Asian-Ameri-

can, and African-American populations.¹³

Within the past two decades, comprehensive specialized reviews have focused on this literature. Results of gerontological and geriatric studies have been especially well-summarized, including by traditional literature review,¹⁴ systematic review,¹⁵ NIH-commissioned quantitative review,¹⁶ annotated bibliography,¹⁷ meta-analysis¹⁸ and in a comprehensive textbook detailing results of over 1,200 studies.²

Research in African Americans

Early reviews found that religion and health research among African Americans was scant and superficial.⁸ Even today, research on health, as in other topical domains, is yet to fully address and account for the uniqueness and diversity of African-American religious experience in the diaspora.¹⁹ Still, studies by at least a couple of established research teams have been instrumental in providing empirical evidence that the unique patterns of religious expression among African Americans have measurable impacts on a variety of physical and mental health indicators.³

The best research on religion and health among African Americans has emphasized older adults or changes in the religion-health dynamic across the life course. Some of this work has focused explicitly on African Americans; other research based on general populations has taken a racial-comparative approach, such as through stratification by race or through use of a binary black-white variable. While this latter approach has been sharply criticized as simplistic in that it masks considerable cultural and ethnic diversity among African Americans and may suppress some significant health disparities,²⁰ resulting findings nonetheless provide evidence of interesting connections among religion, health and race. The concept of race is far too complex to be reduced to a sociodemographic variable, of course, but in this limited context has proven useful to epidemiologic researchers seeking to explore existing data in the hope of identifying health status differences.

Racial Differences in Religion and Morbidity

National survey data beginning in the 1970s found interesting age differences in the extent to which frequent attendance at religious services is associated with both higher self-ratings of health and greater satisfaction with health. Among older African Americans, in contrast to older whites, church attendance had no effect.²¹ In a sample of younger and middle-aged African Americans, again in contrast to whites, frequent attendance was strongly associated as was strength of religious affiliation.²² Among younger African-American men, a positive association was

found that reflected the mediating effects of social support or socioeconomic status.²³

Longitudinal studies from the 1980s further revealed racial differences in patterns of religion-health associations. In national data, an index of religious practice predicted the health of African Americans but not of whites.²⁴ Among older African Americans only, religiousness served to counterbalance or offset the deleterious effects of poor personal and family health by heightening feelings of self-esteem.²⁵

Studies undertaken since the 1990s have identified the complexities of racial differences in religion-health associations. In one study, while frequent religious attendance was found to predict the health of both African Americans and whites, African Americans with the highest levels of functional health impairments engaged in more private devotional activities than less impaired African Americans, to the greater benefit of their self-assessed health.²⁶ In a study of Protestant Christians, race was not a source of variation in physical activity, body mass index or self-rated health.²⁷ This is pertinent here, as African-American Protestants exceeded their white counterparts in religious attendance and self-rated religiousness, variables associated with health in other studies. Finally, an index of religious devotion (i.e., prayer and Bible study) was associated with greater depression in both African Americans and whites, but only among whites did history of chronic illness moderate this effect.²⁸

The best study to date, from a national sample of 1,126 noninstitutionalized older adults, revealed that frequent church attendance and greater congregational cohesiveness were predictors of a self-rating of overall health and that these effects were stronger among African Americans, especially a mediating effect of optimism.²⁹ The author concluded that "older black people may derive greater health-related benefits from religion because they are more involved in it" (p. S341).

In summary, the weight of published evidence from this category of studies supports the presence of a racial difference in the association between religiousness and morbidity. Evidence here is mixed but moderately suggestive of a more salient religious impact on health among African Americans, especially older adults.

Religion and Morbidity in African Americans

Since the late 1980s, the NIH has supported two research programs that focus on religion-health connections in data collected from African-American populations. Research by Brown and associates has resulted in several important studies of the impact of African-American religion on health and well-being.

One study found a gender difference in the stress-buffering effects of religious activity on physical health.³⁰ Among men, no relationship was present; among moderately religious women, greater life stress was associated with poorer health; among less religious women, stress and health were unrelated. The authors explained that African-American women may increase their religious participation to cope with stressful circumstances and concomitant personal and family health challenges. In an urban community study published in *JNMA*, no associations were observed between any religious indicator and either hypertension prevalence or a self-rating of health.³¹ The authors speculated that religious effects on health in this population may be more likely to show up in the long run in reductions in morbidity and mortality rather than in current assessments of health in younger subjects.

Research at the University of Michigan's Program for Research on Black Americans (PRBA) has systematically investigated religious effects on a variety of health status indicators. In nationally representative data from the National Survey of Black Americans (NSBA), a composite index assessing organized religious participation exhibited a strong effect on overall well-being even after adjusting for effects of health and several known sociodemographic correlates of religiousness, health and well-being.³² These effects were observed in all age cohorts. A follow-up study replicated these findings among older adults in three national studies.³³ African Americans were more religious according to all available measures, yet adjusting for the effects of a binary race variable did not diminish the statistical significance of these religion-health associations, suggesting that findings observed in the NSBA study were not unique to African Americans.

In summary, the weight of evidence from this category of studies supports a positive association between religiousness and health among African Americans. Findings from both the Brown and associates and University of Michigan research teams are suggestive of a moderate health advantage among religious African Americans across the life course.

Religion and Mortality in African Americans

Since the early 1990s, a steady stream of findings suggests that religious participation protects against premature mortality and, thus, increases longevity.¹⁸ A handful of studies has included African Americans or explored racial differences, with mixed results. For example, survival data reported a likelihood of mortality of 46% less among frequent church attenders over a period of 6.3 years; adjusting for effects of race, along with age, gender and education reduced the protective effect only slightly, to 41%.³⁴ Follow-up

data over 28 years found a 36% lower risk of mortality among frequent religious attenders when adjusting for effects of race, alongside age, sex, education and religious affiliation.³⁵ Studies like these reveal a survival advantage for religious individuals but do not clearly identify a substantive black-white difference in this association.

By contrast, a sophisticated analysis of national data uncovered an African-American survival advantage due to religious participation.³⁶ Data on more than 20,000 adults compiled from the National Center for Health Statistics (NCHS) Multiple Cause of Death Public Use Data File matched subjects from the 1987 National Health Interview Survey's Cancer Risk Factor Supplement to the National Death Index list of deaths through the end of 1995. The life expectancy estimate at age 20 for nonchurchgoers in the total sample was 55.3 years; for greater-than-weekly attenders, it was 62.9 years, an advantage of about seven years. Among non-African Americans, the respective life expectancy estimates were 56.1 and 63.4 years—a similar seven-year advantage. Among African Americans, results were striking: nonchurchgoers had an estimated life expectancy at age 20 of 46.4 years; for more than weekly attenders, the estimate was 60.1 years. This translates to a nearly 14-year survival advantage for frequent church attenders. This level of religious attendance closes the racial gap in life expectancy from nearly nine years in nonattenders to less than three years.

Similarly sophisticated studies using African-American samples confirm a protective effect of religious participation for longevity. In data from the National Health Interview Survey, frequent church attendance was strongly associated with survival among older African Americans.³⁷ Nonattenders had 1.77 times the odds of dying within a four-year follow-up period than did church attenders. For women, the adjusted odds ratio was 1.63 and for men was 2.72. In a more recent national study, the hazards ratio for nonchurchgoers in the overall sample was 2.23; adjusting for effects of every other variable in the study, the ratio was 2.22.³⁸ That is, nonchurchgoers experienced over twice the risk of dying in the eight years of study follow-up compared to frequent attenders. Even for those who attended church as much as weekly, compared to more frequent attenders, the hazards ratio was 1.47, indicating nearly 1.5 times the risk of death and suggesting a sort of dose-response effect. The relative mortality risk among nonchurchgoers was observed separately in both younger (3.76) and older African Americans (1.96), in both women (2.54) and men (2.42), and in both Southerners (2.11) and non-Southerners (2.08). Adjusting for effects of health, socioeconomic status, health behaviors and social ties had no substantive impact on the consistency

of these findings. The effect of religious participation on longevity in this population must be due to other functions or characteristics of religiousness.

In summary, the weight of evidence for this category of studies is supportive of an inverse relationship between religiousness and mortality among African Americans. Findings from several especially large and sophisticated epidemiologic studies support the presence of a protective religious effect on survival and longevity in this population.

A final caveat: as with all epidemiologic findings, this inverse association between religious participation and mortality among African Americans is expressed on average and across large populations. Such an approach necessarily masks individual cases that do not fit the general pattern (e.g., the cigarette smoker who lives to 100, the fit athlete who dies suddenly at 40 years of age). The present findings, as with all epidemiologic results, thus should not be overinterpreted as expressing universal effects but rather probabilities. It would be helpful for subsequent research in this area to stratify by cause of death, especially in order to determine precisely how and where a protective religious effect on survival manifests in the African-American population.

RELIGION AND MENTAL HEALTH

A growing literature has investigated religious effects on the mental health of African Americans, particularly on measures of depression. Studies also have explored the influence of religion on measures of positive well-being, notably life satisfaction and happiness. Comprehensive reviews have noted the presence of many excellent studies whose findings point to a salutary effect of religion among African Americans or to interesting racial differences.

Research on religious predictors of mental illness dates back decades.^{39,40} Early studies compared the prevalence of mental illness among active and unchurched Catholics, Protestants and Jews,⁴¹ and identified a dose-response relationship between psychological impairment and religious commitment.⁴² Throughout the 1960s, clinical and epidemiologic studies explored whether religious participation exhibited preventive effects on subsequent rates of mental illness with mixed results.⁴³⁻⁴⁵ The 1970s witnessed expansion in the study of religion and mental health,⁴⁶ enough to fill a National Institute of Mental Health (NIMH) bibliography of over 1,500 scholarly articles, chapters, books and reports.⁴⁷ Throughout the 1980s, studies became more sophisticated, with a consistently positive relationship between religion and mental health identified in several comprehensive reviews.⁴⁸⁻⁵⁰ Since 1990, research has flourished, and a salutary mental-health impact of religious commitment, on average, is becoming accepted by investiga-

tors.^{2,51} The importance of religion was formally recognized by inclusion in the DSM-IV of a new category acknowledging religious and spiritual problems as potential sources of psychological distress.⁵²

Gerontological research on religion and well-being also flourishes, a development decades in the making. Research began in the early 1950s,⁵³⁻⁵⁶ waxing and waning throughout the next 20 years until a brief resurgence in the middle 1970s.⁵⁷⁻⁵⁸ In the 1980s, work by Markides and Levin,⁵⁹⁻⁶⁴ Koenig⁶⁵⁻⁶⁶ and others⁶⁷⁻⁶⁸ sparked an enduring renewal of interest. Since the late 1980s, studies have systematically investigated patterns, determinants and outcomes of religiousness⁴ in relation to psychological distress, addictive behaviors, coping, self-esteem, mastery, chronic anxiety, life satisfaction, happiness and depressive symptoms. Reviews of this research,^{5,14-15,69-74} including an NIH-sponsored quantitative summary of studies published through the middle 1990s,¹⁶ all conclude that religion exerts, on average, a moderate and mostly positive influence on dimensions of well-being.

Research in African Americans

The NIH review¹⁶ identified 73 studies published in aging or social science journals between 1980 and 1994 in which religious variables were included. Of these, 47 reported on the race or ethnicity of their study sample. Among this group, 11 studies were of African-American subjects only; 26 studies comprised multi-ethnic samples; of these, 13 noted the inclusion of African Americans. In total, 24 studies reported the presence of African-American subjects. Yet only some of these studies focused on racial differences or reported religious effects among African Americans.

Studies of religion, race and mental health and well-being have generally tackled the issue of race in one of three different ways: a) a binary race variable was introduced in statistical models ostensibly in order to adjust for effects of race on a religion-mental-health or religion-well-being association; b) explicit racial comparisons were made in associations between respective religion and mental health indicators; and c) African-American study samples were used, the approach characterizing most of the work produced by the PRBA and Brown and associates teams. Many of these studies focus on older adults or on age differences across the life course.

Adjustment for Racial Effects

Several studies published from the 1970s through 2002 included a binary race variable whose effects were adjusted for in subsequent analyses. While not an ideal approach for examining the impact of race, these studies sought to investigate determinants of psychiatric or psychosocial outcomes. The investigators, sensitive to the potential importance of race

as a correlate of religious participation and of the outcome under study, commendably ensured that its effects were adjusted for in multivariable analyses.

Three studies, based on large national or regional samples, revealed protective or buffering effects of religion on depressive symptoms, although the impact of race is less clear. In one study, strength of religious beliefs exhibited a protective effect on a depression measure based on the Langner scale.⁷⁵ Race was adjusted for, which had no net effect on depression. A national study found effects of several religious indicators on a depression index comprising items similar to the Center for Epidemiologic Studies Depression (CES-D) scale.⁷⁶ Fundamentalist beliefs were a moderate predictor of depression, and protective effects of church attendance and prayer were mediated respectively by church-based support and religious coping. Effects of race were adjusted for, as greater prayer, religious coping, fundamentalism and religious attendance were found among African Americans.⁷⁶ A study of older veterans found religious coping utilized more by African Americans and black Protestants; religious coping inversely related to depression, as assessed by the Geriatric Depression Scales (GDS), and less depression among both African Americans in general and black Protestants.⁷⁷

Several studies investigated religious effects on indicators of psychological well-being, typically life satisfaction or happiness. All were based on large national or regional studies, including four that used data from the General Social Survey (GSS). In the 1973 GSS, religious attendance predicted life satisfaction after adjusting for effects of race.⁷⁸ Similarly, in the 1983 survey, religious attendance and devotional intensity exhibited strong effects on life satisfaction after adjusting for race.⁷⁹ Using pooled data from the 1983 and 1984 surveys,⁸⁰ religious attendance predicted overall and marital happiness and divine relations (a composite of closeness to God, prayer and history of an out-of-body experience) predicted scores on four well-being indicators, after adjusting for racial effects.⁸⁰ In the 1988 survey, several religious indicators were associated with greater life satisfaction or personal happiness.⁸¹ As in the other GSS studies, race did not appear to be a meaningful factor in this relationship.

Studies using other data sources confirm these results. The most sophisticated of these, from the PRBA team, utilized data from four national surveys of older adults conducted from the early 1970s through the late 1980s.³³ Findings revealed religious effects on well-being in two of the samples, even after adjusting for effects of a binary race variable.

In summary, the weight of evidence for this category of studies is inconclusive with respect to race and African-American subjects. Considerable evi-

dence exists supportive of religion's salutary role in both preventing depressive symptoms and promoting overall psychological well-being, but there is little convincing evidence to suggest that this effect is more or less salient among African Americans.

Racial Differences

Another group of studies examined religion-well-being associations separately by race, enabling comparison of the direction and magnitude of effects in African Americans and whites. A study of older adults found that frequent religious attendance and belief in life after death were associated with greater life satisfaction but only among whites.²¹ A study of younger and middle-aged adults found that church attendance and strength of religious affiliation predicted global happiness in both races but moreso among African Americans.²²

Recent longitudinal psychiatric-epidemiologic studies have provided mixed evidence of racial differences, and the precise nature of these differences is unclear. In the Duke Epidemiologic Catchment Area (ECA) study, frequent religious attendance was associated with fewer depressive symptoms but only among whites.²⁸ Among African Americans, absence of a religious affiliation was strongly associated with more depressive symptoms. The Duke Established Populations for Epidemiologic Studies of the Elderly (EPESE) investigation found striking racial differences in the protective effect of frequent church attendance on depression in older adults diagnosed with cancer,⁸² such that stronger net effects were found among African Americans. By contrast, in the Yale EPESE study, when baseline depression was adjusted for, neither public nor private religiousness had any effect on depression in either African-American or white Protestants.⁸³ However, a protective effect against cognitive dysfunction due to at least weekly religious attendance was observed after three years among whites.

In summary, the weight of evidence for this category of studies was evenly mixed. Racial differences in the association between religiousness and mental health are not uncommon, but no consistency is observed in how these differences express themselves. Much depends, it seems, on the particular outcomes under investigation and the age of study subjects.

African-American Study Samples

Few large probability samples of African Americans exist which simultaneously include both religious and mental-health measures. Data from small community or clinical samples of convenience must be relied upon, or the proportionately small subset of African-American subjects in most national or

regional health surveys. Accordingly, the most sophisticated research has been done by Brown and colleagues and by investigators affiliated with PRBA or using data from studies based at the University of Michigan.

Several NIMH-funded studies of religion and depressive symptoms conducted by Brown and Gary and colleagues make a strong case for a protective effect of religion among African Americans. In an urban study of noninstitutionalized men, a very clear trend was apparent such that depression scores, as measured by the CES-D, declined with increasing religiousness.⁸⁴ A community survey found an inverse effect of religiousness on depressive symptoms, especially in men, and a stress-buffering effect of religion on depression among men with injuries.⁸⁵ Absence of a stress-buffering effect in women was borne out in another study.³⁰ An urban study found protective effects for both religious attendance and presence of a denominational affiliation were observed in relation to CES-D scores.³¹ Most recently, the team found that the one-year prevalence of major depression, assessed by the Diagnostic Interview Schedule (DIS), among subjects without a religious affiliation was 6.4%, the highest for any category of any exposure variable in the study except for poor health status.⁸⁶ For subjects with a religious affiliation, the prevalence rate was only 2.8%.

Other studies have demonstrated a salutary impact of religion on indicators of psychological well-being, such as life satisfaction or happiness. Early research, based on convenience samples of older adults, points to a generally positive effect. For example, religiousness was found to be associated with life satisfaction and happiness,⁸⁷ and overall well-being as assessed by the Philadelphia Geriatric Center (PGC) scale was predicted by receipt of church-based support.⁸⁸ This latter study showed that religion may influence well-being in ways other than as a result of the positive effects or satisfaction resulting from a perception that one is personally religious. Another study found impacts of self-rated religiousness and religious attendance on life satisfaction as assessed by the Diener scale.⁸⁹ Religiousness was in fact the strongest determinant of life satisfaction, and, among men, was the only predictor, explaining a substantial 27% of the variance in life satisfaction. Among women, it was a stronger determinant of well-being than even health.

Studies from PRBA, or based on national surveys housed at the University of Michigan, provide additional evidence that religion serves as a resource not just for primary prevention of psychiatric illness in clinical and community populations but for promotion of well-being among the general population. Research by Krause,^{25,90,91} for example, has identified positive effects of religion on psychosocial resources

used to cope with life stress. One study identified a strong effect of self-rated religiousness on self-esteem, which, in turn, strongly protected against depression.²⁵ In another study, organized religious participation strongly predicted self-esteem, and more informal and private religiousness was associated with a sense of mastery or personal control,⁹⁰ a key correlate of well-being. More recently, frequent church attendance was associated with greater life satisfaction specifically because of the informal support received at church and by the strength provided by one's faith to confront race-related problems.⁹¹

Other studies of religion and well-being have been conducted using waves of data from the NSBA. One study found that religious effects on life satisfaction were not completely explained by the tendency of both well-being and some expressions of religiousness to be higher in successively older age cohorts.⁹² A subsequent study found that organized religious participation was associated with life satisfaction even after adjusting for effects of health and every other religious and sociodemographic construct in the study.³² Especially remarkable was that this net effect of religious participation on well-being was about as large as, or larger than, the unadjusted effect of health on life satisfaction, regardless of age cohort. These results challenged the conventional belief that health status and socioeconomic status are the primary determinants of general well-being in adults,⁹³ regardless of age or race. More recently, analyses revealed both contemporaneous and longitudinal effects of religion on well-being,⁹⁴ suggesting that the salutary impact of religion on well-being may extend forward in time, similarly to its effects on physical longevity.

In summary, the weight of evidence for this category of studies strongly supports a positive association between religiousness and mental health among African Americans. Findings from numerous large-scale national and regional studies consistently underscore religion's salient role in preventing depression and promoting well-being in this population.

WHAT THESE FINDINGS MEAN AND DO NOT MEAN

To summarize, research over the past 20 years points to a significant impact of religious participation on indicators of physical and mental health. Moreover, this association appears to vary but yet is not explained away by race. This is expressed through: a) studies of physical morbidity in which religiousness exhibited protective effects even after adjusting for effects of race; b) studies in which racial differences were found in the presence and magnitude of religious effects on health; c) studies of African Americans, especially older adults, in which religiousness was a salient protective factor

against morbidity, mortality and depressive symptoms or a correlate or determinant of positive well-being. Whether or not religion is more salient a preventive resource for mental health among African Americans than among whites is still an open question. But its importance as a generally protective factor for physical and psychological morbidity among African Americans is strongly supported.

These findings among African Americans are consistent with religion and health research among the general population. Religious participation, broadly defined, appears to exhibit moderate but statistically significant protective effects on subsequent morbidity and mortality. Religion, then, is similar to other psychosocial and behavioral factors observed to mitigate or exacerbate the risk or odds of adverse health outcomes at the population level.⁹⁵ Examples of psychosocial variables whose effects have been validated epidemiologically among African Americans and/or the general population include such familiar constructs as stressful life events, the type-A behavioral pattern, coping, hardiness, locus of control, bereavement, John Henryism and social support.

Despite the consistency of studies of religion and health with longstanding research in psychosocial epidemiology, the meaning and significance of findings, such as those summarized in this paper, have often been overstated and misinterpreted. This has fueled a spate of "skeptical" rebuttals that even more dramatically misinterpret what this research means.⁹⁶ The typical critique of this research combines ad hominem attacks on the motives of investigators, claims that it is impossible to study religion empirically, assertions that every study conducted on the topic is methodologically flawed, and denunciations of this area of investigation as an encouragement of the use of prayer in lieu of medical treatment for illness. Uninformed by the many decades of scholarly research and writing on religion among social and behavioral scientists and by the principles of epidemiologic research methods, these skeptical critiques are essentially straw men. But, in fairness, as noted, they may be responses in part to the misinterpretation and overstatement of findings by ill-informed supporters or religious partisans and by the popular media.

Part of the confusion may lie in an apparent difficulty in distinguishing between epidemiologic research findings, such as those reviewed in this paper, and results of medical research studies, such as those obtained from clinical trials. Epidemiologic research seeks to identify characteristics of people or environments that are observed to offer protection or elevate risk in terms of some subsequent adverse health-related outcome. These relationships are expressed as rates or ratios, or statistical associations, and, as noted earlier, manifest on average and

across general populations of healthy people. Medical research, by contrast, typically seeks experimental methods to identify treatments that cure sick people or are otherwise therapeutic. Both types of research are of course health-related and are indispensable for advancing our understanding of the determinants of health status across the natural history of disease. But, strictly speaking, most religion and health research has not been explicitly concerned “with medicine, with physicians, with patients, with illness, with the clinical setting, with medical therapies or with healing”.⁹⁷ These studies, instead, are “population-based sociological and epidemiologic studies of general communities investigated cross-sectionally or prospectively in order to identify religious correlates of health and well-being.”⁹⁷ These investigations are not much different—theoretically, conceptually or methodologically—from the decades of population-based studies of religious determinants of such diverse outcomes as political preference, sexual activity, criminal behavior, contraceptive usage, social support, fertility, marital satisfaction, environmental attitudes or other issues explored by social scientists.¹²

Another barrier to acceptance of research findings supportive of a salutary role for religious participation may be a perception that such results cannot be rationally explained. This is analogous to the issue arising in clinical studies when there is empirical evidence of efficacy yet no consensus on the mechanism of action. But, again, this objection is not valid. For one, it presupposes a reductionistic definition of religion as something solely supernatural or outside the realm of observation. On the contrary, studies of religion and health have assessed observable behaviors, such as frequency of church attendance, or have measured beliefs or attitudes about the importance of religion or have simply asked people to report their church affiliation. Religious assessment has a long history within the fields of psychology and sociology, and over a hundred validated measures exist for assessment of religious behaviors, beliefs, attitudes, identities, emotions, values, experiences and so on.⁹⁸ Moreover, while some religions may endorse supernatural beliefs, religion in general represents a domain of life that operates through social institutions that provide resources and services to fellow human beings. This is clearly evident among African Americans, for whom the historic black church has been not just a principal actor in the struggle for survival, dignity and justice, but a leading player in primary care delivery, community mental health, health promotion and disease prevention, and health policy, as elaborated by one of the present authors 20 years ago in *JNMA*.⁹⁹

The misinterpretation of epidemiologic and sociological findings on religion is so pervasive that at

least a couple of sophisticated reviews have been written expressly to address this problem.^{6,100} Common misinterpretations of the findings summarized in the present review include: “Religious involvement promotes healing,” “Religious people don’t get sick,” and “Religion is the most important factor in health”.¹⁰⁰ As has been pointed out, these findings suggest nothing of the sort, but rather that some forms of religious participation may serve to protect some people against some types of morbidity and that, on average, religious participation seems to be associated with lower risk or odds of subsequent morbidity and premature mortality. Religion simply deserves a place at the table, so to speak, among the numerous environmental and host characteristics that exhibit measurable impacts on population-wide rates of respective diseases in particular groups of people.¹⁰⁰

An especially perplexing and yet common misinterpretation of this research is, “Prayer heals.” Obviously, epidemiologic investigations of the health impact of religious participation and hypothetical experiments on faith healing do not even involve study of the same stage of or direction along the natural history of disease. To investigate a purported healing power of prayer as some researchers actually have done¹⁰¹ would require a sample of sick people, an experimental therapeutic protocol involving praying and an effort to monitor whether study subjects move in a salutogenic direction—that is, from a clinical status of ill to a status of well. By contrast, the epidemiologic studies reviewed in this paper involve samples of healthy people who are observed in order to determine whether certain characteristics (e.g., religiousness) serve to prevent subsequent movement in a pathogenic direction, across the clinical threshold, from wellness to illness. No therapy is being studied nor is there anyone or anything to heal, and thus nothing concerning a prayer-healing connection could possibly be inferred from these studies’ findings. Yet, such an inference is often made from religion and health research by nonscientists and even some clinicians, both skeptics and religious believers, causing a considerable muddying of the waters.¹⁰²

The most concise and accurate summary of existing research findings reviewed in the present paper is simply this: religious participation appears to be a potentially powerful, salutary resource in the lives of many people, notably African Americans. No more, no less. This finding is hardly controversial. It makes sense precisely because religious participation may serve to provide what Antonovsky called a “sense of coherence”¹⁰³ and, thus, help individuals to cope with the stresses inherent in daily life and, ultimately, to strengthen the host resistance of populations.^{7,100}

How can religion serve to strengthen host resistance and prevent morbidity among African Ameri-

cans? Several potential mediating factors have been proposed, most of which have been investigated in the context of religion-and-health research. Taken together, they demonstrate that findings linking measures of religion and indicators of health among African Americans fit squarely within mainstream theories of biobehavioral and psychosocial factors in preventive medicine and epidemiology.

First, strong commitment to a system of religious beliefs may lead to avoidance of destructive habits and adoption of healthy behaviors known to reduce the risk of morbidity among African Americans.¹⁰⁴ Second, frequent church involvement may strengthen bonds to the most significant network of social support in the African-American community, a key resource for health promotion and disease prevention.¹⁰⁵ Third, the worship experience in African-American churches may produce positive affects that could potentially influence susceptibility to or course of illness or even be therapeutic,¹⁰⁶ such as through psychoneuroimmunologic or neuroendocrine pathways. Fourth, certain healthy beliefs which motivate preventive healthcare practices may be consonant with or supported by the beliefs or worldviews promoted by African-American churches.¹⁰⁷ Finally, the positive expectations of persons of faith, such as those promoted by readings of scripture, by sermons or by pastoral counseling encounters, may be an especially potent resource for preventing psychological distress in African Americans.¹⁰⁸ Evidence supportive of these potential mediating factors is discussed in greater depth in the recent book, *God, Faith, and Health*.¹

Certainly, these hypothesized linkages connecting religion and health among African Americans, and among all people, would be worth exploring further. Such research is especially consistent with increasing calls to investigate the relationship between psyche and soma. This exciting intellectual frontier for physicians and scientists was heralded decades ago by medical pioneers, from Sir William Osler¹⁰⁹ writing in the *British Medical Journal* to Dr. Paul Dudley White¹¹⁰ here in the pages of *JNMA*, yet only recently has it received the attention it deserves. Investigating the possible interconnections among body, mind and spirit—and community—may produce promising leads in the challenge to improve the health of African Americans.

IMPLICATIONS FOR CLINICAL PRACTICE, MEDICAL EDUCATION AND PUBLIC HEALTH

The presence of this large body of empirical findings on religious determinants of health has already significantly impacted medicine and the health professions. While most existing findings are not based on clinical studies, as noted earlier, the implications that one's health status may be influenced to some

extent by aspects of one's religious life have not been lost on many physicians, especially in the academic world. Innovations have been wide-ranging, occurring in clinical assessment, medical and health professions education, and public health policy. These changes reflect a growing awareness of the salience of religion as a motivating force in people's lives—one that, according to epidemiologic studies, seems to exert a mostly salutary effect on indicators of physical and mental health.

The authoritative *Handbook of Religion and Health*² outlines opportunities for physicians and other health professionals to stay attuned to or respond to religious needs of their patients: taking a religious history, supporting or encouraging religious beliefs, ensuring access to religious resources, respecting visits by clergy, viewing hospital chaplains as part of the healthcare team, being ready to step in when clergy are unavailable and using advanced spiritual interventions (e.g., prayer) cautiously. The first of these activities may be the most directly applicable to most physicians. Accordingly, greater attention is beginning to be paid to what is known as spiritual assessment,¹¹¹ particularly for African-American patients, as noted recently in *JNMA*.¹¹² The Joint Commission on Accreditation of Healthcare Organizations, for example, under its behavioral healthcare standards, now specifies guidelines related to spiritual assessment.¹¹³

This is a potentially challenging issue for clinicians. Physicians are limited in the time available to them in the typical clinical encounter, and indications that yet another overlooked factor ought to be probed for and measured may not necessarily be welcomed, no matter how much variance such a factor might explain in statistical models. Medical history-taking is a painstaking process, and, naturally, the lengthy scales and indices used in large community studies cannot be used given the constraints of the typical primary care office visit and the urgency to make a sound diagnosis. Fortunately, efforts have been made to develop and validate brief, useful and culturally sensitive inventories for such settings, and a variety of simplified instruments are available for both primary care physicians and psychiatrists.^{114,115} Since the first NIH Conference on Spiritual Assessment in Health Care Settings, held in 1995, medical educators have begun to integrate this material into their curricula.

Notwithstanding previous warnings about the overinterpretation of findings related to religion-health associations, it is important to recognize the potential importance of religious and spiritual beliefs with regard to patients' well-being and coping efforts. Religious and spiritual beliefs and practices (e.g., prayer, rituals, religious support) are important

resources and sources of comfort to many individuals and may be an essential component of their overall coping strategy for dealing with the physical and psychological effects of illness and the treatment experience. In fact, some patients report a desire to engage in prayer with their physicians but indicate that they are often reluctant or embarrassed to do so.² While undoubtedly important in specific circumstances and with particular patients and physicians, the use of prayer and other religious coping strategies in clinical encounters should be guided by several caveats.

First, because the physician-patient relationship is characterized by significant differences in power, knowledge and authority, there is always the possibility that physician attempts to incorporate religion into the therapeutic relationship will be misconstrued as coercive.¹¹⁶ In the interest of preserving patient autonomy and self-determination, the patient should be the one who requests prayer and other religious activities. The use of religious or spiritual histories of the type mentioned previously can be employed as a preliminary procedure that informs physicians as to the relevance of these concerns for individual patients, as well as signals to the patient of the physician's willingness to engage in discussions of these topics. Exploration of religious topics should proceed using a patient-centered approach and, to the extent possible, nondirective techniques.

Second, the physician should also feel comfortable in engaging in these activities—both with respect to the type of activities and level of involvement required. Physicians who do not share the patient's religious tradition and beliefs may need to simply demonstrate acknowledgment of and respect for clients' religious orientations. When patients and physicians have similar religious orientations and beliefs, they may be able to engage questions of religion and health in ways that affirm their own understandings and preferences, while at the same time upholding the highest standards of ethical care. However, even patients and physicians who ostensibly share the same faith tradition (e.g., Christianity) may have very different preferences for religious interventions and views about the functional aspects of religion.¹¹⁷ For example, they may differ with respect to the types of religious coping preferred or attitudes about the appropriate uses of prayer under these circumstances. Further, differences concerning the use of religion in healthcare are likely intensified in situations in which the patient and physician are of different religious or faith backgrounds.

Third, for precisely these reasons, physicians must demonstrate tolerance and respect for patient beliefs as well as competence in discussing religion and using religious methods of varying levels of sophistication and depth. Several physicians have advocated

use of advanced religious interventions, such as prayer and reading of religious scriptures in health-care settings.^{116,118} For reasons stated earlier, this should only be done with care and in a manner that respects patients' wishes and autonomy. Physicians who choose to engage in these discussions and interactions with patients and their families should recognize the outstanding resource that they have available in hospital chaplains or other clergy who make hospital rounds. Hospital chaplains are specifically trained to handle the issues and concerns that arise in these situations and provide a perspective that emphasizes the health and well-being of the whole person. Further, by virtue of their training and experience, hospital chaplains have a wider exposure to and appreciation of a range of faith traditions and religions. This is particularly important, as the U.S. population is religiously pluralistic and diverse. Physicians who choose to incorporate religious content into their practice should be responsive to the significant religious and cultural subgroups that may reside in their communities (e.g., Muslim, Hindu, Hmong). Unfortunately, the predominant focus of the research literature on white mainline Protestant denominations has limited our understanding of the relation between religion and health for different and diverse religious and faith groups, such as exist among African Americans.

Fourth, frequently, patients may feel that their illness has been caused by a lack of faith on their part or is due to other religious reasons (e.g., moral failing, sin). Physicians must be especially careful to avoid contributing to these beliefs. Appropriate referral to a hospital chaplain or the patient's own clergy may be needed to address these special concerns. However, it should be noted that in some instances, patients' beliefs regarding individual blame may be consistent with their religious orientation. For the patient, accepting responsibility in such situations may be seen as appropriate and necessary for spiritual reconciliation. Accordingly, physicians must be very careful not to "prescribe" prayer or other religious practices specifically as a means to effect a cure for disease without an explicit indication from the patient that he or she is comfortable discussing these issues with their physician. Professional codes of ethical conduct and practice, while endorsing the clinical value of religious orientations, explicitly prohibit actions on the part of the professional that seek to impose particular views (either religious and antireligious) on clients or that discourage and disparage clients' religious beliefs and values behavior.¹¹⁹ As indicated above, the best advice is when in doubt, consult a healthcare chaplain or appropriate member of the clergy.

Several clinicians^{2,120} have written expertly about the issues involved in incorporating religion in treat-

ment. While beyond the scope of the present article, more extensive discussions are needed concerning the appropriate roles of religion in the clinical encounter and which include the perspectives of patients, clergy, health professionals and bioethicists.^{11,120} This past decade has also witnessed a growing receptivity to broaching larger issues related to spirituality and personal faith in undergraduate and graduate medical curricula. In 1992, only three U.S. medical schools had coursework or instruction of any type related to summarizing or exploring the role of religion in health and illness and in the clinical setting.^{121,122} Two thirds of medical schools now have such coursework, including especially innovative programs at Howard University College of Medicine and Morehouse School of Medicine, and these developments are formally recognized and supported by the Association of American Medical Colleges.¹²³ Additionally, training curricula have been developed for residents in psychiatry and primary care, which are being used as guidelines in many residency programs throughout the country.¹²⁴

Several years ago, the present authors outlined a model of the contributions of religion to public health.¹² It was noted that one of the principal ways that church involvement can impact on the health and well-being of communities is through increasing access to religious institutions that participate in or offer health programs or interventions, such as screening, referrals and free clinics. In the public health sector, efforts to make use of churches and religious institutions for community health interventions actually predate most of the wider publicity given research findings related to religion and health. Westberg's¹²⁵ well known church-based Wholistic Health Centers and the pioneering Health and Human Services Project of the General Baptist State Convention of North Carolina¹²⁶ date back at least 25 years. The latter program was especially important as it demonstrated that medical professionals, academic public health scientists and historically African-American churches could successfully collaborate to improve the health status of underserved African Americans and reduce the risk and complications of serious diseases, such as hypertension and diabetes. Over the past few decades, numerous public health and community medicine programs have been implemented in collaboration with African-American churches and denominations,⁹⁹ and African-American pastors have proven especially valuable allies for interventions at all three of the levels of prevention.¹²⁷

Dr. Caswell A. Evans, Jr., a former president of the American Public Health Association, has called for an increase in partnerships and coalitions between the health and faith communities as a vital means to "pro-

mote the physical, emotional, mental, social, educational, economic, environmental and spiritual well-being of all communities".¹²⁸ For African Americans, this would be a welcome development. Church communities and congregations are primary sources of formal and informal support, both emotional and tangible, for African Americans,³ especially older black adults.¹²⁹ These, in turn, may be powerful resources for promoting health and preventing disease, and thus reducing the unfortunate racial disparities in access to medical care, in physician utilization, in morbidity and mortality and in overall health status that still persist in the United States.¹³⁰

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