

How Religious Beliefs and Practices Are Related to Stress, Health and Medical Services

(presented at a Heritage Foundation Symposium on 12/3/08)

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Summary

This paper reviews *original* research published in social, psychological, behavioral, nursing and medical journals that has examined relationships between religion/spirituality (R/S) and the health of individuals and populations. I describe (1) the prevalence of religious beliefs and practices in United States; (2) the increasing stress in America and negative effects on physical health; (3) the role R/S play in coping with stress and physical illness; (4) the relationships between religious involvement, stress, and depression; (5) the relationships between religion, substance abuse, and health behaviors; (6) the relationships between religion and physical health; (7) the impact on need for medical care and use of health services; and (8) the effects on community resiliency following natural disasters and acts of terrorism. This review suggests that as many as 3,000 quantitative studies have now examined relationships between R/S and health (mental and physical), the majority reporting positive findings. I examine of the implications of this research for improving public health, promoting community resiliency, enhancing patient care, and lightening the ever-increasing economic burden of providing health care and protecting our population.

Note: A version of this paper was presented to Subcommittee on Research and Science Education of the U.S. House of Representatives on September 18, 2008 (http://democrats.science.house.gov/Media/File/Commdocs/hearings/2008/Research/18sept/Koenig_Testimony.pdf)

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Until recently, scientists have largely avoided studying the relationship between religion and health. A young faculty member wishing to examine these relationships was often told that conducting such research amounted to an “anti-tenure” factor. Furthermore, there was little if any funding from NSF/NIH to support such research. Religious beliefs and behaviors were largely thought of as too subjective, not quantifiable, unscientific, and based in fantasy and infantile projections or illusion (Freud). As a result, health professionals today ignore their patients’ religious or spiritual needs, and have little appreciation for their relationship to health.

Times are changing. There has been a tremendous surge in research examining relationships between religion, spirituality, and health (95% conducted without funding). Research on this subject carried out prior to the year 2000 has been systematically reviewed in the *Handbook of Religion and Health*.¹ That review uncovered over 1200 studies published in a wide array for psychological, behavioral, medical, nursing, sociological, and public health journals. During the time since publication of this book, the research on the subject has increased dramatically. An online search using the keywords “spirituality” and “religion” between 2000 and 2008 in *PsychInfo* (the American Psychological Association’s online database of research in the psychological, social, and behavioral sciences) recently uncovered 7,145 scientific articles (about 20% reporting original research). Repeating the same search but restricting the years to 1860 to 1999, uncovered 6,282 articles. Thus, more research on religion, spirituality and health has been published in the past 7-8 years than was published in the 140 years before that. Covering this massive research base, then, is a daunting task.

The present report reviews *original* research conducted in the social, psychological, behavioral, and medical sciences that has examined relationships between religion/spirituality (R/S), and health. Where individual studies are cited, these represent some of the best work on the topic in terms of research design. They often utilize large representative population-based or clinical samples, control for relevant confounders, and employ distinctive, uncontaminated measures of religion/spirituality (R/S). Most studies are observational in research design, although a small number of clinical trials are included. Some aspects of this review are systematic (for example, studies on depression, positive emotions, substance abuse, delinquency, health behaviors), while others are not. For example, studies reported on physical health outcomes have been chosen to illustrate the kinds of studies published, but the review is not systematic. A complete systematic review of this area is now underway (*Handbook of Religion and Health*, 2nd edition, Oxford University Press, 2011).

Below I outline (1) the prevalence of religious beliefs and practices in the United States; (2) the increasing stress in our population and the negative effects of stress/depression on physical health; (3) the role that R/S plays in coping with stress and physical illness; (4) the relationships between religious involvement, stress, and depression; (5) the relationships between religion, substance abuse, and health behaviors; (6) the relationships between religious involvement and physical health; (7) the impact on need for medical care and use of health services; and (8) the effects that religious involvement has on community resiliency following natural disasters and acts of terrorism. I then briefly examine the implications of this research for public health and for the individual care of patients by health professionals.

Facts to Ponder

The United States is a very religious nation:

- **93% of Americans believe in God** or a higher power, according to a Gallup Poll conducted in May 2008²
- **89% of Americans report affiliation with a religious organization** (82% Christian, i.e., Protestant or Catholic), according to a representative national survey conducted by Baylor Institute for Studies of Religion in September 2006 and Gallop Poll in December 2007.³
- **83% of Americans say religion is fairly or very important** to them, according to a September 2006 Gallup Poll (latest data available).⁴
- **62% of Americans say that they are members of a church or synagogue**, according to a December 2007 Gallup Poll (latest data available).⁵
- **58% of Americans pray every day** (and 75% at least weekly), according to a 2008 U.S. Religious Landscape Survey.⁶
- **42% of Americans attend religious services weekly or almost weekly** (and 55% attend at least monthly), according to aggregate Gallup Pools in 2007.⁷

Stress and depression are common in American society, especially due to the recent economic downturn. Both stress and depression worsen when people develop medical illness and health problems.

- **Stress levels, and likely stress-related disorders, are increasing** in the United States, based on Associated Press-AOL poll and surveys conducted by the American Psychological Association.^{8,9}
- **Rates of significant depression in the community are about 5-10%, and place a substantial burden on the economy** due to cost of treating depression and time lost from work due to depression-related disability.^{10,11,12}
- **Nearly 50% of hospitalized medical patients develop depressive disorder**, usually due to the prolonged stress and life changes caused by medical problems.¹³

Stress and depression have effects on physical health and need for health services

- **Psychological stress and depression adversely affect health.** This applies to a wide range of medical outcomes,¹⁴ including hypertension, myocardial infarction,¹⁵ stroke, speed of wound healing,¹⁶ and may even affect the aging process itself in terms of cellular lifespan.¹⁷
- **Depression increases length of hospital stay and cost of medical services,** in addition to adversely affecting the quality of life of the patient and their family.^{18,19} For latest information, see NIH report.²⁰

Many in the United States turn to religion for comfort when stressed or sick.

- **Religion is often used to cope with stress.** Following the terrorist attacks on September 11, 2001, research shows that 9 out of 10 Americans turned to religion to cope.²¹
- **Religion is often used to cope with mental/physical health problems.** Research shows that in some areas of the United States, 9 out of 10 hospitalized patients say they use religion to cope with illness, and over 40% say that it is the most important factor that keeps them going.²² Since the year 2000, over 130 separate *quantitative* studies have documented high rates of religious coping in a range of health conditions, especially in minority groups and in women. This number does not include hundreds of peer-reviewed published *qualitative* studies (in the words of patients) that support these findings.

Religious involvement may help to reduce stress, minimize depression, and enhance quality of life.

- Because of its effectiveness as a coping behavior, religious involvement may **reduce psychological stress, buffer against depression, and speed recovery from emotional disorders.**^{23,24,25,26} Of studies examining religion and depression prior to the year 2000, 64 of 101 studies (64%) reported less depression or faster recovery from depression among the more religious (*Handbook of Religion and Health*, *ibid*). Since the year 2000 (past 7-8 years), 140 of 223 studies (63%) reported less depression or faster recovery from depression in the more religious (unpublished review).
- Religious involvement is associated with positive emotions (greater well-being, happiness, optimism, hope, meaning and purpose in life) and higher quality of life.
- With regard to well-being, of research conducted prior to the year 2000, 106 of 131 studies (81%) reported that religious persons experienced more positive emotions (*Handbook of Religion and Health*, *ibid*). Since the year 2000 (past 7-8 years), 172 of 228 studies (75%) have reported this same finding (unpublished review).

- With regard to quality of life, since the year 2000, 20 of 29 studies on R/S and quality of life reported that they were positively associated.

Religious involvement is related to lower rates of alcohol and drug abuse, less crime and delinquency, and better grades in school.

- Religious involvement predicts **lower rates of alcohol and drug use**, particularly in high school students, college students, and young adults.^{27,28,29,30,31,32,33} Concerning research published prior to the year 2000, 124 of 138 studies (90%) reported less alcohol and drug use/abuse in those who were more religious (*Handbook of Religion and Health*, *ibid*). Since the year 2000 (past 7-8 years), an *incomplete review* indicates that 152 of 186 studies (82%) reported this same finding (unpublished review). Thus, 276 of 324 studies report significant inverse relationships between religious involvement and substance abuse.
- **Delinquency rates and crime are less frequent** in those who are more religious.^{34,35,36,37} Prior to the year 2000, 28 of 36 studies (78%) reported that delinquency or crime rates were lower among the more religious (*Handbook of Religion and Health*, *ibid*). Since the year 2000 (past 8 years), an *incomplete review* indicates that 12 of 16 studies (75%) report similar findings.

Religious involvement is related to healthier life styles and fewer risky behaviors that could adversely affect health

- Religious involvement is associated with better health behaviors, including **less cigarette smoking**^{38,39,40,41,42,43,44,45} **and more physical exercise.**^{46,47,48} Prior to the year 2000, 22 of 25 studies (88%) indicated that religious persons are less likely to smoke cigarettes (*Handbook of Religion and Health*, *ibid*). Since the year 2000, an *incomplete review* indicates that 28 of 33 studies (85%) reported this same finding. With regard to exercise, four of six studies have reported that religious persons are more likely to exercise. Body weight, however, is another issue; only 1 of 8 studies show that religious persons weigh less than those who are less religious (probably because of those potluck suppers!).
- Religious involvement is related to **less sex outside of marriage and safer sexual practices** (including fewer partners).^{49,50,51,52,53,54} Prior to the year 2000, 37 of 38 studies reported that finding. Since 2000, an *incomplete review* indicates that 8 of 8 studies (100%) report this.
- Religious involvement is related to a **lower risk, healthier lifestyle, particularly among youth**. This includes greater likelihood of wearing seat belts, better sleep quality, regular vitamin use, regular physical and dental visits, etc.^{55,56,57,58,59}

Religion is related to better physical health and faster recovery

- Religious involvement and spiritual activities are associated with lower rates of a whole host of stress-related medical conditions, including less cardiovascular disease,^{60,61,62,63} improved outcomes following cardiac surgery,^{64,65} lower rates of stroke,^{66,67} lower cardiovascular reactivity,^{68,69,70} lower blood pressure,^{71,72,73,74,75,76,77,78} and fewer metabolic problems (related to blood sugar, etc.).^{79,80,81} Immune^{82,83,84,85,86,87} and endocrine functioning^{88,89,90,91} also appear to be better in those who are more religious, and consequently, it is not surprising that medical outcomes are improved for patients with HIV/AIDS^{92,93} or other infections such as meningitis.⁹⁴ Finally, there is a lower risk of developing cancer and better outcomes for cancer in general,^{95,96} and for specific cancers such as gastrointestinal^{97,98,99} breast,¹⁰⁰ and oral.¹⁰¹ For a review of the research before 2000, see *Handbook of Religion and Health*, *ibid.* For a more recent review, see *Medicine, Religion and Health*.¹⁰²
- Religious involvement predicts **greater longevity** and lower mortality, with religious attendance being the strongest predictor (and associated with 7-14 years of additional life), with earlier^{103,104,105,106} as well as more recent studies^{107,108,109,110,111,112,113,114,115,116,117,118} showing such relationships.
- Religious activity predicts **slower progression of cognitive impairment** with aging,^{119,120,121} and may be associated with a slower progression of Alzheimer's disease.¹²²
- Religious involvement predicts **less functional disability** with increasing age,^{123,124,125} and faster functional recovery following surgery.¹²⁶
- For a critique of research on religion and physical health, see reviews by Sloan.^{127,128}

All things being equal, religious people need and use fewer health care services; this is because they are healthier, more likely to have intact families to care for them, and have greater social support

- Religious involvement is related to greater marital stability,^{129,130,131,132} enhanced family relationships,¹³³ and greater social support,^{134,135,136,137,138,139} particularly for minority communities. This affects the kind of support and monitoring a person with chronic illness will have in the community (which may keep them out of the hospital or out of a nursing home). Prior to the year 2000, 19 of 20 studies found that religious persons had significantly more social support.
- Religious involvement is associated with **lower rates of medical service use**,^{140,141} including both acute hospitalization¹⁴² and long-term care.¹⁴³

Communities with high percentage of religious involvement recover more quickly from natural disasters and acts of terrorism

- After the police, firefighters, and emergency medical technicians, religious communities are often the first responders and often the most enduring responders following disasters. The extensive literature (both research studies and popular articles) documenting this fact is described in two books, *In the Wake of Disaster: Religious Responses to Terrorism and Catastrophe*,¹⁴⁴ and *Tend my Flock: Emergency Planning for Faith Communities*.¹⁴⁵
- Religious involvement is related to better mental health, greater community resilience, and higher social capital following disasters.^{146,147,148,149}

Implications for Public Health

So what? Should we try to make people more religious? There are numerous direct public health and clinical applications for all of the above that have nothing to do with prescribing religion, endorsing religion, or over-stepping the bounds of church-state separation that the 1st Amendment guarantees. I divide the implications of this research into two categories: implications for public health and implications for clinical care.

Implications for Public Health

(1) More research is needed. Although there is every reason based on existing research to suggest that religious involvement is related to better health, we don't really understand why this is the case. Religion can certainly have negative health effects as well, but certain aspects of religion (cognitive, behavioral, or social) appear have positive effects on health and well-being. Is this not relevant to the health of our population and resiliency of our communities? The problem is that we don't know what aspects of religion are particularly healthy, or how these health benefits occur in terms of behavioral and physiological mechanisms. We also don't fully understand how religion impacts the health of communities, or their resiliency to crime, poverty, teenage pregnancy, school performance, venereal disease transmission, natural disasters, etc. Given the widespread prevalence of religious beliefs and activities (with nearly 200 million church members and over 125 million weekly church attendees), even small effects on either individual or community health could have enormous public health impact.

(2) Although it is not ethical or desirable to change or increase religious involvement for health reasons, it is important for social and behavioral scientists to learn how R/S is affecting health and then inform the public about this. People, then, will need to make their own choices in this regard, free from coercion or manipulation. Furthermore, doesn't the majority of the U.S. population for whom religion is important deserve to know what effect their religious beliefs and practices are having on their health? This is particularly true since certain religious practices in some settings may actually worsen health (about 5-10% of studies find negative correlations

between religion and health). For religious beliefs, practices, and rituals that are shown to improve health, knowing this may help to boost the health effects that these beliefs/practices have for religious people (since it may encourage them to continue these practices, or may help them to utilize their beliefs to help them change unhealthy lifestyles). Thus, education of the public and dissemination of research findings about factors that may affect health is an important role for both health professionals, as well as for government agencies interested in maintaining and enhancing the health of the population.

(3) There are many human characteristics that we study in the social and behavioral sciences that we cannot change, but need to understand what impact they are having on health for planning purposes (i.e., anticipating health care needs of the population). These include age, gender, race, ethnic background, sexual preference, political belief, etc. There are also characteristics that we may be difficult to change, and yet we need to know how these factors affect health and use of health services. These include the effects of poverty, personality, level of social involvement, health habits, obesity, and so forth. This doesn't prevent us from conducting research to better understand how these factors affect health. For some reason, however, religion seems to be placed in a different and separate category. Currently, there is widespread bias in the mainstream scientific community against research on the health effects of traditional religious beliefs and practices [just take a look at the portfolio of NSF/NIH grants and see how many grants in the psychological, social, and behavioral sciences are focused this area of research].

(4) What about the Americans who are not religious (about one-third of the U.S. population)? It may be that they too will benefit from research on religion, spirituality and health. By learning about how R/S affects health, we can apply this knowledge to non-religious settings and to non-religious people using secular techniques. For example, how does religious involvement convey meaning and purpose, hope, self-esteem, protection from depression, and buffer against stress (and perhaps consequently reduce blood pressure, heart attacks, and stroke, or slow the development of cognitive impairment and disability with age)? If we know the mechanisms, we could use them to enhance the way secular beliefs and behaviors provide these healthy effects. This would benefit everyone.

(5) There is even some research that suggests that communities where high proportions of the population are members of religious groups have better health in general, even the non-religious people who live in those communities.^{150,151} Shouldn't public health experts be interested in why and how this occurs? Would such research not provide clues on how to enhance the health of entire populations?

(6) There are few places where people of all ages (young, middle-aged, and elderly), all socioeconomic levels, and all ethnic backgrounds congregate on a regular basis as happens in religious communities. This makes religious organizations an ideal route by which to provide health screening, health education, and other disease detection and prevention services. A few studies have shown that health education programs in churches can affect diet, weight, exercise, and other health behaviors, and this is particularly true for minority communities who often do not have easy access to such information or to preventative healthcare services. Religious communities may also be an ideal place to provide alcohol and drug education, as well as inculcate moral values and character that could affect future decisions that impact health, pro-

social behaviors, and even affect the ability to afford health insurance during adulthood. More research is needed, and effective programs need to be developed. Again, such efforts could have a direct impact on public and community health.

(7) Religious communities often have altruism as one of their basic values. Thus, members of churches, synagogues and mosques represent an army of potential volunteers to assist with social programs, mentoring, and direct service provision. This is perhaps most evident with regard to disaster preparation and response. Why are we not supporting and nourishing this role that many faith communities are already engaged in? Instead, faith groups often meet resistance from formal emergency management services when they try to help, since they are not integrated into these efforts. Without the volunteer help that faith communities provide, it is not hard to imagine what the additional cost to FEMA might be. The health of our communities, particularly when affected by natural disasters or acts of terrorism, may depend on whether religious communities are fully prepared and involved in response efforts.

Implications for Patient Care

(1) If future research confirms that religious involvement significantly affects mental and physical health, then health professionals need to be educated about this and need to consider this in their treatment of patients. In fact, one could argue that there is already sufficient evidence from research to begin doing this. Furthermore, there are other reasons why health professionals should be integrating spirituality into patient care. Here are a few (see *Spirituality in Patient Care*, 2007, for details):¹⁵²

- Many patients are religious or spiritual, and would like it addressed in their health care. Because religious beliefs are used to cope with illness (either mental or physical), religious patients would like their spiritual needs to be acknowledged and addressed by their physicians (and by nurses who provide direct and personal care).
- Patients, particularly when hospitalized or imprisoned by chronic illness, are often isolated from their religious communities. Our country has recognized that when people are prevented from practicing their religious faith because of circumstances imposed on them, we have provided the resources necessary for them to practice their faith (based on the principle of religious freedom). This is why we have chaplains in the army, and in federal and state prisons and psychiatric facilities. Hospitalized patients with medical problems or the chronically ill are no different. Many people are hospitalized far away from their religious communities of support (this is especially true for nursing homes, where contact is minimal even when religious communities are nearby).
- Religious beliefs affect medical decisions, and may conflict with medical treatments. This is a very practical reason why health professionals need to communicate with patients about religious or spiritual beliefs. Studies find that 45% to 73% of seriously ill patients indicate that their religious affect their medical decisions.^{153,154,155} Yet 90% of physicians do not take a spiritual history or discuss these matters with patients, and 45% of physicians say that it is not appropriate to do so.¹⁵⁶ One reason for the latter is because only 5% of physicians have had training during their medical education on these issues.¹⁵⁷ Nevertheless, common sense should

dictate otherwise. How can physicians practice competent medicine if they don't have knowledge about factors that will affect compliance with the treatments they prescribe?

- Religious struggles or spiritual conflicts over medical issues have been shown to predict increased mortality and worse medical outcomes.¹⁵⁸ If left undetected and not addressed, these struggles may adversely affect disease course despite the best of medical treatments.
- Religion influences health care in the community. Because of the rising costs of health care, most health care is now shifting out of the hospital and into the community. Hospital stays are becoming shorter and shorter (since hospitalization is the most expensive form of medical care), and people are being discharged sicker and sicker into the community. If patients are involved in a church, synagogue, or mosque, they will have a ready support system that can provide emotional support, monitor compliance, and provide practical services (meals, home-maker services, respite care, rides to physician office). If they are not so involved, then they are dependent on family members for support, and if no family is available, then they are forced to rely on the government. This will become a real issue as our population ages and the medical needs escalate (see *Faith in the Future: Healthcare, Aging, and the Role of Religion*).¹⁵⁹

(2) What are sensible ways that clinicians can integrate spirituality into patient care without prescribing religion or coercing patients to believe or practice? First of all, health professionals will find that most of their patients are already religious (recall that up to 90% of seriously ill patients in some parts of the U.S. use religion to cope), so promoting religion is not necessary. It's already there. What clinicians do need to do, however, is to recognize religious/spiritual beliefs, support them (if not directly in conflict with medical care), and consider them when making medical decisions and developing treatment plans. Here are some ways to do that:

- For patients admitted to the hospital or those with serious or chronic medical illness, physicians should take a brief, screening spiritual history that identifies if spiritual beliefs are (1) important to the patient, (2) helping the patient to cope (or causing spiritual struggles), (3) influence medical decisions or conflict with treatments prescribed, (4) include involvement in supportive spiritual community, and (5) are accompanied by spiritual needs that someone should address.¹⁶⁰ The spiritual history takes about 2 minutes to complete.
- Support (verbally and non-verbally) the religious or spiritual beliefs of patients if those beliefs are helping the patient to cope.
- If spiritual needs or conflicts are identified, refer patients to professional chaplains or trained pastoral counselors to address those needs.
- If patients are not religious, then the spiritual history should focus on what gives life meaning and purpose in the setting of illness (interacting with grandchildren, hobbies, etc.), and then those activities supported. Religion should never be prescribed, forced, or even encouraged in patients who are not already religious. There is no need to add guilt to the already heavy burden of illness. Inquiry and support in this area must always be patient-centered and patient-directed.

(3) Health professionals in hospital and outpatient settings should be willing to accommodate the environment to allow for the spiritual beliefs and traditions of patients. Examples: For the American Indian, this may involve altering the environment (or providing alternative

environments) so that traditional spiritual ceremonies concerning sickness and death may be performed if requested by the patient or family. For the Muslim patient, the environment should be altered so that the patient can perform his or her daily prayers, and care arranged so that only gender-matched health professionals provide personal care. Religious and cultural sensitivity will help both the patient and the family to cope better with illness, will improve patient and family satisfaction with care, and thereby may enhance medical outcomes.

(4) Efforts should be made to ensure that there are adequate numbers of chaplains available so that patients' spiritual needs can be adequately addressed. A recent study conducted by Harvard investigators documented that three-quarters (72%) of patients dying of cancer said that their spiritual needs were minimally or not at all met by the medical system (i.e., doctors, nurses, or chaplains).¹⁶¹ Currently, there are only enough chaplains in U.S. hospitals to see about 20% of patients (1 in 5).¹⁶² There are typically no chaplains in outpatient settings and no chaplains in nursing homes. Who meets these patients' spiritual needs? Systems need to be developed to ensure that this happens.

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