

CONGREGATIONAL SUPPORT NETWORKS, HEALTH
BELIEFS, AND ANNUAL MEDICAL EXAMS: FINDINGS FROM
A NATIONWIDE SAMPLE OF PRESBYTERIANS

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Explanations for associations between religious involvement and preventive health care utilization remain poorly understood. Using 2007 data from a nationwide sample of members of the Presbyterian Church U.S.A., we develop and test several hypotheses concerning religious beliefs, congregational practices, and informal church-based networks in shaping the likelihood of obtaining annual medical checkups. Members of churches with higher levels of formal health activities and those who discuss health matters within informal member networks are more likely to have checkups. At least part of this association reflects the role of doctor recommendations from church members. Surprisingly, beliefs in the sanctity of the body are inversely associated with the likelihood of obtaining checkups. Several dispositional factors (planfulness, conformity, social desirability) are considered and dismissed as explanations for the observed patterns.

INTRODUCTION

The relationships between religion, health, and mortality have elicited considerable attention from researchers, practitioners, and the public. A substantial literature has investigated these issues, and while this remains highly controversial in some circles (e.g., Sloan 2006), a number of studies link religious involvement—often gauged in terms of the frequency of attendance at religious services—with desirable health outcomes

(Chatters 2000; Koenig, McCullough, and Larson 2001). Although a range of outcomes has been examined (*e.g.*, hypertension, cardiovascular disease, self-rated health), perhaps the most consistent findings involve mortality risk (Hummer *et al.* 2004; McCullough *et al.* 2000). Indeed, several dozen studies, primarily based on samples of community-dwelling adults, have reported that religious involvement is inversely related with the risk of subsequent mortality, a pattern that is broadly consistent across a range of specific causes of mortality (Hummer *et al.* Ellison 1999; Oman *et al.* 2002; Rogers, Krueger, and Hummer 2007), across different types of communities and populations (Hummer *et al.* 2004), and across diverse racial and ethnic groups (Ellison *et al.* 2000; Hill *et al.* 2005).

Although the evidence of salutary religious effects on mortality continues to accumulate, researchers differ regarding the most plausible explanations for these patterns. Most high-quality studies in this area include statistical controls for certain health behaviors (*e.g.*, smoking, drinking, body mass index), as well as social ties and support, baseline health status, and various sociodemographic variables (Strawbridge *et al.* 1997; Hummer *et al.* 1999; Musick, House, and Williams 2004). This has led investigators to speculate about the role of other factors, including unobserved psychosocial mechanisms such as coping and resilience in the face of stress, hope and optimism, sense of coherence, forgiveness, and others (Ellison and Levin 1998; George, Ellison, and Larson 2002). Others have discussed the potential significance of the duration of exposure to religious faith and practice in reducing allostatic load¹ and the cumulative protective effects of religious involvement over the life course. Still other researchers have focused on identifying possible physiological explanations for the religion-mortality link, including potential influences of religion and spirituality on stress hormones, immune function, and other systems in the body (*e.g.*, Seeman, Dubin, and Seeman 2003).

One interesting possibility is that studies of religion, health, and mortality have not fully considered the role of various health behaviors and lifestyle factor, which may be influenced by religious involvement. To be sure, there is strong evidence of religious differentials in use of tobacco and alcohol (Gillum 2005; Koenig *et al.* 1998; Strawbridge *et al.* 2001), although the associations with body mass (BMI) are less clear (Cline and Ferraro 2006). However, recent studies also suggest broader links between religious factors, and especially frequency of attendance at services, and a much broader array of behavioral and lifestyle factors, ranging from exercise and diet quality, to sleep quality, to the regular use of seat belts, vitamins, and other protective and preventive measures (Hill *et al.* 2006; Hill *et al.* 2007). Of particular importance is a small but growing literature demonstrating that more religious persons tend to enjoy greater continuity of care than others (King and Pearson 2003), and report greater use of various preventive health services, including mammograms, cholesterol screening, and others (Benjamins and Brown 2003; Benjamins 2005, 2006a; Benjamins, Trinitapoli, and Ellison 2006). It is conceivable that early detection of serious chronic conditions could help more religious persons manage diseases more effectively, leading to a higher quality of life in later years, as well as a reduced risk of premature mortality. Thus, it is important to examine more carefully the reasons for the associations between religious factors and preventive care use. To date, however, work in this area remains in its early stages, and a number of promising potential explanations for associations remain unexplored.

Our study begins to address this gap in the literature. Briefly, after outlining three mechanisms via which religious involvement may promote preventive care use—beliefs, formal

congregational initiatives, and informal church-based support—we test relevant hypotheses using data from lay respondents from the January 2007 wave of the Presbyterian Panel Survey, a nationwide sample of PCUSA elders and rank-and-file laypersons. Our study focuses on one particular preventive health activity, obtaining an annual general medical examination (*i.e.*, checkup), because it is: (a) perhaps the most common type of preventive health care; (b) a gateway to various types of diagnostic tests, *e.g.*, for chronic conditions such as hypertension, diabetes, heart disease, and others; and (c) a way for persons to build ongoing relationships with primary health care providers, who can assess their individual risks and vulnerabilities over time and can advise them about ways to enjoy better health as they age. After presenting our findings, we discuss their significance for future research on religion and health, as well as the possible implications for practitioners.

THEORETICAL AND EMPIRICAL BACKGROUND

The Evidence: Previous Studies

Although a number of studies over the years have explored the possible role of religious factors in shaping patterns of acute care use, length of hospital stays, and related outcomes (Koenig 1995; Koenig and Larson 1998; Schiller and Levin 1988), the focus on preventive care use is a relatively recent development. Much of this research has centered on middle-aged and older adults, for whom preventive care is more common and arguably more important from a medical standpoint. As a result, certain preventive health services have received a good deal of consideration from religion-health researchers.

In particular, several studies now report that religious involvement—chiefly gauged in terms of the self-reported frequency of attendance at services—bears a positive association with preventive care practices among women. One important type of screening is mammogram utilization to detect possible breast cancer (Benjamins and Brown 2003; Benjamins 2006a; Miller and Champion 1993). At least one study among women from Los Angeles churches found no link between religious behaviors and mammogram use; on average, however, these church women were more likely to receive mammography than women in a comparison group drawn from the wider Los Angeles community (Fox *et al.* 1998). There is at least some evidence that members of certain religious traditions, primarily Jews and Mainline Protestants (including members of the Presbyterian Church USA), are more prone to avail themselves of mammograms than others (Benjamins 2006a). Taken together, such results suggest an association between religious group membership and/or participation and mammogram utilization, although the mechanisms underlying this association remain unclear. One study focusing exclusively on PCUSA women found a significant association between certain religious beliefs, notably the belief that spiritual health and physical health are connected, and the likelihood of mammogram use (Benjamins *et al.* 2006), perhaps suggesting a role for specific religious health beliefs in accounting for these broad patterns.

Religious involvement also appears to be positively linked with the likelihood of using other preventive health services as well, such as cholesterol screening and flu shots, as well as pap smears for women, and prostate exams for men (Benjamins and Brown 2003; Yi 1994, 1998). In particular, a study of older adults found that those who attended religious services, and especially regular attenders, were more likely to obtain cholesterol screening than their non-attending counterparts (Benjamins 2005). Here again, members of Mainline Protestant denominations such as the PCUSA were somewhat more likely than other per-

sons to report having a recent cholesterol screening (Benjamins 2005). These findings are noteworthy because they lend additional support to the hypothesis that religious involvement is linked with increased use of preventive health services. According to these patterns, frequent or regular attendance at religious services may foster or facilitate such preventive care, and it is possible that other aspects of religion, including affiliation and beliefs, may also contribute to these practices.

The role of religious factors in shaping tendencies to have general annual medical examinations has rarely been examined. However, individuals who attend religious services regularly are not only more likely to continue seeing the same health care provider over time (King and Pearson 2003), but are also inclined to express greater trust and confidence in physicians than persons who are less religiously active (Benjamins 2006b). In light of these findings that religion may influence how individuals perceive and utilize their doctors, it is reasonable to expect that religion may also be linked with the likelihood of receiving a physical examination from a doctor or other provider. However, few empirical studies have assessed this relationship. In a rare exception to this general pattern of neglect, Hill and colleagues (2006) reported that Texas residents who attend religious services regularly were more likely to receive a general health checkup than persons who attend less often, or not at all. To date, however, the generalizability of this pattern and the possible mechanisms that may explain this observed association have not been explored. This previous literature leads, then, to the first hypothesis of this study:

H1: Frequency of attendance at religious services will be positively associated with the likelihood of obtaining an annual medical examination.

Three Possible Mechanisms

How and why might religious involvement influence the use of preventive care services? One important type of explanation may be theological. Practicing Christians may have distinctive ideas and attitudes concerning the physical body and the meaning of health. For example, in First Corinthians, the apostle Paul referred to the body as a "temple of God" and exhorted the faithful to care for their physical well-being (1 Cor. 6:15, 19-20). Several empirical studies of religious variations in preventive care use cite this scriptural passage as a potential motivation for religious persons to lead healthier lifestyles and engage in positive preventive practices. In addition, the Bible contains numerous other passages that may hold implications for physical health and wellness, ranging from: (a) the teaching that humans are created in the image of God, to (b) Old Testament injunctions about dietary and other health practices, to (c) New Testament accounts of miraculous healing and recovery from illness (e.g., Sweet 1994). Although various expressions of Christian faith throughout history have embraced sharply contrasting views of the physical body, including those that have emphasized the "mortification of the flesh," Christian teaching also offers a basis for valuation and preservation of health as a gift from God (Benjamins 2007). Moreover, a pragmatic orientation toward physical health has also been advocated by some theologians. For example, John Wesley argued that Christians should maintain their health not only as an end in itself, but also because physical vigor was essential in order to fulfill other responsibilities. For example, he pointed out that God uses the physical body to accomplish His will and purposes. Health enables believers to evangelize and

