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## RELIGION AND HEALTH

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### EPIDEMIOLOGY OF RELIGION

Over the past century, the impact of religion on physical health and illness has constituted a popular if somewhat obscure topic of empirical research in epidemiology and medicine. Hundreds of published studies have identified religious differences in a wide range of health outcomes and have examined the effects of religiosity, variously defined, on health status indicators and measures of disease states (Levin & Schiller, 1987; Levin & Vanderpool, 1989). Nearly every major disease entity and cancer site has been studied in regard to religion, and especially large bodies of published data exist for coronary heart disease, hypertension and stroke, cancer, and overall and cause-specific mortality.

Until recently, this literature has not been very well known, perhaps because few of these studies were designed specifically to study the effects of religion on health. Rather, in typical epidemiologic fashion, investigators directing large studies of atherosclerosis, cervical cancer, respiratory disease, life expectancy, colitis, and the like made sure to collect data on scores of social, psychological, and biological variables—more perhaps than were ever intended to be studied explicitly. Through serendipity, one or more religious indicators managed to make a “guest appearance” in a few hundred studies. As a result, a statistical finding bearing on the impact of these religious variables on the health outcome or disease under study often ended up buried in a table in a published report. More often than not, such results were not discussed in these papers, nor were they mentioned in the abstract, nor was religion indexed as a key word. Only after several years of exhaustive bibliographic researching, reading, and collation did the full scope of this literature emerge (see Levin, *In press-a*).

Results from these studies have been remarkably consistent. While there are exceptions, these studies for the most part point to a salutary relationship between religious involvement and health status. Because most of the studies in this literature were not designed solely and explicitly to investigate this issue, and because of the paucity of true experimental evidence, no one study is ideally designed to “prove” that religion exerts a positive influence on health. However, across this literature, the consistency of findings despite the diversity of samples, designs, methodologies, religious measures, health outcomes, and population characteristics actually 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 respondents; in

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men and women; in subjects from the U.S., Europe, Africa, and Asia; in research conducted in the 1930s and into the 1990s; in case-control, prospective cohort, cross-sectional, and panel studies; in Protestants, Catholics, Jews, Muslims, Buddhists, Parsis, and Zulus; in studies operationalizing religiosity as any of over a dozen variables (religious attendance, prayer, Bible reading, church membership, subjective religiousness, Yeshiva education, etc.); in research limited to t-tests and bivariate correlations and in research testing structural-equation models with LISREL; and, in U.S. studies, among Anglo Whites, Hispanics, Asian Americans, and Blacks (Levin, Submitted).

### RESEARCH ON BLACK AMERICANS

As with medical research in general, religion and health research among Blacks has been mostly scant and superficial (Levin & Schiller, 1987). Further, researchers are yet to adequately address and account for the uniqueness—and diversity—of the Black experience in religion in the diaspora (Lincoln & Mamiya, 1990). Research currently underway at the Program for Research on Black Americans (PRBA) has provided much-needed empirical verification of the unique patterns of religious expression among Black Americans. Drs. Robert Joseph Taylor and Linda M. Chatters of the University of Michigan and Dr. Jeffrey S. Levin of Eastern Virginia Medical School have received an NIH grant to study social-structural, generational, and denominational variation in Black religiosity, and findings to date reveal differences between Blacks and Whites (Levin, Chatters, & Taylor, Submitted-a) as well as significant religious differences among Blacks (Levin & Taylor, 1993).

These findings should encourage researchers studying the influence of religious involvement on health to stratify analyses by race and ethnicity. As the health profile of Black Americans, on average, differs dramatically (and for the worse) from Whites (Braithwaite & Taylor, 1992), and since racial differences have been shown to exist in patterns of religiosity, then expectations regarding the salience of religion for health may require formulation sensitive to the socioeconomic, ethnic, spiritual, and medial contexts of the populations under study. Further, patterns of both religiosity and health status, especially mortality rates, vary by age and gender. Taking into account demographic issues such as Black-White differences both in the age structure of the population and in the gender ratio of specific age cohorts, as well as the well known racial "crossover" in mortality rates at advanced age (Markides & Machalek, 1984; Markides, 1983), adds further theoretical and methodological complexity to the requirements for religious research in this area among Blacks (see Chatters & Taylor, In press).

The best of this work has been done by gerontologists and has focused on older Blacks or on changes in religion and health throughout the life cycle. Some of this work has

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explored physical health in conjunction with other facets of overall well-being. Excellent published studies have begun to appear in this area in the past few years (e.g., Ortega, Crutchfield, & Rushing, 1983; Handal, Black- Lopez, & Moergen, 1989). Several well developed programs of empirical research currently focus on these issues, notably the work of Drs. Christopher G. Ellison, Diane R. Brown, and Neal Krause, and their respective colleagues, and the work of Levin, Taylor, and Chatters in conjunction with PRBA.

Ellison and his associates have published a series of studies which highlight the central role played by religion in the lives of Black Americans. This work entails secondary data analysis of large, national samples, such as the NSBA and the NORC General Social Surveys. Much of this research focuses on health and well-being. Findings have revealed that religion plays an adaptive and supportive role in enhancing the mental health of Black adults (Ellison & Gay, 1990). Specifically, both public and private or devotional types of religiosity exert positive effects on overall satisfaction with life and personal happiness and mitigate the negative psychosocial effects of life stress (Ellison, 1990). Further, religious certainty is found to exhibit positive effects on life satisfaction (Ellison, Gay, & Glass, 1989).

Brown and her colleagues have studied the effects of various measures of religious participation and subjective religiosity on both physical and mental health in urban Blacks. This research is notable for its attention to gender and social-structural differences in how religion impacts on health and well-being. An early study (Brown & Gary, 1987) found that among Black men religiosity does not have a significant effect on health status, while for Black women religiosity is associated with poorer physical health. Those women who were very religious tended to experience a greater number of life events related to the health and well-being of family members. The stress of these family illnesses likely exacerbated their own health problems. The authors hypothesized that religion was a mechanism used to cope with both family and personal health challenges. Additional research points to a protective effect for subjective feelings of religiousness on depressive symptomatology (Brown, Ndubuisi, & Gary, 1990), although this finding may operate primarily among the unemployed (Brown & Gary, 1988).

Krause has published findings supportive of religion's role as a coping resource among older Blacks. This research is unique for its broad focus on a variety of psychosocial and health outcomes (e.g., physical health, depression, self-esteem, mastery), its postulating of multifactorial theoretical models, and its use of sophisticated statistical procedures based on covariance-structure modeling. One study (Krause & Tran, 1989) found that increased religious involvement offset the deleterious effects of life stress on feelings of self-worth and personal control. A subsequent study (Krause, 1992) found that high levels of religious commitment counterbalance the negative impact of

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physical illness and family deaths on psychological well-being. These significant effects of religion appear to operate by bolstering self-esteem and to affect well-being independently of religion's provision of social support.

Current work in progress at PRBA is seeking to extend this field to consideration of "harder" measures of physical health, such as indices of chronic disease prevalence and functional disability, while upgrading the methodological sophistication of religious research in general (see Levin, In press-b). Levin is building just such a program of research through a five-year NIH FIRST Award, "Religion, Health & Psychological Well-Being in the Aged." A recent study completed in collaboration with Chatters and Taylor uses a theoretically based structural-equation model to examine the effects of three dimensions of religiosity on indices of both physical health and psychological well-being. Findings reveal that organizational religiosity (e.g., religious attendance) has a strong, statistically significant effect on well-being even after controlling for the effects of health and of the sociodemographic correlates of religiosity, health, and well-being (Levin, Chatters, & Taylor, Submitted-b). These provocative findings suggest that the impact of religion on well-being is not solely due to the confounding of religious attendance and functional health among older, disabled adults, as has been suggested (Levin & Vanderpool, 1987), or to religion and well-being having common predictors, such as age, gender, and socioeconomic status.

#### FUTURE DIRECTIONS

Researchers have begun to propose explanations or hypotheses for these observed effects of religion on health and well-being. These range from the sociological explanations offered by Idler (1987), whereby religion is seen as impacting health via social cohesiveness, theodicy, coherence, and health-related behavior, to more intrapsychic explanations such as McIntosh and Spilka's (1990) contention that religion effects health by way of locus of control, to the dozen hypotheses of Levin and Vanderpool (1989) based on a variety of biological, sociomedical, psychodynamic, and more esoteric pathways and mechanisms. These in turn involve health-related behavior; heredity; social support; the psychodynamics of faith, religious ritual, and religious belief systems; a "superempirical" or ineffable force or power (*prana*, *chi*, *orgone*, *mach*, etc.), as taught in some traditions; and, finally, the possibility of some type of divine or supernatural influence. The latter explanation, however, cannot be proven scientifically as, by definition, its operation lies outside the parameters of the other more naturalistic explanations. Alternatively, a multifactorial combination of some or all of the social and psychological hypotheses of Idler, McIntosh and Spilka, and Levin and Vanderpool may best make sense of these results. For example, recent findings from the field of psychoneuroimmunology demonstrate the interconnections of emotions, cognitive states, and pathophysiology (Ader, Felten, & Cohen, 1991). The next generation of religious research on health among Blacks would be wise to take

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a more multidisciplinary approach, incorporating findings and theories from the social, behavioral, and biological sciences in order to understand this interesting phenomenon.

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