

Latest Religion and Health Research Outside Duke (2000-2007)

Note: This list of studies is by no means comprehensive or exhaustive and includes only a small sample of the kinds of studies that have examined the relationship between religion, spirituality and health in recent years.

Litwin H (2007). Evidence suggests that people who attend synagogue live longer. European Journal of Ageing, August issue (also, see website: <http://www.haaretz.com/hasen/spages/895546.html>)

Researchers at the Hebrew University of Jerusalem, based on a survey by the Bureau of Statistics, studied 5,000 Israeli men and women aged 60 and above from 1997 through 2004, during which time 38% of the group had died. The death rate was 75 percent higher among the group that did not attend synagogue compared to those who attended synagogue regularly.

Kaufman Y, Anaki D, Binns M, Freedman M (2007). Cognitive decline in Alzheimer's disease: Impact of spirituality, religiosity, and QOL. Neurology 2007; 68:1509–1514

Examined the effects of spirituality, religiosity and quality of life (QOL) on rate of cognitive decline in Alzheimer's disease (AD). Subjects were 70 patients (ages 49 to 94 years, mean age 78) with probably AD, and cognitive function was assessed over 12 months using the Mini-Mental State Exam (MMSE). All subject met standard neurological criteria for probably AD or AD with cerebrovascular disease, and had MMSE scores of 10 or higher. Religious variables were religious attendance, private religious activity, intrinsic religiosity (based on DUREL), and self-ratings of religiosity and spirituality. Controlling for baseline cognitive function, age, gender, and education, subjects scoring higher on self-rated spirituality ($p=0.01$) and private religious practices ($p=0.003$) had a significantly slower rate of cognitive decline; 17% of the variance in cognitive decline was explained by these variables. Religious attendance, self-rated religiosity, intrinsic religiosity, and QOL were unrelated to cognitive decline. Lack of an effect for QOL suggests that another mechanism must explain how spirituality/religion affects cognitive function other than by improving QOL.

Balboni TA, Vanderwerker LC, Block SD, Paulk ME, Lathan CS, Peteet JR, Prigerson HG (2007). Religiousness and spiritual support among advanced cancer patients and associations with end-of-life treatment preferences and quality of life. Journal of Clinical Oncology 25:555-560

Surveyed 230 patients with advanced cancer (and failure of first-line chemotherapy) and their caregivers in Boston, MA (Coping with Cancer Study at Harvard). Patients rated to what extent either their religious community or the medical system supported their spiritual needs on a scale from 1 (not at all) to 5 (completely supported). Findings indicated that 88% of patients said that religion was at least somewhat important. However, just under half (47%) said that their spiritual needs were minimally or not at all met by their religious community; furthermore, nearly three-quarters (72%) said that their spiritual needs were minimally or not at all met by the medical system (i.e., doctors, nurses, or chaplains). Patients who indicated that either the religious community or the medical system was providing spiritual support reported significantly higher quality of life ($p<0.0005$). Of nine variables, degree of spiritual support was the 2nd most

powerful predictor of quality of life. This was particularly true for African-Americans and Hispanics.

Galea M, Ciarrocchi JW, Piedmont RL, & Wicks RJ (2007). Child abuse, personality, and spirituality as predictors of happiness in Maltese college students. Research in the Social Scientific Study of Religion 18: 141-154.

Researchers investigated whether spirituality and religious practices would predict subjective well-being (SWB) in a sample of Maltese undergraduates, over and above personality and a history of child abuse. Participants ($N = 214$) were selected randomly from students who volunteered for such studies. In this sample, the percentages of abuse and neglect were similar to rates found in the United States. Hierarchical regression analysis with total child abuse history entered on step one, personality (as measured by the five-factor model) in the second step, and either spirituality or religiosity in step three, showed that spirituality contributed an additional 4% of variance to positive affect and 2% to cognitive well being. Religious practices had no incremental validity. While personality was a partial mediator, this evidence suggests that spirituality may be an asset for persons with an abuse history, and worthy of study as a component of human flourishing.

Mendonca D, Oakes KE, Ciarrocchi JW, Sneek WJ, Gillespie K (2007). Spirituality and God attachment as predictors of subjective well-being for seminarians and nuns in India. Research in the Social Scientific Study of Religion 18: 121-140.

This study examined the relationship of spirituality and God attachment, while controlling for personality, with subjective well-being in a cross-cultural sample of religious leaders in India. Participants ($N = 321$) were recruited from Jesuit seminarians and Catholic nuns in various orders in India. Hierarchical multiple regression analysis showed that personality predicts a significant amount of variance for satisfaction with life (SWL), positive affect and negative affect, when controlling for age and gender. Both faith maturity and positive God image predicted positive affect and satisfaction with life, while controlling for age, gender, and personality. Negative God image predicted increased negative affect, decreased positive affect, and decreased SWL. Gender differences were also found. Results were for this sample were consistent those generally found in the literature and supported the importance of controlling for personality. Researchers concluded that the influence of religion and spirituality on well-being is complex and subtle.

Walsh JW, Ciarrocchi JW, Piedmont RL, & Haskins D (2007). Spiritual transcendence and religious practices in recovery from pathological gambling: Reducing pain or enhancing quality of life? Research in the Social Scientific Study of Religion 18: 155-175

This study examined the relationship between spiritual beliefs and religious practices of 100 persons with a gambling disorder with subjective well-being (SWB). Participants were identified as pathological gamblers by means of a Gamblers Anonymous (GA) instrument or diagnostic assessments carried out in inpatient and outpatient treatment centers. Little demographic information was obtained in an effort to respond to participant sensitivity about confidentiality. Results of hierarchical multiple regression analysis showed that personality explained between 20-25% of the variance in positive affect, negative affect, and cognitive well-being, the three components of SWB. Spirituality contributed an additional 7% of unique variance over and above personality. The effect of religious practices on SWB was completely mediated by

personality. Researchers concluded that including spiritual interventions in treating pathological gambling could improve recovery rates.

Ai, A. L., Park, C. L., Huang, B., Rodgers, W., & Tice, T. N. (2007). Psychosocial mediation of religious coping styles: a study of short-term psychological distress following cardiac surgery. Personality & Social Psychology Bulletin 33(6):867-82

Investigators examined religious coping styles, hope, and social support as possible mechanisms for religion's effects on reducing postoperative psychological distress in 309 cardiac patients. Using structural equation modeling, researchers found that after controlling for preoperative distress, gender, and other baseline covariates, religiousness was positively correlated with positive religious coping, which influenced post-operative psychological distress through effects on social support and hope. At baseline, negative religious coping was associated with greater preoperative psychological distress, and prospectively predicted greater post-operative distress through the same pathways as positive religious coping (but in the opposite direction).

Wanyama, J., Castelnovo, B., Wandera, B., Mwebaze, P., Kambugu, A., Bangsberg, D. R., et al. (2007). Belief in divine healing can be a barrier to antiretroviral therapy adherence in Uganda. AIDS. 21(11):1486-7.

Researchers examined culture barriers to adherence to ART therapy for AIDS. They found that 1.2% of patients stopped ART because of belief in spiritual healing. Authors concluded that addressing spiritual beliefs should be part of ART counseling and that practitioners should work together with religious leaders to help enroll their support in encouraging HIV infected persons to comply with treatment.

Daniels, N. A., Juarbe, T., Moreno-John, G., & Perez-Stable, E. J. (2007). Effectiveness of adult vaccination programs in faith-based organizations. Ethnicity & Disease 17(1 Suppl 1):S15-22.

Researchers examined the effectiveness of a faith-based organization's adult vaccination program for minorities. A total of 15 churches were randomized to either the intervention group (onsite adult vaccinations for influenza or pneumococcal pneumonia) or to a comparison group without vaccinations. The majority of the 186 participants were either African American (44%) or Latino (43%). Of the 112 in the intervention group, 80% received the influenza vaccine compared to 46% of the 70 persons in the control group ($p < 0.001$). Similar findings occurred with regard to pneumococcal vaccination (66% of 88 in the intervention group vs. 35% of 57 in the control group ($p < 0.001$)). Statistical models revealed that those in the intervention group were nearly 5 times (odds ratio=4.8) more likely to receive influenza vaccine and nearly 4 times (odds ratio 3.6) more likely to receive pneumococcal vaccine compared to the control group. Most participants were at least willing to participate in education and promotion programs in their churches.

Reiter, J., Wexler, I. D., Shehadeh, N., Tzur, A., & Zangen, D. (2007). Type 1 diabetes and prolonged fasting. Diabetic Medicine 24(4):436-9.

Investigators examined the effects of prolonged fasting on insulin requirements. Prolonged fasting was defined as 25 hours or more without food. Sample involved 56 subjects, of whom 37 were able to carry out a prolonged fast without terminating. Results indicated that no serious side-effects occurred as a result of prolonged fasting. Those who fasted had greater reductions in

the insulin doses they required, although had higher HbA1c levels. Investigators concluded that individuals with Type 1 diabetes could participate in prolonged fasts without major side-effects, but encouraged them to reduce their usual insulin dose, carefully monitor their blood glucose levels, and terminate the fast if they developed either hypoglycemia or hyperglycemia.

Maselko, J., Kubzansky, L., Kawachi, I., Seeman, T., & Berkman, L. (2007). Religious service attendance and allostatic load among high-functioning elderly. Psychosomatic Medicine 69(5):464-72.

Researchers examined the relationship between religious attendance and allostatic load (AL) (blood pressure, body size, cholesterol, blood glucose control, cortisol, epinephrine, norepinephrine, and other stress hormones, values of which were used to create a 10-item index). The sample for this study involved 853 participants of the widely known MacArthur Successful Aging. Analyses were stratified by sex, and covariates (demographics, social integration, and physical functioning) were controlled using regression models. Results indicated that attendance at religious services on a weekly or more frequent basis was associated with lower AL levels among women ($b = -0.47, p < 0.01$). The investigators concluded that religious involvement could influence physical health outcomes by affecting AL, at least in older women.

Furnham, A., & Wong, L. (2007). A cross-cultural comparison of British and Chinese beliefs about the causes, behaviour manifestations and treatment of schizophrenia. Psychiatry Research. 151(1-2):123-138.

Investigators compared beliefs regarding the causes and treatment of schizophrenia between persons in Great Britain and those in China (Hong Kong). Results indicated that those in China held more religious and superstitious beliefs compared to those in Britain; those in Britain were more likely to attribute schizophrenia to biological, psychological, or sociological causes; and those in China had more negative attitudes toward schizophrenia than did those in Britain. Investigators concluded that it was important for clinicians to inquire about the religious or superstitious beliefs of patients and family members concerning the causes and treatment of schizophrenia.

Willemsen, G., & Boomsma, D. I. (2007). Religious upbringing and neuroticism in Dutch twin families. Twin Research & Human Genetics 10(2):327-33.

Researchers examined the association of between religious upbringing and adult neuroticism, taking into consideration genetic or inherited vulnerabilities to neuroticism. The sample involved 4,369 twins and 1,304 siblings over age 25 from 2,698 families (longitudinal Netherlands Twin Register). Results indicated that religious upbringing predicted significantly lower levels of neuroticism in both men and women. When structural equation modeling was used to examine differences in heritability, for those with religious upbringing 41% of neuroticism was explained by genetic factors and 59% by unique environmental factors. For those without religious upbringing 55% of neuroticism was explained by genetic factors and 45% by unique environmental influences. Investigators concluded that religious upbringing was associated with both lower neuroticism and a lower genetic predisposition to neuroticism.

Wong, Y. K., Tsai, W. C., Lin, J. C., Poon, C. K., Chao, S. Y., Hsiao, Y. L., et al. (2006). Socio-demographic factors in the prognosis of oral cancer patients. Oral Oncology 42(9):893-906.

Investigators examined social and demographic factors influencing the mortality of patients with oral cancer in Taiwan. Researchers reviewed the medical records of 1010 patients with oral cancer. The 5-year survival rate for all patients as a group was 63 percent. After controlling for other predictors of survival (including clinical features) using survival analyses, researchers reported that patients without religious belief were more than twice as likely to die during the follow-up period compared to those with religious belief (Relative Risk=2.06, $p < 0.001$).

Ironson G, Stuetzie R, Fletcher MA (2006). An increase in religiousness/ spirituality occurs after HIV diagnosis and predicts slower disease progression over 4 years in people with HIV. Journal of General Internal Medicine 21:S62-68

Study examined the effects of changes in religiousness/spirituality (R/S) following the diagnosis of HIV, and the consequences that this had on CD4 cell levels and viral load over the next 4 years. The sample consisted of 100 patients positive for HIV. Following diagnosis, 45% showed increase in R/S, 42% remained the same, and 13% reported a decrease in R/S. Hierarchical Linear Modeling (HLM) was used to examine the effects of changes in R/S over time with the outcome being slopes of individual patients change in either CD-4 cells or viral load. Patients who reported an increase in S/R after diagnosis had significantly less decrease in their CD4 counts and significantly better control of viral load during the 4-year follow-up period. Results were independent of church attendance and initial disease status, medication at every time point, age, gender, race, education, health behaviors, depression, hopelessness, optimism coping, and social support. In fact, of all other predictors of CD-4 cell preservation and viral load, change in R/S was the most powerful predictor. Religious service attendance was also an independent predictor in the same direction as increased R/S, but the effect was weaker.

Tully J. Viner RM. Coen PG. Stuart JM. Zambon M. Peckham C. Booth C. Klein N. Kaczmarek E. Booy R (2006). Risk and protective factors for meningococcal disease in adolescents: matched cohort study. British Medical Journal 332(7539):445-50

Researchers prospectively examined the ability of social and biological factors to predict the development of meningococcal disease in adolescents aged 15 to 19 years. Cases with meningococcal disease were matched with controls on age and gender. Cases in this multi-center study were recruited from six regions of England that made up 65% of the country's population. A total of 144 case-control pairs participated in the study (51% male, median age 17.6). Among cases, 79% were confirmed from microbiological cultures/serology from nose and mouth swabs. Based on multivariate logistic regression modeling, predictors of increased likelihood of meningococcal disease were prior illness, intimate kissing with multiple partners, status as a university student, and pre-term birth status. Meningococcal vaccination was inversely associated with disease (OR 0.12, 95% CI 0.04-0.37, $p < 0.001$), as was religious attendance (OR=0.10, 95% CI 0.02-0.58, $p = 0.01$). Thus, religious attendance (during the 2 week period before illness in cases or before interview in controls) reduced the likelihood of having meningococcal disease by 90%, an amount equal to or greater than meningococcal vaccination.

Gillum RF, Ingram DD (2006). Frequency of attendance at religious services, hypertension, and blood pressure: The Third National Health and Nutrition Examination Survey. Psychosomatic Medicine 68: 382-385

Surveyed 14,475 Americans over age years on frequency of attendance at religious services, history of hypertension treatment, and measured blood pressure. Controlling for sociodemographic and health variables, those who attended religious attendance had a lower prevalence of hypertension compared to non-attenders: $\beta = -0.24$ (95% CI -0.37 to -0.11 ; $p < .01$, for weekly attenders and $\beta = -0.33$. 95% CI -0.60 to -0.07 , $p < .05$, for more than weekly attenders. Systolic BP for weekly attenders was 1.46 mm Hg (95% 0.58-2.33, $p < 0.01$) lower than nonattenders, and more than weekly attenders had systolic BP 3.03 mm Hg (1.72-4.34, $p < 0.01$) mmHg lower than non-attenders.

Hebert RS, Dang Q, Schulz R (2006). Religious Beliefs and Practices Are Associated With Better Mental Health in Family Caregivers of Patients With Dementia: Findings From the REACH Study. American Journal of Geriatric Psychiatry December 8 online version (<http://ajgponline.org/cgi/rapidpdf/01.JGP.0000247160.11769.abv1.pdf>)

Investigators examined the relationship between religion, depression, and complicated grief in dementia caregivers, both currently providing care or bereaved of their loved one. Surveyed 1,229 caregivers multiple sites across the U.S. Caregivers were followed prospectively for up to 18 months. Religion was measured by frequency of religious attendance or other religious community activities, frequency of prayer or meditation, and importance of religious faith/spirituality. Results indicated that religious beliefs and practices were important to the majority of caregivers, with 77% praying nearly every day, 70% indicating that their spiritual/religious faith was “a great deal” important, and 42% attending services at least weekly. Beliefs and practices were similar for bereaved ($n=225$) and non-bereaved caregivers. Analyses were stratified by bereavement status of caregivers. In non-bereaved caregivers, all three measures of religion were significantly associated with less depressive symptoms, controlling for caregiver age, caregiver physical health, caregiver burden, and social integration (p values ranging from 0.018 to 0.001). In bereaved caregivers, only frequency of religious attendance was associated with fewer depressive symptoms ($p=0.007$) and less complicated grief ($p=0.0017$), controlling for depression at study entry, caregiver physical health, caregiver burden, social integration, and negative interactions.

Yoshimoto SM. Ghorbani S. Baer JM. Cheng KW. Banthia R. Malcarne VL. Sadler GR. Ko CM. Greenbergs HL (2006). Varni JW. Religious coping and problem-solving by couples faced with prostate cancer. European Journal of Cancer Care 15(5):481-8

Investigators surveyed 101 patients with prostate cancer and their spouses, examining the quality of their social problem solving and their religious coping. Subjects were assessed at baseline and 10 weeks later. Subjects were classified into four groups based on whether or not they used religious coping: (1) husband only, (2) wife only, (3) both husband and wife, and (4) neither husband nor wife. Results indicated that if both husband and wife used religious coping, then there was a significant reduction in wife’s dysfunctional problem solving between baseline and follow-up, compared to the wife only group (#2).

Carrico AW, Ironson G, Antoni MH, Lechner SC, Duran RE, Kumar M, Schneiderman N (2006). A path model of the effects of spirituality on depressive symptoms and 24-h urinary-free cortisol in HIV-positive persons. Journal of Psychosomatic Research 61(1):51-8

Researchers examined the relationship between spirituality and 24-hour urinary cortisol in 264 HIV positive men and women, with the goal of developing a model of how spirituality may impact cortisol levels through positive reappraisals on depressive symptoms. Spirituality was measured using the 22-item short form of the Ironson-Woods Spirituality/Religiousness Index. Researchers found that spirituality was associated with lower 24-hour cortisol levels ($r=-0.17$, $p<0.05$), and this could be explained by more positive coping reappraisals and benefit finding that were in turn associated with fewer depressive symptoms (by Beck Depression Inventory). Spirituality was positively associated with both benefit finding and positive reappraisal (the two being strongly inter-correlated); benefit finding, in turn, was associated with lower cortisol levels resulting in an indirect effect of spirituality through benefit finding ($p<0.01$).

Bormann JE, Giffor AL, Shively M, Smith TL, Rdwien L, Kelly A, et al. (2006). Effects of spiritual mantram repetition on HIV outcomes: A randomized clinical trial. Journal of Behavioral Medicine 29:359-376

RCT involving 93 participants: 46 randomized to repeating a mantram of their choice in group format, and 47 randomized to an attention control group getting information about HIV/AIDS in a group format. Both groups attended 5 consecutive weekly sessions, 90 minutes each, followed by four weekly automated phone calls and a 6th final session in week 10. Mantrams that participants could choose from were “Om Mani Padme Hum” (Buddhism), “Rama, Rama” (Hinduism), “Lord have mercy (Christianity), “Shalom” (Judaism). The mantram group improved significantly more on reducing trait-anger and increasing spiritual faith and connectedness, compared to control group. No effect was seen on biological measures (CD4 count, HIV-RNA count). Multiple comparisons may have been an issue.

Becker G, Momm F, Xander C, Bartelt S, Zander-Heinz A, Budischewski K, Domin C, Henke M, Adamietz IA, Frommhold H (2006). Religious belief as a coping strategy: an explorative trial in patients irradiated for head-and-neck cancer. Strahlentherapie und Onkologie 182(5):270-276

Researchers in the Department of Internal Medicine, University Clinic in Freiburg, Germany, examined the role of religion in coping with disease and treatments for cancer. Data were prospectively collected in 105 patients with head-and-neck cancer who were receiving radiotherapy and were involved in a double blind multi-center trial. Patients were divided into “believers” and “non-believers.” Investigators reported that, “On average, believers felt better in all categories of side effects at all points of time before, during and directly after therapy.”

Mofidi M, DeVellis RF, Blazer DG, DeVellis BM, panter AT, Jordan JM (2006). Spirituality and depressive symptoms in racially diverse US sample of community-dwelling adults. Journal of Nervous and Mental Disease 194:975-977

Study of 630 randomly selected adults aged 45 or older in NC. Using structural equation modeling, and controlling for Daily Spiritual Experiences were inversely correlated with depression ($B=-0.25$, $p<0.05$), explaining 9% of the variance in depressive symptoms, especially in younger adults (45-65) ($B=-0.37$, $p<0.05$) and those who were stressed ($B=-0.35$, $p<0.05$).

Moll J, Krueger F, Zahn R, Pardini M, de Oliveira-Souza R, Grafman J (2006). Human fronto-mesolimbic networks guide decisions about charitable donation. Proceedings of the National Academy of Sciences 103 (42):15623-15628

This study uses functional magnetic resonance imaging (fMRI) technology to examine the parts of the brain that are active during charitable giving or moral-based altruistic decisions. Nineteen healthy participants (10 men, 9 women, mean age 28 years, mean education level 17 years) took part. A personal endowment of \$128 was made available for each participant. This corresponded to the maximum amount they could obtain for themselves during the experimental task or donate to altruistic causes. Choices were made using a computerized algorithm while in the f-MRI machine. Results indicated that the mesolimbic reward system is activated when decisions to donate are made in the same way as when monetary rewards are obtained. Medial orbitofrontal-subgenual and lateral orbitofrontal areas appear to mediate altruistic decisions. Perhaps most fascinating is that fMRI scans of the brain during altruistic choices engaged anterior sectors of the prefrontal cortex. The researchers concluded that altruistic choices based on abstract moral beliefs depend on the uniquely developed human anterior prefrontal cortex (i.e., giving for the benefit of others (to non-family) for moral reasons involves those parts of the brain that have evolved most recently and that make us uniquely human).

Bowen, R., Baetz, M., & D'Arcy, C. (2006). Self-rated importance of religion predicts one-year outcome of patients with panic disorder. Depression and Anxiety 23(5), 266-273

Investigators in Saskatchewan, Canada, explored coping and motivation factors related to treatment response in 56 patients with panic disorder participating in a clinical trial. Subjects were treated with group cognitive-behavioral therapy, and then were followed up at 6 and 12 months after baseline evaluation. Self-rated importance of religion was a significant predictor of panic symptom improvement and lower perceived stress at the 12-month follow-up. Investigators concluded that high importance of religion reduced panic disorder symptoms by decreasing level of perceived stress.

Krause N (2006). Church-based social support and mortality. Journals of Gerontology Series B-Psychological Sciences & Social Sciences 61(3):S140-146

The investigator examined the effects of church-based giving support to others (vs. receiving support from others) on mortality in a random national sample of 1500 older adults over 3 years. More specifically, the study was designed to determine whether church-based support buffered against the stress of financial strain. During the 2001 evaluation, subjects were assessed on financial strain, church-based support (support received and support given to others), along with organizational and non-organizational religious practices. Mortality status was determined during the 3-year follow-up. The researcher found that providing support to others (within the church setting) buffered the effects of providers' own financial strains on their mortality ($B=-0.093$, $p<0.001$). Frequency of religious attendance was also inversely related to mortality, controlling for education, gender, rate social support received and given, private religious activities, and self-rated health ($B=-0.16$, $p<0.05$) (without financial strain in the model). Receiving support, however, was positively related to mortality.

Szaflarski M, Ritchey P, Leonard AC, Mrus JM, Peterman AH, Ellison CG, McCullough ME, Tsevat J (2006). Modeling the Effects of Spirituality/Religion on Patients' Perceptions of Living with HIV/AIDS. Journal of General Internal Medicine 21(Suppl 5):S28-S38

Multi-site survey of 450 outpatients with HIV/AIDS that examined predictors of quality of life, in particular whether the patient felt that their life now was better than it was before being diagnosed with HIV/AIDS. Analyses were controlled for demographic factors, social support, self-esteem, healthy beliefs, and health status/health concerns. Only about one-third of patients felt their lives were better now than before their diagnosis. An increase in spirituality/religion was associated with a 69% increased likelihood of feeling that their life had improved. Both direct effects of religion/spirituality were evident (30%) and indirect effects through healthy beliefs (39%).

Cotton S, Puchalski CM, Sherman SN, Mrus JM, Peterman AH, Feinberg J, Pargament KI, Justice AC, Leonard AC, Tsevat J (2006). Spirituality and Religion in Patients with HIV/AIDS. Journal of General Internal Medicine 21(Suppl 5):S5-S13

Surveyed 450 outpatients with HIV/AIDS examining rates of religious/spiritual activities and their relationships to mental health and adjustment. Eighty percent of patients were affiliated with a religion, 23% attended religious services weekly, and 32% prayed or meditated at least daily. Three-quarters of patients said that their illness had strengthened their faith to at least some degree. Multivariate analyses controlling for multiple covariates revealed that religiousness/spirituality were related to greater optimism, less alcohol use, greater self-esteem, and greater life satisfaction.

Friedman LC, Kalidas M, Elledge R, Dulay MF, Romero C, Chang J, Liscum KR (2006). Medical and psychosocial predictors of delay in seeking medical consultation for breast symptoms in women in a public sector setting. Journal of Behavioral Medicine 29(4):327-334

Researchers examined factors related to delay in seeking medical care for symptoms of breast cancer in a sample of 124 women in an outpatient breast surgery clinic. The primary outcome variable was delay in seeking medical care for breast symptoms. Among numerous medical and psychosocial variables examined was spirituality ("How spiritual/religious do you consider yourself?" with responses ranging from "not at all" to "very much"). Results from multivariate analyses showed that greater spirituality/religiousness was one of the strongest inverse predictors of delay in seeking care ($B=-0.32$, $p=0.005$).

Hill TD, Burdette AM, Angel JL, Angel RJ (2006). Religious attendance and cognitive functioning among older Mexican Americans. Journals of Gerontology Series B-Psychological Sciences & Social Sciences 61(1):P3-9

Researchers examined the effects of religious attendance on cognitive functioning over six years in a large sample of older Hispanics. Participants were involved in the Hispanic EPESE, an NIA supported study that surveyed 3,050 individuals over age 65 of Mexican origin. After the baseline survey 1993-94, subjects were followed up in 1995-96, 1998-99, and 2000-2001. The MMSE (a measure of cognitive functioning) was administered at each follow-up evaluation and linear growth curve modeling was used to predict the effects of baseline religious attendance on cognitive function over time. Control variables included functional disability, sensory impairments, health behaviors, psychological distress, chronic diseases, and sociodemographic

factors (age, gender, education, English proficiency, and social engagement). Investigators found that religious attendance predicted cognitive functioning in a dose-response manner. Those who attended religious services more than weekly (compared to non-attenders), declined more slowly in cognitive functioning by 0.75 MMSE points per 2-year period, or 2.25 points over the study period. For both weekly and more than weekly attendance, effects were significant at $p < 0.01$.

Yeager DM, Gleib DA, Au M, Lin HS, Sloan RP, Weinstein M (2006). Religious involvement and health outcomes among older persons in Taiwan. Social Sciences and Medicine 63(8):2228-2241.

Researchers examined data from a nationally representative, longitudinal survey of older Taiwanese to examine the relationship between religious involvement and overall health status, physical functioning, depressive symptoms, cognitive functioning, systolic and diastolic blood pressure, serum interleukin-6, 12-h urinary cortisol, and 4-year mortality. Attendance at religious services was the religious variable that had the strongest and most consistent relationship to health outcomes. Relationships between other religious characteristics and health outcomes were explained after controlling for confounders (initial health status) and explanatory variables (health behaviors, social networks). Religious attendance, however, remained significantly associated with lower mortality after controlling for other variables. Private religious practices and stronger beliefs, however, were generally associated with worse health (although relationships disappeared after controlling for prior health status). Over 92% were non-Christian [50% Taoist/traditional folk religion, 28% Buddhist, 15% none, and 8% other (Muslim, Yi Kuan Tao, Christian)], causing authors to conclude, "Discrepancies with previous studies may result from the different religious practices of the largely non-Christian population we studied in Taiwan" (p 2240).

Krause N (2006). Exploring the stress-buffering effects of church-based and secular social support on self-rated health in late life. Journals of Gerontology Series B-Psychological Sciences & Social Sciences 61(1):S35-43

Researcher examined the effects of church-based support vs. secular social support in predicting self-rated health in later life for African-American and white persons. Data analyzed were from a national random sample of older adult Christians in U.S. The sample was composed of 548 older Christians who attended church services more than twice a year and 238 older Christians who attend religious services less frequently. The investigator found that church-related social support reduced the effects of financial strain on self-rated health; in contrast, social support from secular sources did not. These effects are particularly strong in African-Americans. The author concluded that there may be something unique about church-related social support in terms of its relationship to health that distinguishes it from secular support.

Holmes SM, Rabow MW, Dibble SL (2006). Screening the soul: communication regarding spiritual concerns among primary care physicians and seriously ill patients approaching the end of life. American Journal of Hospice & Palliative Care 23(1):25-33

Examined the spiritual concerns of seriously ill patients and the practices of primary care physicians in addressing those concerns. A total of 65 outpatients with end-stage illness (40% CHF, 32% COPD, 28% cancer) and 67 physicians were surveyed (87-90% response rate). Study took place in San Francisco. Nearly two-thirds of both patients and physicians (62% and 68%, respectively) felt that it was important that physicians pay attention to the patients' spiritual

needs. Over 90% of patients had never brought up their spiritual concerns in their discussions with physicians, despite the fact that only 17% had no spiritual concerns. When patients were asked whether their physicians had actually done this, few reported that physicians had communicate with them on these issues (62 % said they didn't think it was part of their PMD's job). Only 40% said they would want to discuss their spiritual concerns with their physicians and 30% said they would like to pray with their physicians.

Molassiotis A. Panteli V. Patiraki E. Ozden G. Platin N. Madsen E. Browall M. Fernandez-Ortega P. Pud D. Margulies A (2006). Complementary and alternative medicine use in lung cancer patients in eight European countries. Complementary Therapies in Clinical Practice. 12(1):34-9

This study is of interest because it was done in a sample of 111 patients from 8 countries in Europe. The purpose of the survey was to determine the kinds of CAM practices that patients with lung cancer engaged in. The survey indicated that about 24% used CAM after their diagnosis of lung cancer. "Spiritual therapies" (12% of those using CAM) were tied for the second most commonly used CAM treatment in this secular region.

Lonczak, H.S., Clifasefi, S.L., Marlatt, G.A., Blume, A.W., Donovan, D.M (2006). Religious coping and psychological functioning in a correctional population. Mental Health, Religion and Culture 9(2):171-192

Investigators examined the relationship between religious characteristics (religious upbringing and type of religious coping) and depressive symptoms, anxiety symptoms, somatization, and hostility in a sample of 305 adult prisoners. Controlling for demographic variables and stressful life events, investigators found that having a religious upbringing was significantly and inversely related to depressive symptoms and hostility. Significant relationships were also found between religious discontentment and depressive symptoms, anxiety symptoms, somatization and hostility especially in women prisoners compared to men.

Hill, T.D., Burdette, A.M., Ellison, C.G., Musick, M.A (2006). Religious attendance and the health behaviors of Texas adults. Preventive Medicine 42(4):309-312

Researchers examined the relationship between health behaviors and religious attendance in a random sample of 1504 adults – average age 41 – in Texas (2004 Survey of Texas Adults). Logistic regression was used to determine the independent effects of weekly religious attendance on health behaviors, including preventive care, vitamin use, bar attendance, seatbelt use, walking, strenuous exercise, sleep quality, smoking, and drinking, controlling for correlates of religious involvement and health behaviors. Investigators found that 43.8% attended religious services weekly or more often (about the national average). Weekly attendance was associated with a greater frequency of physical exams (OR 1.65, CI 1.21-2.23), dental exams (OR 1.56, CI 1.16-2.10), regular vitamin use (OR 1.68, CI 1.24-2.24), infrequent bar attendance (OR 2.16, CI 1.45-3.22), regular seatbelt use (OR 2.20, CI 1.26-3.85), walking (OR 1.73, CI 1.29-2.32), strenuous exercise (OR 1.84, CI 1.34-2.52), sound sleep quality (OR 1.49, CI 1.03-2.15, for more than weekly religious attendance; NS for weekly), non-smoker (OR 2.03, CI 1.52-2.71), and moderate or occasional drinker (OR 2.82, CI 1.65-4.81).

Elizabeth JD, Graham M, Swanson M (2006). Psychosocial and spiritual factors associated with smoking and substance use during pregnancy in African American and White low-income women. Journal of Obstetric, Gynecologic, & Neonatal Nursing 35(1):68-77

Examined the health behaviors (substance abuse and smoking) of 130 African American and white low-income women during pregnancy. Investigators used prenatal interviews and medical records involving participants of an urban prenatal clinic located in the Midwest. To emphasize the significance of health behaviors for this group of pregnant women, 39% smoked and 28% abused alcohol or drugs during pregnancy. In the uncontrolled analyses women who were more religious (based on 3 items assessing importance of attending religious services) were less likely to abuse substances, but not in controlled analysis; in the controlled and uncontrolled analyses, women who were more religious were significantly less likely to smoke cigarettes. Spirituality (measured by a 10-item Spiritual Perspectives scale) was unrelated in controlled and uncontrolled analyses to either smoking or substance abuse.

Hamilton JL, Levine JP (2006). Neo-Pagan patients' preferences regarding physician discussion of spirituality. Family Medicine 38(2):83-4

Researchers surveyed 673 members of Neo-Pagan religions (including such groups as Wiccans, Druids, Asatrus) to assess their willingness to have physicians take a spiritual history with them. Subjects were identified through their clergy or through Neo-Pagan-themed websites. A total of 458 of 673 subjects from 52 states and five Canadian provinces completed the survey. The largest group of respondents were Wiccan (n=188). Investigators reported that 73% of responders indicated that their religious/spiritual beliefs would influence their medical decisions. Most (84%) agreed that it would be important to have their physician ask about religious beliefs, and 81% reported that it would strengthen trust in their doctor if he/she took a spiritual history.

Harrison JP, Sexton C (2006). The improving efficiency frontier of religious not-for-profit hospitals. Hospital Topics 84(1):2-10.

Researchers examined the efficiency of religious not-for-profit hospitals. They used data-envelopment analysis to show that religious hospitals increased in efficiency from 72% in 1998 to 74% in 2001. Furthermore, there was an increase in religious hospitals operating on the efficiency frontier, increasing from 40 in 1998 to 47 in 2001. Researchers concluded that religious hospitals are becoming more efficient in their management of resources, and that the entire health care industry could benefit from examining religious hospitals' strategies. Replicates findings from an earlier study (White KR, Ozcan YA. Church ownership and hospital efficiency. Hospital & Health Services Administration 41(3):297-310, 1996)

Canada AL, Parker PA, de Moor JS, Basen-Engquist K, Ramondetta LM, Cohen L (2006). Active coping mediates the association between religion/spirituality and quality of life in ovarian cancer. Gynecologic Oncology 101(1):102-7

Researchers surveyed 129 women with ovarian cancer (mean age 59, 85% with stage III or IV) who completed a course of adjuvant chemotherapy in Texas. Participants completed the COPE (a measure of active coping), the FACT-O (a measure of quality of life assessment for ovarian cancer patients), and the Systems of Belief Inventory-15R (assessing religious and spiritual beliefs). Survey found that religious and spiritual beliefs were positively correlated with active coping ($r= 0.23, p= 0.02$), quality of life ($r=0.25, p=0.01$), emotional well being ($r= 0.24, p=0.01$), and functional well being ($r= 0.28, p<0.005$), and had fewer ovarian cancer-specific concerns ($r= 0.27, p=0.006$).

Harris KM. Edlund MJ. Larson SL (2006). Religious involvement and the use of mental health care. Health Services Research 41(2):395-410

Investigators analyzed data from the 2001-2003 National Surveys on Drug Use and Health to examine the relationship between religious beliefs and practices and use of mental health services. Two subgroups were identified: those with moderate (n=49,902) and serious mental illness/emotional distress (n=14,548). Sophisticated probit models were used to examine past 12-month use of outpatient care and prescription medications. Religious measures were frequency of religious attendance, strength of religious beliefs, and influence of religious beliefs on decisions. Other variables controlled in the analyses were DSM-IV disorders symptoms, substance use and related disorders, self-rated health status, and sociodemographic characteristics. Researchers found that in those the group with moderate mental illness/emotional distress, there was a positive relationship between religious attendance and outpatient mental health care use; however, importance of religious beliefs were inversely related to outpatient use. In the group with serious mental illness/emotional distress, religious attendance and with importance of religious beliefs were both positively related to both outpatient mental health care service use and medication use; however, influence of religious beliefs on decisions were inversely related to outpatient mental health services. These findings argue against the widespread notion that religious involvement discourages use of mental health services, especially among those with serious mental illness.

Young DR. Stewart KJ (2006). A church-based physical activity intervention for African American women. Family & Community Health 29(2):103-117

Found that a 6-month, church-based aerobic exercise intervention in 196 women from 11 churches reduced physical inactivity by 18% to 26%.

Drentea P. Goldner MA (2006). Caregiving outside of the home: the effects of race on depression. Ethnicity & Health. 11(1):41-57

Researchers examined whether African American caregivers experience lower or higher levels of depression when they provide care outside of the home. Examined 275 Black and 2218 White care workers providing care outside the home from the 1992-1994 National Survey of Families and Households. Regression analyses was used to determine the associations between sociodemographics, family structure, resources, and stressors. Black care caregivers with stronger religious beliefs (based on two items taping the importance and truth of the Bible) had significantly fewer depressive symptoms.

Only strength of religious belief was associated with lower depressive symptomatology for Blacks.

Alderete E. Juarbe TC. Kaplan CP. Pasick R. Perez-Stable EJ (2006). Depressive symptoms among women with an abnormal mammogram. Psycho-Oncology 15(1):66-78

Researchers examined factors that predicted depressive symptoms (Composite International Diagnostic Interview) in 910 women with an abnormal mammogram (42% white, 19% Latino, 25% African-American, 14% Asian) in SF Bay area. Controlling for the effect of demographic, psychosocial and medical factors on depressive symptoms using multivariate logistic regression, investigators found that weekly attendance at religious services was inversely related to depressive symptoms.

Parsons SK, Cruise PL, Davenport WM, Jones V (2006). Religious beliefs, practices and treatment adherence among individuals with HIV in the southern United States. AIDS Patient Care & Stds. 20(2):97-111

Examined the effects of religious beliefs and practices on non-adherence to medical treatment in 306 HIV-positive persons. Investigators found that religious practices and beliefs were either positively or negatively related to adherence to treatment, prompting the investigators to conclude that health professionals need to address the patient's religious beliefs as a part of their medical care.

Al-Sabwah MN, Abdel-Khalek AM (2006). Religiosity and death distress in Arabic college students. Death Studies 30(4):365-75

Investigators examined the relationship between religiosity and death anxiety, death depression, and death obsession in a sample of 570 Egyptian women nursing undergraduates (Muslim). Religiosity was inversely related to death anxiety and death depression; no relationship with death obsession was found.

Murray-Swank AB, Lucksted A, Medoff DR, Yang Y, Wohlheiter K, Dixon LB (2006). Religiosity, psychosocial adjustment, and subjective burden of persons who care for those with mental illness. Psychiatric Services 57:361-365.

Researchers interviewed 83 caregivers who were participating in the Family to Family Education program in Baltimore, Maryland. They were questioned on their religious involvement (attendance, importance, God as source of strength) and on their spiritual support (support received in the last 3 months -- praying, watching or listening to religious media, reading the Bible or seeking support from their faith community). The extent to which they had adjusted to caring for a relative with schizophrenia (44%), major affective disorder (50%), or other chronic mental illness (6%) was also determined. Depression (CES-D), self-esteem and mastery in caregivers were assessed with established measures. Caregiver burden was also assessed and examined in relationship to religious or spiritual resources. Researchers found that 37% of caregivers had received religious or spiritual support within the past 3 months. Personal religiosity (importance of religion and God as a source of strength) was positively correlated with mastery level ($r = 0.26$) and with self-care ($r = 0.33$), and was negatively related to depression ($r = 0.25$). After controlling for age, gender, education, and race in regression models, personal religiosity was inversely related to depression ($B = 0.33$), positively correlated with self-esteem ($B = 0.33$), mastery ($B = 0.29$), self-care ($B = 0.42$), but not caregiver burden. All correlations and Betas shown above were significant at $p < 0.05$.

Krisanaprakornkit T, Krisanaprakornkit W, Piyavhatkul N, Laopaiboon M (2006). Meditation therapy for anxiety disorders. Cochrane Database of Systematic Reviews. (1):CD004998.

Systematic review of results from studies examining the effectiveness of meditation in treating anxiety disorders. Searched the following online databases: CCDANCTR-Studies and CCDANCTR-References, CAM databases, Science Citation Index, Health Services/Technology Assessment Text, and others. Reviewed conference proceedings, book chapters, and references were checked and followed up. Experts in spirituality and health were contacted for any other studies. Review focused on randomized clinical trials of meditation vs. a control condition.

Investigators found that only 2 randomized, controlled clinical trials were eligible for review. One study (transcendental meditation) found a reduction in anxiety symptoms, and the other found no difference between Kundalini Yoga and Mindfulness Meditation. Another study compared Kundalini Yoga (KY) with Relaxation/Mindfulness Meditation and found no difference between the two methods. Dropout rates were 33% to 44% (high). Researchers concluded that no conclusions could be drawn based on the small number of studies.

Gillum TL, Sullivan CM, Bybee DI (2006). The importance of spirituality in the lives of domestic violence survivors. Violence Against Women 12(3):240-50

Investigators examined the role that trust in a higher power and support from their faith community plays in coping with domestic violence. They surveyed 151 women (45% white, 38% African-American, 7% Hispanic, 9% multi-racial) with domestic violence history. Most (97%) indicated that spirituality or God helped them to cope (i.e., was a source of strength or comfort). Religious involvement (attendance at religious services and comfort/strength derived from attending services) was associated with increased quality of life ($B=0.17$, $p=0.02$) and decreased depression ($B=-0.11$, $p<0.03$) in regression models.

Saxena S (2006). A cross-cultural study of spirituality, religion, and personal beliefs as components of quality of life. Social Science and Medicine 62(6):1486-1497

Examined relationships between spiritual, religious and personal beliefs (SRPB) and quality of life (QOL) in 5,087 adults in 18 countries around the world. The World Health Organization's QOL Instrument (the WHOQOL) was used to assess SRPB. Researcher found that SRPB was highly and significantly correlated with all eight domains of WHOQOL domains. The strongest correlations, however, were found for the psychological and social domains and for overall QOL. When QOL was examined in a subsample of 588 persons who reported poor health, only four domains predicted overall QOL – these were (in order of strength) level of independence, environment, SRPB and physical. Women reported greater feelings of spiritual connection and faith than did men. Although not addressed in the article, the SRPB measure used in this study may have been contaminated by questions measuring mental health and social support (see Moreira-Almeida A, Koenig HG (2006). Commentary: Retaining the meaning of the words religiousness and spirituality. Social Sciences and Medicine 63(4):843-5.)

Ai AL, Peterson C, Bolling SF, Rodgers W (2006). Depression, faith-based coping, and short-term postoperative global functioning in adult and older patients undergoing cardiac surgery. Journal of Psychosomatic Research 60(1):21-28.

Researchers prospectively examined the effects of depression and religious coping on post-operative global functioning s/p cardiac surgery in 335 patients (mean age 62) who completed the pre-op assessment, early post-op assessment, and final post-op follow-up assessment. Regression analyses revealed that pre-operative positive religious coping predicted better post-op functioning, even after controlling for preoperative depression (that predicted post-op functioning) and other confounders. Post-op prayer frequency, however, was associated with worse post-op functioning, although may have reflected a turning to prayer as a result of poor function.

Jonas E. Fischer P (2006). Terror management and religion: evidence that intrinsic religiousness mitigates worldview defense following mortality salience. Journal of Personality & Social Psychology 91(3):553-567

Researchers review the results from three studies that examine the relationship between religion and “death-thought accessibility following mortality salience and the use of terror management defenses” (studies involving students in Germany facing threat of terrorist attacks). Each of the studies found that those who score high on intrinsic religiosity (IR) (internally motivated religious belief) were less likely to react with a worldview defense and had decreased death-thought accessibility following mortality salience (i.e., thoughts and fears of death after a close encounter with death), compared to those low on IR. Investigators concluded that intrinsically religious persons derive terror management benefits from their religious beliefs. Intrinsic religiosity does so, theorize the authors, because it provides a meaningful life, helps people to feel significant, and provides an image of him or herself that is eternal.

Ciarrocchi JW, & Deneke E (2006). Hope, optimism, pessimism, and spirituality as predictors of well-being controlling for personality. Research in the Social Scientific Study of Religion 16: 161-183.

This study explored the relationship of hope, optimism, pessimism and spirituality with subjective well-being (SWB). A convenience sample ($N = 256$) was comprised of acquaintances of graduate students in a psychology of religion class. A series of hierarchical multiple regression analyses were performed to explore whether each of the predictor variables would contribute unique variance to SWB over and above age, gender, and personality (as measured by the five-factor model). Then the remaining predictor variables were added to the model to account for all mediation combinations. Consistent with other research, results showed negative affect decreasing with age, and no gender differences in SWB. Total hope contributed significant variance above age, gender, personality, bipolar optimism, and spirituality for all three components of SWB. Optimism and spirituality predicted positive affect and pessimism predicted negative affect, while controlling for age, gender, personality and the other independent variables.

Park CL (2006). Exploring relations among religiousness, meaning, and adjustment to lifetime and current stressful encounters in later life. Anxiety, Stress and Coping 19 (1):33-45

The investigator examined the relationship between the self-perceived meaning of stressful events and whether the attributions of meaning correlated with adjustment. The sample consisted of 83 older adults, average age 78 years. Questions were directed at the most stressful life experience currently and most stressful life experience ever. Private and public religiousness, and religious coping style, were measured. Results indicated that religiousness was positively associated with higher appraised challenge and making of meaning, and was associated with subsequent adjustment. There was little evidence that the perceived meanings of events mediated the association between religiousness and adjustment

Pearce MJ, Singer JL, Prigerson HG (2006). Religious coping among caregivers of terminally ill cancer patients: main effects and psychosocial mediators. Journal of Health Psychology 11(5):743-59, 2006

Examined associations between positive and negative religious coping, caregiver burden, quality of life, satisfaction, depression and anxiety in 162 caregivers of terminally ill cancer patients. Although positive religious coping was associated with more caregiver burden ($B=0.21$, $p<0.05$), it was at the same time associated with greater satisfaction ($B=0.18$, $p<0.05$), after controlling for other predictors. Negative religious coping strategies was more consistently related to worse mental health outcomes, including greater caregiver burden ($B=0.17$, $p<0.05$), lower quality of life ($B=-0.16$, $p<0.05$), lower satisfaction ($B=-0.16$, $p<0.05$), a two and a half times greater likelihood of major depression, and 76% greater likelihood of anxiety disorder. Controlling for social support, optimism and self-efficacy helped to account for these relationships.

Schoeneberger ML, Leukefeld CG, Hiller ML, Godlaski T (2006). Substance abuse among rural and very rural drug users at treatment entry. American Journal of Drug & Alcohol Abuse. 32(1):87-110

Surveyed 604 persons in 3 regions of Kentucky, the majority of whom were in outpatient treatment (57%), male (75%), and white (94%), most from rural areas. Nearly two-thirds had been referred by the criminal justice system (64%), and over half (51%) had no religious preference. What is remarkable about this study is that only 7% of persons living in rural areas of the United States have no religious preference (compared to 51% of substance abusers).

Benjamins MR (2006). Does religion influence patient satisfaction? American Journal of Health Behavior 30(1):85-91

This study examined the relationship between religion and satisfaction with health care in a random national sample of 14,557 Americans ages 51 to 106 years who took part in the Health and Retirement Study. Religious salience was determined by a single question ("How important would you say religion is in your life?" Very important vs. somewhat or not too important). Investigators found that higher levels of religious salience was significantly related to being very satisfied with one's health care, an association that persisted after controlling for demographic, social, and health variables (age, marital status, education, self-rated health, activity limitations, chronic conditions and depressive symptoms).

Allen JJB, Schnyer RN, Chambers AS, Hitt SK, Moreno FA, Manber R (2006). Acupuncture for depression: a randomized controlled trial. Journal of Clinical Psychiatry 67:1665-1673

This randomized controlled trials compared Traditional Chinese Medicine (TCM) acupuncture with manual stimulation vs. a nonspecific intervention using a comparable number of legitimate acupuncture points not specifically targeted to depressive symptoms (sham acupuncture) vs. a waitlist control ($n=151$ patients). Results indicated no difference between acupuncture and sham acupuncture, drawing into question whether acupuncture has any effect on relieving depression.

Paul-Labrador M, Polk D, Dwyer JH, et al (2006). Effects of a randomized controlled trial of transcendental meditation on components of the metabolic syndrome in subjects with coronary heart disease. Archives of Internal Medicine 166(11):1218-1224

This study examined the effects of transcendental meditation (TM) on components of the metabolic syndrome (the clustering of hypertension, dyslipidemia, visceral obesity, and insulin resistance). The investigators conducted a randomized, controlled clinical trial involving either TM or health education for 16 weeks in 103 patients with coronary heart disease (CHD).

Outcomes included blood pressure, lipoprotein profile, insulin resistance, endothelial function, and cardiac autonomic system activity (heart rate variability). measured by heart rate variability. Compared to the control group, the TM group experienced significantly lower systolic blood pressure ($p=0.04$), less insulin resistance ($p= 0.01$), and tended to have greater heart rate variability (good) ($p = 0.07$).

There were no differences for brachial artery reactivity testing. The authors concluded that TM may modulate the physiological response to stress and improve the metabolic syndrome, which is a known risk factor for CHD.

Gillum RF (2006). Frequency of attendance at religious services and leisure-time physical activity in American women and men: The Third National Health and Nutrition Examination Survey. Annals of Behavioral Medicine 31 (1):30-35

This study examined whether religious attendance is related to leisure time physical activity (LTPA) (exercise). The sample involved the Third National Health and Nutrition Examination Survey (NHANES III) that included 11,820 persons 20 years of age and older who completed items on the survey related to religious attendance, LTPA, and physical functioning. The author found that among older women (ages 60 or over) with no physical functioning limitations, those who attended religious services infrequently were more likely to have no LTPA (OR 1.4, 95% CI 1.1-1.9); these results were adjusted for sociodemographic variables and health status. There was no association between religious attendance and LTPA in men or in women ages 20 to 59.

Reyes-Ortiz CA, Ayele H, Mulligan T, Espino DV, Berges IM, Markides KS (2006). Higher church attendance predicts lower fear of falling in older Mexican-Americans. Aging and Mental Health 10(1):13-18.

Investigators at the University of Texas at Galveston examined the relationship between religious attendance and fear of falling in a sample of 1341 non-institutionalized Mexican-Americans aged 72 and over. These subjects participated in the third wave of the Hispanic Established Population for the Epidemiological Study of the Elderly (1998-1999), when religious attendance was measured, and then were followed until 2000-2001 when fear of falling was measured (average 2 years). Results indicated that religious attendance significantly predicted less fear of falling (OR 0.73, 95% CI 0.58-0.92) independent of other baseline predictors. Other significant predictors of fear of falling controlled for in the analysis were female gender, poorer objective lower body performance, history of falls, arthritis, hypertension, and urinary incontinence. Given that fear of falling is a strong predictor of age-related declines in physical health (due to restrictions on mobility caused by the fear of falling), the possible effect of religious attendance on reducing such fear may explain why older adults who attend religious services more often are more likely to retain physical functioning as they age.

la Cour P, Avlund K, Schultz-Larsen K (2006). Religion and survival in a secular region. A twenty year follow-up of 734 Danish adults born in 1914. Social Science & Medicine 62:157-164.

Investigators examined the effects of religious characteristics on mortality in a sample of 734 Danish, community dwelling elderly persons. Subjects were over age 70 when religious characteristics were measured at baseline and were then followed-up for 20 years collecting mortality data. Religious characteristics were importance of affiliation (“Does this mean something to you?” Yes vs. No), church attendance (“Do you attend services at church?” Never,

Rarely, or Often), and listening to religious media (same as attendance). Cox proportional hazards regression was used to determine the relative hazards (RH) of dying, while controlling for gender, education, physical health (confounders), and mental health, social relations, help given and received, and health behaviors (mediating variables). First, subjects who indicated that religious affiliation was meaningful (vs. not) experienced a lower risk of dying (RH=0.70, 95% CI 0.58–0.85). Similarly, those who attended religious services rarely or often (vs. never) experienced a reduced risk of dying (RH=0.73, 95% CI 0.64–0.87). No relationship with watching religious media was found. When gender and education were controlled, the effect of affiliation was reduced to non-significant in men, but persisted in women (RH=0.75, 95% CI 0.56-0.99); when physical and mental health were controlled, the effect in women lost significance (although these may have been mediating variables). For religious attendance (rare or often), the effect weakened when gender and education were controlled (RH=0.76, 95% CI 0.64-0.91) but remained significant, particularly in women (RH=0.71, CI 0.54-0.92) but not men. When physical and mental health were controlled (again, possible mediating variables), effect persisted (RH=0.78, CI 0.66-0.93), again especially in women. When social support and health behaviors were controlled (mediators), the effect weakened further (RH=0.82, 95% CI=0.68-0.97), but remained significant. This is the only mortality study to date in Europe. The RH of 0.82 compares is weaker than the RH of 0.72 for the Koenig et al., 1999 (North Carolina), or the RH of 0.77 for the Strawbridge et al, 1997 (California), but not by much.

Tarakeshwar N, Vanderwerker LC, Paulk E, Pearce MJ, Kasl SV, Prigerson HG (2006). Religious coping is associated with the quality of life of patients with advanced cancer. Journal of Palliative Medicine 9(3):646-657

Investigators examined the relationship between religious coping and quality of life (QOL) in a sample of 170 advanced cancer patients. Positive and negative religious coping were examined. Measures administered included the McGill QOL scale, the Brief RCOPE, and Fetzer Multidimensional Measure of R/S. Controlling for sociodemographics, lifetime history of depression, and self-efficacy, positive religious coping was related to better overall QOL, even though positive religious coping was positively related to greater overall physical symptoms. Negative religious coping, however, was related to worse QOL. Investigators concluded that type of religious coping may influence QOL in cancer patients.

Moss Q, Fleck DE, Strakowski SM (2006). The influence of religious affiliation on time to first treatment and hospitalization. Schizophrenia Research 84(2-3):421-426.

Investigators indicate that this is the first study to examine the effects of religion on duration of psychotic illness. They surveyed 161 patients ages 18 to 45 years with at least delusions, hallucinations or a prominent thought disorder admitted to the hospital. Activity in religious community prior to hospital admission was assessed with a single question with responses ranging from “not active in religious community” to “very active.” Religious affiliation prior to admission was also asked (Catholic, Protestant, none). Results indicated that time to first treatment and time to first hospitalization were both inversely related to religious practice ($r=-0.15$, $p<0.05$, and $r=-0.18$, $p<0.05$, respectfully, uncontrolled). Protestant affiliation was also related to a delay in treatment of psychosis (vs. those with no affiliation), independent of degree of religious practice or ethnicity ($p=0.05$). Rating 5.0.

Schiff M (2006). Living in the shadow of terrorism: psychological distress and alcohol use among religious and non-religious adolescents in Jerusalem. Social Science & Medicine 62(9):2301-2312

Examined the effects of exposure to terrorism in 600 religious and non-religious Jewish adolescents in Jerusalem. Found that religious adolescents reported lower levels of PTSD and less alcohol consumption despite having greater exposure to terrorism than non-religious adolescents. Depressive symptoms, however, were the same in both groups.

Assarian F. Biqam H. Asqarnejad A (2006). An epidemiological study of obsessive-compulsive disorder among high school students and its relationship with religious attitudes. Archives of Iranian Medicine 9(2):104-7

Investigators examined the relationship between religious attitudes and OCD symptoms in a sample of 293 high school students of different grades. Yale-Brown scale used to assess OCD symptoms. Results indicated that the overall prevalence of OCD was 8.9%. There was no relationship between OCD and religious attitudes.

Falcone RA Jr. Brentley AL. Ricketts CD. Allen SE. Garcia VF (2006). Development, implementation and evaluation of a unique African-American faith-based approach to increase automobile restraint use. Journal of the National Medical Association 98(8):1335-41

Through partnering with the African-American churches, investigators developed an intervention to increase the use of seat belts. Participation in the program was very good. As a result of the program, there was a 72% reduction in unrestrained children, a 25% increase in children being secured in the rear-seat position, and a nearly 20% increase in driver seatbelt use.

Timberlake DS. Rhee SH. Haberstick BC. Hopfer C (2006). Ehringer M. Lessem JM. Smolen A. Hewitt JK. The moderating effects of religiosity on the genetic and environmental determinants of smoking initiation. Nicotine & Tobacco Research 8(1):123-33

Researchers examined the interaction between religious characteristics (affiliation, organizational religiosity, self-rated religiosity), genetic, and environmental determinants of smoking initiation in 237 monozygotic, 315 dizygotic, 779 full-sibling, and 233 half-sibling pairs. This was part of the third wave of the National Longitudinal Study of Adolescent Health study. All three measures of religiousness were inversely related to beginning to smoke. In addition, self-rated religiousness moderated the effects of genetic factors on likelihood of initiating smoking. Thus, personal religious involvement, serving as a method of self-control, may help compensate for genetic tendencies toward smoking.

Benson H, Dusek JA, Sherwood JB, et al (2006). Study of the therapeutic effects of intercessory prayer (STEP) in cardiac bypass patients: A multi-center randomized trial of uncertainty and certainty of receiving intercessory prayer. American Heart Journal 151:934-942.

Researchers examined the impact of distant, double-blinded intercessory prayer (IP) on complications after CABG. In this multi-center randomized controlled trial, 1205 patients were randomly assigned to Christian groups praying for them and 597 were assigned to a control group that was not prayed for. Among those receiving prayer, 601 were told that they would get

it. The results indicated that there was no difference in the primary endpoint (complication rate) between those prayed for and those not (52% vs. 51%). However, there was a small but statistically significant trend for those prayed for to have more major events (a secondary endpoint) (18% vs. 13%, RR=1.18, 95% CI 1.03-1.35). Similarly, patients who were prayed for and told that they were being prayed for did slightly worse in terms of the primary endpoint than those not told (59% with complications vs. 52%, RR 1.14, 95% CI 1.02-1.28).

Yi MS, Luckhaupt SE, Mrus JM, et al (2006). Religion, spirituality, and depressive symptoms in primary care house officers. Ambulatory Pediatrics 6:84-90

There is little data on the prevalence of depression in house officers and the coping resources that they rely on to get them through their extremely demanding residency training. In this study, 25% of 227 primary care house officers (internal medicine, family practice, and pediatrics at the University of Cincinnati Medical Center) experienced significant depressive symptoms. Information on religious coping and spiritual well-being was also collected. Results indicated that depressed house staff had significantly lower spiritual well-being and poorer religious coping.

Rew L. Wong YJ (2006). A systematic review of associations among religiosity/spirituality and adolescent health attitudes and behaviors. Journal of Adolescent Health 38:433-442

Researchers reviewed 43 studies on religiosity/spirituality (R/S) and health attitudes/behaviors in persons aged 10 to 20 years old that were conducted between 1998 and 2003. They found that positive effects of R/S were found in 84% of studies, and indicated that the majority of these studies were relatively well designed. The major weaknesses involved not including a theoretical framework and not providing clear definitions for religiosity/spirituality.

Kelly S. Floyd FJ (2006). Impact of racial perspectives and contextual variables on marital trust and adjustment for African American couples. Journal of Family Psychology. 20(1):79-87

Investigators examined the relationships between religious well-being, socioeconomic status, marital trust, and adjustment for 93 African-American couples. Anti-African American, pro-African American, and mixed-African American perspectives were also examined in their impact on couple adjustment. Among husbands, results indicated that the anti-African American perspective was inversely related to couple adjustment and the mixed perspective was inversely associated with marital trust. The pro-African American perspective, however, predicted marital trust only in husbands with low religious well-being and high SES.

Curlin FA, Chin MH, Sellergren SA, Roach CJ, Lentos JD (2006). The association of physicians' religious characteristics with their attitudes and self-reported behaviors regarding religion and spirituality in the clinical encounter. Medical Care 44:446-453

In the most recent and largest study to date of U.S. physicians, this study surveyed a random sample of 1,144 physicians of all specialties across the U.S. on their religious characteristics, attitudes, and behaviors concerning religion and spirituality in clinical practice. Questionnaires were sent to a stratified random sample of physicians aged 65 or younger from the American Medical Association Physician Masterfile. Results indicated low rates for physicians addressing religious/spiritual (R/S) issues (10% often or always). Nearly half of physicians (45%) indicated that it was usually or always inappropriate for a physician to inquire about a patient's R/S.

However, factors that predicted whether or not physicians addressed R/S issues had little or nothing to do with the characteristics of patients or the need to do so. Instead, this depended heavily on physicians' personal R/S beliefs and practices. For example, only 23% of physicians who were low on both self-rated religiosity and spirituality "ever" asked about R/S concerns of patients, compared to 76% of physicians with high self-rated religiosity and spirituality. Findings were similar for praying with patients. Although not having enough time is often the reason given for physicians not addressing R/S issues, physicians who noted insufficient time in this study were actually significantly *more likely* to inquire about R/S (58% vs. 44%).

Dezutter, J., Soenens, B., Hutsebaut, D (2006). Religiosity and mental health: A further exploration of the relative importance of religious behaviors vs. religious attitudes.

Personality and Individual Differences 40(4):807-818

Surveyed 472 adults concerning their religious involvement, religious orientations, and social-cognitive approaches to religion, and their mental health (psychological distress and psychological well-being). Religious orientation and social-cognitive approaches to religion were significantly related to psychological well-being outcomes, whereas religious involvement was not. Literal approach to religion was negatively related to well-being and greater distress, whereas intrinsic religiosity was related to higher well-being. Extrinsic religiosity was related to lower well-being.

Ardelt M, Koenig CS (2006). The role of religion for hospice patients and relatively healthy older adults. Research on Aging 28(2):184-215

Researchers examined the effects of religious orientation and spiritual activities on psychological well-being and attitudes toward death. The sample consisted of 103 relatively healthy older adults and 19 hospice patients over the age to 60. Subjects with a greater purpose in life had higher subjective well-being and lower fear of death. LISREL was used to examine direct and indirect effects. Control variables included hospice status, physical health, SES, gender, and race. Intrinsic religiosity had an indirect positive effect on psychological well-being, sense of purpose in life, and was directly and indirectly related to accepting approach towards death. Extrinsic religiosity was related to greater death anxiety and was inversely related to purpose in life (indirect effect) and to an accepting approach to death among hospice patients.

Lesniak KT, Rudman W, Rector MB, Elkin T (2006). Psychological distress, stressful life events, and religiosity in younger African American adults. Mental Health, Religion & Culture 9(1):15-28

Researchers examined the relationship between stressful life events (SLE) and psychological/physical distress, and the role that religiosity (intrinsic religiosity, organizational religiosity, non-organizational religiosity) played in mediating this relationship. The sample consisted of 215 African Americans ages 18 to 43. Intrinsic religiosity was negatively related to both total distress and depression. Organizational religiosity was negatively related to somatization and obsessive-compulsive symptoms. Non-organizational religiosity was negatively related to interpersonal sensitivity. Investigators concluded that religiosity was associated with distress in different ways depending on the particular aspect of religion measured.

Krupski TL, Kwan L, Fink A, et al. (2006). Spirituality influences health related quality of life in men with prostate cancer. Psycho-Oncology 15:121–131.

Researchers examined the relationships between spirituality, health-related quality of life and psychosocial health in 222 men with prostate cancer. Most men were of low socioeconomic status. Validated instruments of spirituality, disease-specific quality of life, and mental health symptoms were administered. High spirituality was significantly correlated with better physical health, mental health, sexual function, and fewer urinary problems, and the finding persisted when other predictors were controlled.

Regnerus MD, Burdette A (2006). Religious change and adolescent family dynamics. Sociological Quarterly 47:175-194

Examined the influence of adolescent religious change on relationships with parents and satisfaction with their families. Researchers analyzed data from two waves (1995 and 1996) of the National Longitudinal Study of Adolescent Health (random sample of students in grades 7-12). Religious affiliation, religious attendance, importance of religion, and “born again” status were measured. Found that increase in the importance of religion in life between waves was independently and positively related to better family relationship even after controlling for increased substance use (i.e., negative behavioral change). Increase in importance of religion was positively associated with improvements in mother-child relationship ($B=0.19$, $p<0.001$), in father-child relationship ($B=0.18$, $p<0.05$), and family satisfaction ($B=0.17$, $p<0.001$).

Abdel-Khalek AM (2006). Happiness, health, and religiosity: Significant relations. Mental Health, Religion & Culture 9(1):85-97

Investigator examined the relationships between happiness, physical health, mental health, and religiosity in sample of 2,210 volunteer Kuwaiti undergraduates (52% female) by gender. Results indicated that women were significantly more religious than men. Relationships between religiosity and happiness, physical health, and mental health were all positive and significant in this Muslim sample. Regression analysis revealed that religiosity accounted for around 15% of the variance in happiness, even more so than did self-ratings of physical health.

Rummans TA, Clark MM, Sloan JA, Frost MH, Bostwick JM, Atherton PJ, Johnson ME, Gamble G, Richardson J, Brown P, Martensen J, Miller J, Piderman K, Huschka M, Girardi J, Hanson J (2006). Impacting quality of life for patients with advanced cancer with a structured multidisciplinary intervention: a randomized controlled trial. J Clin Oncology 24(4):635-42

Researchers conducted a randomized clinical trial involving a multi-disciplinary intervention (including a spiritual component) in 103 radiation therapy patients with advanced cancer who had expected 5-year survival rate of 0%-50%. The five domains of QOL that were addressed in the intervention arm were cognitive, physical, emotional, spiritual, and social functioning. These were addressed during eight 90-minute sessions. Investigators found that the 49 patients randomized to the intervention group experienced a 3-point increase in QOL from baseline, compared to a 9-point decrease in the standard care control group ($p<0.01$). Although nothing can be concluded specifically about the spiritual component, one can conclude that a QOL intervention that includes the spiritual along with the social, mental, and physical, may be helpful in cancer patients.

Huguelet P, Mohr S, Borrás L, Gillieron C, Brandt P (2006). Spirituality and religious practices among outpatients with schizophrenia and their clinicians. Psychiatric Services 57(3):366-372

Investigators interviewed 100 outpatients with schizophrenia (mean age 39) to determine the relationship between clinical characteristics and religious involvement. Thirty-four clinicians caring for these patients were also interviewed on their religious practices and what they know about the religious practices of patients. Findings were that a majority of patients reported that spirituality was important in their daily lives. However, only 39% had spoken about their spiritual concerns or strengths with clinicians. In contrast to patients, only 6% of clinicians participated in religious activities every day (versus 52% of patients) and only 4% believed that spirituality was essential for daily living (versus 40% for patients). Although 93% of clinicians said that they felt comfortable talking about spirituality with their patients, clinicians' perceptions of their patients' religious involvement were incorrect half of the time. Many clinicians also indicated that they lacked the necessary skills to competently address spiritual issues.

McConnell KM, Pargament KI, Ellison CG, Flannelly KJ (2006). Examining the links between spiritual struggles and symptoms of psychopathology in a national sample. Journal of Clinical Psychology 62(12):1469-84

Examined relationships between religious struggles (negative religious coping or NRC) and symptoms of psychopathology in 1629 persons stratified by whether they had or did not have a serious injury or illness within the past year. NRC was positively associated with anxiety, phobic anxiety, depression, paranoid ideation, obsessive-compulsiveness, and somatization, after controlling for confounders. In particular, the associations between NRC and both anxiety and phobic anxiety were stronger in persons who had recently had a physical illness.

Hamrick N, Diefenbach MA (2006). Religion and spirituality among patients with localized prostate cancer. Palliative & Supportive Care 4(4):345-55

In a prospective study of 254 patients with localized prostate cancer (compared to 238 respondents to the General Social Survey (GSS)), researchers examined the relationship between changes in religiousness around the time of diagnosis and worry. Prostate cancer patients reported higher levels of daily spiritual experiences than persons responding to the GSS. Patients who had higher levels of worry about their diagnosis and elevated levels of prostate-related symptoms were more likely to report an increase in religiosity and spirituality around the time of diagnosis. Patients with higher increased religiosity at the time of diagnosis experienced a reduction in worry. Patients not reporting an increase in religiousness who were not using religion to cope did just as well as patients who reported an increase in religiosity.

Mohr S, Brandt PY, Borrás L, Gillieron C, Huguelet P (2006). Toward an integration of spirituality and religiousness into the psychosocial dimension of schizophrenia. American Journal of Psychiatry 163(11):1952-9

Interviewed 115 outpatients, most with schizophrenia, about their religious coping; conducted in Geneva, Switzerland. Reported that religion instilled hope, purpose, and meaning in the lives of 71% of patients, but induced spiritual despair in 14% of patients. Religion was reported to lessen psychotic and other pathological symptoms by 54% of patients (although 10% said it increased symptoms). Patients indicated that religion increased their social integration in 28% of cases (although led to social isolation in 3%), reduced the risk of suicide attempts in 33% (although

increased risk in 10%), reduce substance abuse in 14% (although increased SA in 3%), and increased adherence to psychiatric treatment in 16% (although decreased it in 15%).

Lechner SC, Carver CS, Antoni MH, Weaver KE, Phillips KM (2006). Curvilinear associations between benefit finding and psychosocial adjustment to breast cancer. Journal of Consulting & Clinical Psychology 74(5):828-40

Assessed 366 women with breast cancer (non-metastatic) during the year after surgery and 5-8 years later. Women were divided in to high, intermediate, and low “benefit finding” groups (i.e., had benefited from their breast cancer in some way). Women who reported the most benefits were those with higher optimism, more use of positive reframing, and greater use of religious coping.

Watlington CG, Murphy CM (2006). The roles of religion and spirituality among African American survivors of domestic violence. Journal of Clinical Psychology 62(7):837-57

Examined relationships between religion, spirituality, social support, PTSD and depression symptoms in 65 African American women who were survivors of domestic violence that occurred within the past 12 months. Findings indicated that women with higher spirituality and greater religious involvement had fewer depression symptoms; that religious involvement was inversely related to PTSD symptoms; and that religious involvement was positively correlated with social support. Social support was not found to explain the relationship between religious/spiritual variables and mental health variables.

Zehnder D, Prchal A, Vollrath M, Landolt MA (2006). Prospective study of the effectiveness of coping in pediatric patients. Child Psychiatry & Human Development 36(3):351-68

A prospective study of 161 patients ages 6 to 15 years examined effects of coping behaviors on PTSD symptoms and behavioral problems 1 month and 1 year after accidental injury or diagnosis of chronic disease. Investigators found that religious coping reduced PTSD-like symptoms in this sample.

Schanowitz JY, Nicassio PM (2006). Predictors of positive psychosocial functioning of older adults in residential care facilities. Journal of Behavioral Medicine 29(2):191-201

Examined relationships between coping behaviors and mental health in 100 older adults living in residential care (skilled, intermediate, assisted-living). Focused on active, passive, meaning-based (positive reappraisal), positive and negative religious coping strategies. There was no relationship between positive religious coping and psychosocial outcomes, but negative religious coping was related to greater depression (negative affect).

Billig M, Kohn R, Levav I (2006). Anticipatory stress in the population facing forced removal from the Gaza Strip. Journal of Nervous & Mental Disease 194(3):195-200

Investigators conducted a telephone survey of a random sample of settlers in the Gaza strip that had to be relocated elsewhere due to increasing tensions. Examined relationship between psychosocial factors and demoralization (based on a standard scale). Respondents who were less likely to use religious coping were at greater risk for emotional distress.

Roehlkepartain EC, King PE, Wagener L, Benson PL (2006). The Handbook of Spiritual Development in Childhood and Adolescence. CA: Thousand Oaks, CA:Sage Publications

This handbook is necessary reading for academics, researchers, and students in departments of Psychology, Family Studies, and Religious Studies, anyone interested in the relationship between spirituality and health in children and adolescents, and health professionals working with young people. This is probably the best resource out there for clinicians, researchers, and teachers in the area of spirituality in childhood and adolescence.

Lorenz KA, Hays RD, Shapiro MF, Cleary PD, Asch SM, Wenger NS (2005). Religiousness and spirituality among HIV-infected Americans. Journal of Palliative Medicine 8(4):774-81

Two-year prospective study of a nationally representative sample of 2266 patients receiving care for HIV infection. Results indicated that 80% were religiously affiliated. Two-third (65%) indicated that religion was either somewhat important or very important to them and 85% said this when the term “spirituality” was used. Between two-third and three quarters said that they sometimes or often relied on religious or spiritual factors when making medical decisions. Patients not reporting being involved in risk factors associated with HIV infection were more religious. Stage of disease was not related to religiousness/spirituality. Investigators concluded that many HIV-infected patients emphasize the importance of religiousness and spirituality in their lives and their impact on making treatment decisions.

Tarakeshwar, N., Pearce, M. J., & Sikkema, K. J. (2005). Development and implementation of a spiritual coping group intervention for adults living with HIV/AIDS: A pilot study. Mental Health, Religion & Culture 8(3):179-190.

Investigators examined the effects of a spirituality-oriented group intervention in HIV-positive adult patients. Eight sessions of a cognitive-based coping intervention in a spiritual framework were administered to 13 subjects; stressors unique to being diagnosed HIV-positive were addressed. Compared to pre-intervention assessment, subjects at post-intervention assessments reported higher self-rated religiosity, greater use of positive religious coping, lower use of negative religious coping, and lower depression scores.

Wink P, Larsen B, Dillon M (2005). Religion as moderator of the depression-health connection: Findings from a longitudinal study. Research on Aging 27(2):197-220.

Investigators examined the relationship between religiousness, spirituality, depression, and physical health in a representative sample of subjects born in the San Francisco area during the 1920s. These persons were then followed into their 60s and 70s. Religiousness was measured as the extent to which institutionalized religious beliefs and practices played a *central* role in the respondent’s life indicated by belief in God, an afterlife, and prayer, and/or frequent attendance (e.g., weekly) at a traditional place of worship. Spirituality was measured as the extent to which non-institutionalized religious beliefs and practices played a *central* role in the individual’s life, such as a person’s awareness of sacred connectedness with God, a Higher Power, or nature, and their systematically engaging in intentional spiritual practices (e.g., meditation, Shamanistic journeying, centering, or contemplative prayer) on a regular basis. Results indicated that religiousness buffered against depression associated with poor physical in later life, with the highest level of depression being found in those with low religiousness and poor physical health. This effect was independent of social support and was predicted longitudinally by religiousness

that was assessed 30 years previously. Interestingly, spirituality as described above did not have a similar buffering effect.

Wink P, Scott J (2005). Does Religiousness Buffer Against the Fear of Death and Dying in Late Adulthood? Findings From a Longitudinal Study. Journal of Gerontology 60(4):P207-P214.

Investigators examined data collected over 40 years on 155 persons from 1959 to 1999, studying the relationship between religiousness and fear of death and dying late life. Findings indicated that moderately religious persons feared death more than either the highly religious or the low religious participants. Analyses were controlled for sociodemographic variables, life satisfaction, social support, and stressors.

Heuch I, Jacobsen BK, Fraser GE (2005). A cohort study found that earlier and longer Seventh-day Adventist church membership was associated with reduced male mortality. Journal of Clinical Epidemiology 58(1):83-91.

This study of Seventh Day Adventists (SDA) examined the effects on mortality of joining the church in adult life vs. joining the church as a child. A total of 29,871 SDAs were followed for 12 years, during which 5,109 deaths occurred. Effects were particularly notable in men. Among men, mortality rates declined (longevity increased) with increasing membership duration, and then stabilized. Among men joining the church at age 50, there was a 15-25% reduction in mortality after 10 years of membership. SDA women joining after age 50 had somewhat higher mortality compared to those entering the church during childhood, and there was no reduction in mortality during followup in the former group.

Hasnain M, Sinacore JM, Mensah EK, Levy JA (2005). Influence of religiosity on HIV risk behaviors in active injection drug users. AIDS Care. 17(7):892-901.

Examined impact of religiosity on HIV high-risk drug and sexual practices among 880 IV drug users. Compared to those who reported having no religiosity, subjects who stated that their lives were strongly influenced by religious beliefs were significantly more likely to share injection outfits, cookers, cotton and water.

Jaffe DH, Eisenbach Z, Neumark YD, Manor O (2005). Does living in a religiously affiliated neighborhood lower mortality? Annals of Epidemiology 15(10):804-810.

Study examined the effects on mortality of living in a religiously affiliated neighborhood. Investigators used individual and community-level data to examine predictors of mortality in the Israel Longitudinal Mortality Study. A total of 141,683 persons aged 45-89 years living in 882 statistical community areas were studied and followed over 9.5 years examining predictors of mortality (29,709 deaths). After multi-level models were adjusted for individual demographic and socioeconomic (SES) factors and area SES, both men and women living in religiously affiliated neighborhoods had lower mortality rates (OR=0.75, 95% CI 0.67-0.84, and OR=0.86, 95% CI=0.67-0.96, respectively). Area SES modified the effects for women only – for those living in higher SES areas, neighborhood religious affiliation had no effect on mortality.

Flannelly KJ, Galek K, Handzo GF (2005). To what extent are the spiritual needs of hospital patients being met? International Journal of Psychiatry in Medicine 35(3):319-23

There is very little information in the published literature on what proportion of patients see a hospital chaplain. These investigators estimate the percentage of patients who are seen by a chaplain using data from their studies in New York City and elsewhere. This analysis came up with an estimate of 20% (+/- 10%), depending on several considerations.

Chen YY (2005). Written emotional expression and religion: effects on PTSD symptoms. International Journal of Psychiatry in Medicine 35(3):273-86

The researcher examined whether taking a religious perspective to a traumatic event and then writing this down on paper, made a difference in psychological response. A total of 177 college students were randomly assigned to either a conventional trauma writing group (writing about a traumatic event in general and how it affected them) or to a group that wrote about the trauma from a religious perspective. One month after the intervention, PTSD symptoms were assessed in both groups. Results indicated that writing intervention interacted with the severity of the trauma reported and the gender of the participant. Conventional trauma writing was more effective for subjects who reported traumatic events of low severity than for those reporting events of high severity. However, the effect of religious writing on PTSD symptoms was not affected by the severity of the trauma reported. In other words, religious writing was equally effective for low and high trauma events, unlike the conventional writing which was only effective for low trauma events. Finally, women benefited more than men from religious writing based on PTSD symptoms.

McCullough ME, Laurenceau JP (2005). Religiousness and the trajectory of self-rated health across adulthood. Personality and Social Psychology Bulletin. 31(4):560-573.

Investigators examined the effects of religiousness (measuring interest in religion, reading the Bible, importance of religious instruction for children, and number of religious activities engaged in) on changes in self-rated health during adulthood. Data were used from the Terman Life Cycle Study of Children With High Ability. The Terman study involved 1,528 bright and gifted boys and girls from California (all had IQ's >135). The average year at birth was 1910. Religiousness assessed in 1941 was used to predict self-rated health from 1940 to 1999. Analyses were stratified by gender. Results indicated that after controlling for health behaviors, social involvement, and personality factors, women who were highly religious in 1940 had higher mean self-rated health throughout their lifespan and slower rates of decline in self-rated health over time compared to women who were less religious. For men, religiousness did not predict self-rated health.

Franzini L, Ribble JC, Wingfield KA (2005). Religion, sociodemographic and personal characteristics, and self-reported health in whites, blacks, and Hispanics living in low-socioeconomic status neighborhoods. Ethnicity and Disease 15(3):469-484.

Investigators reexamined relationships between self-rated mental and physical health, religiosity, and other personal characteristics in a sample of Blacks, Whites, and Hispanics. Results indicated that participants with more social resources had higher organizational religiosity and better health, while individuals with fewer social resources had higher non-organizational religiosity and poorer health. Blacks reported higher organizational and non-organizational religiosity than Whites, while Hispanics reported higher non-organizational religiosity. Racial

background (being Black) was indirectly related to better mental health through organized religiosity, but indirectly related to worse physical and mental health through non-organizational religiosity. Hispanic race was indirectly related to better mental health through organizational religiosity.

Bagiella E, Hong V, Sloan RP (2005). Religious attendance as a predictor of survival in the EPESE cohorts. International Journal of Epidemiology 34:443-451

Investigators examined the relationship between religious attendance and mortality using the 14,456 participants in the NIA's Established Populations for Epidemiologic Studies of the Elderly (EPESE) that includes data on religious involvement and mortality in four sites. After controlling for both confounders and explanatory variables, weekly religious attendance predicted greater survival in the entire sample (RR = 0.78, 95% CI 0.70-0.88). Stratified analyses by site showed that after controlling for confounders and explanatory variables (those that helped to explain the effects on mortality), significant effects persisted in two of the four sites.

Hill TD, Angel JL, Ellison CG, Angel RJ (2005). Religious attendance and mortality: an 8-year follow-up of older Mexican Americans. Journal of Gerontology 60(2):S102-S109.

Investigators at the University of Texas at Galveston examined the effects of religious attendance on mortality among Mexican Americans aged 65 or older. Data were used from the Hispanic EPESE (Established Populations for Epidemiologic Studies of the Elderly) to examine the ability of religious attendance to predict survival over an 8-year follow-up. Results indicated that compared to those who did not attend religious services, those who attended at least once per week experienced a 32% reduction in mortality risk. This reduction in mortality persisted after controlling analyses for baseline confounders (sociodemographic characteristics, cardiovascular health, activities of daily living, physical mobility and functioning, subjective health) and explanatory variables (social support, health behaviors, and mental health).

Kristeller JL, Rhodes M, Cripe LD, Sheets V (2005). Oncologist assisted spiritual intervention study (OASIS): Patient acceptability and initial evidence of effects. International Journal of Psychiatry in Medicine 35:329-347

Investigators conducted a randomized clinical trial involving examining the effect of a physician-administered spiritual history intervention in 118 consecutive outpatients with cancer. Physicians involved in the study were four oncologists (2 Christian, 1 Hindu, and 1 Sikh). Patients were alternately assigned patients to either the intervention group or a control group (usual care) in order to minimize burden on any one oncologist (so in this respect, it was not "randomized" in the ideal sense of the term). Quality of life, depression, and interpersonal communication scales were administered before and three weeks after the intervention. Intervention was called the OASIS spiritual history (SH). This intervention that involves the physicians inquiring about the patients' religious or spiritual beliefs took an average 6 minutes to administer, and increased the length of the outpatient visit from 13.1 to 14.8 minutes. Results indicated that in most cases (85%), physicians were comfortable administering the intervention and the majority of patients (76%) thought it was useful. Not only was this intervention well received, but three weeks after the visit, intervention patients had a significantly greater reduction in depressive symptoms ($p < 0.01$) compared to the control group. Furthermore, patients receiving the OASIS spiritual history had a greater sense of interpersonal caring from

physician ($p < 0.05$) and increased functional well-being ($p < 0.001$), compared with control patients.

Musick MA, House JS, Williams DR (2004). Attendance at religious services and mortality in a national sample. Journal of Health and Social Behavior 45 (2):198-213

Investigators examine the effects of religious attendance on mortality in a national random sample of 3,617 adults, with over-sampling of African Americans and adults over age 60 (American's Changing Lives Study). All-cause mortality was the main outcome (542 deaths). Results indicated that participants attending services at least once a month (above half of the sample) experience a one-third reduction in risk of death over a 7.5-year period (Relative Hazard 0.65-0.69, $p < 0.05$ in full model). This effect is independent of other confounders (demographics and baseline physical health) and explanatory factors (social and health behaviors), and is consistent with prior research. Controlling for other religious beliefs and behaviors could not explain (and often tended to suppress) the association between attendance and mortality. In other words, analyses were controlled for "volunteering for a church," subjective religiosity, private religious activities, and certain religion-related beliefs (negative justice and fatalism).

Masters KS, Hill RD, Kircher JC, Benson TL, Fallon JA (2004). Religious orientation, aging, and blood pressure reactivity to interpersonal and cognitive stressors. Annals of Behavioral Medicine 28(3):171-178

Investigators examined the relationship between religiosity (intrinsic vs. extrinsic religiousness) and blood pressure reactivity in a sample of 178 participants (75 over age 60 and 103 between ages 18 and 24). Subjects were divided into intrinsic vs. extrinsic religious orientation using the Religious Orientation Scale, and were then exposed to cognitive and interpersonal stressors in the laboratory. Systolic and diastolic blood pressures (SBP and DBP) were assessed at baseline and during the psychological stressors. Researchers reported that older subjects who were extrinsically religious had exaggerated blood pressure reactivity during stressors, compared to both younger subjects and older intrinsically religious subjects. There was no difference in SBP reactivity between older intrinsically religious subjects and younger subjects. Effects were particularly notable for the interpersonal stressor (role play vs. mental arithmetic stressor), where regardless of age, those with intrinsic religious orientation had less SBP reactivity. Effects were similar for DBP but not as pronounced.

Harinath K, Malhotra AS, Pal K, et al (2004). Effects of Hatha yoga and Omkar meditation on cardiorespiratory performance, psychologic profile, and melatonin secretion. Journal of Alternative and Complementary Medicine 10: 261-268.

In this randomized clinical trial, investigators examined the effects of Hatha yoga and Omkar meditation on cardiorespiratory performance, psychologic profile, and melatonin secretion. Thirty healthy male volunteers ages 25-35 years were randomly assigned to either control group (who performed body flexibility exercises for 40 minutes and slow running for 20 minutes during morning and played games for 60 minutes during evening) or the intervention group (who practiced yogic postures for 45 minutes and pranayama for 15 minutes in morning and preparatory yogic postures for 15 minutes, pranayama for 15 minutes, and meditation for 30 minutes in the evening). Both groups engaged in these activities for 3 months. Orthostatic tolerance, heart rate, blood pressure, respiratory rate, forced vital capacity, forced expiratory volume in 1 second, forced expiratory volume percentage, peak expiratory flow rate, maximum

voluntary ventilation, measures of mental health, and blood samples assessing melatonin levels were obtained at baseline and at 3 month follow-up. Results indicated that the intervention group experience improved cardiorespiratory performance and increased plasma melatonin levels on follow-up. Multiple comparisons, however, were not taken into account and there were many variables on which no differences were found.

Hart A, Jr., Tinker LF, Bowen DJ, Satia-Abouta J, McLerran D. Is religious orientation associated with fat and fruit/vegetable intake? Journal of the American Dietetic Association. 2004;104(8):1292-1296.

Examined the relationships between intrinsic/extrinsic religiosity and dietary fat behaviors in a sample of 2,375 people through telephone survey. Extrinsic religiosity, but not intrinsic religiosity, was associated with low-fat dietary fat behaviors ($p < 0.05$).

Benjamins MR (2004). Religion and functional health among the elderly: is there a relationship and is it constant? Journal of Aging and Health. 16(3):355-374.

Examined relationship between religious involvement and functional ability in 4,071 persons aged 72 to 103 (mean age 78) who participated in the Assets and Health Dynamics Among the Oldest Old Survey. This is a nationally representative, longitudinal data set. Religious activities in 1995 were examined as predictors of change in physical functioning between 1995 and 2000, controlling for baseline functional limitations. Investigator reported that frequent religious attendance predicted fewer functional limitations over time, independent of other factors. The opposite was true for higher salience of religiousness, which predicted more functional limitations.

Dedert EA, Studts JL, Weissbecker I, Salmon PG, Banis PL, Sephton SE (2004). Private religious practice: Protection of cortisol rhythms among women with fibromyalgia. International Journal of Psychiatry in Medicine 34:61-77

Examined the relationships between religiosity, spirituality, and diurnal salivary cortisol profiles in 91 women with fibromyalgia. Religious involvement measured using the Duke University Religion Index (DUREL) and Index of Core Spiritual Experiences (INSPIRIT). Results showed that controlling for age and medications, significant associations were documented between diurnal cortisol rhythm and measures of private religious activity and intrinsic religiosity. Moderately or highly religious patients had high morning and low evening salivary cortisol levels (healthy rhythms). Patients with low religiosity had flattened cortisol rhythms (not so healthy). Further analyses controlling for social support revealed that the relationship between cortisol rhythm (diurnal cortisol slope) and intrinsic religiosity remained significant ($\beta = -0.25$, $p < .05$), although the relationship with private religious activities weakened to a trend level ($p = .087$).

Kraut A, Melamed S, et al. (2004). Association of self-reported religiosity and mortality in industrial employees: the CORDIS study. Social Science & Medicine 58(3): 595-602.

Researchers examined effects of self-reported religiosity on mortality in 3638 Jewish Israeli male industrial employees over 12 years, controlling for workplace and socioeconomic factors. 253 deaths took place during follow-up. Negative workplace and sociodemographic factors were greatest among the most religious employees, including lower education, non-European origin, heavy physical work, blue-collar jobs and adverse job and environmental conditions. Cox

proportionate hazard regression analysis revealed an age by religiosity interaction on mortality. Among younger employees (under age 55 years) religiosity was associated with lower mortality, after controlling for other factors. The relative hazard of dying for religious employees was 0.64 (36% lower) ($p=0.016$) compared with non-religious employees. Among men aged 55 or older, however, greater religiosity predicted higher mortality ($RH=1.69$, $p=0.01$) after controls.

Contrada RJ, Goyal TM, Cather C, Rafalson L, Idler EL, Krause TJ (2004). Psychosocial factors in outcomes of heart surgery: the impact of religious involvement and depressive symptoms. Health Psychology 23:227-38.

This prospective study examines the effects of religiousness on complications experienced during recovery from heart surgery. Religiousness (5-item scales assessing degree of religiousness, single item measure of religious attendance, and single item measure of private prayer) and other psychosocial factors (depressive symptoms, social support, optimism, anger/hostility) were assessed in 142 patients one week prior to surgery, and outcomes (length of hospital stay and complications) were determined based on hospital chart review following surgery. Investigators found that greater religiousness predicted fewer post-surgical complications and shorter hospital stays. However, frequency of attendance at religious services was unrelated to complications, but predicted longer hospital stays. Frequency of prayer did not predict either complications or length of hospital stay. Effects of religiousness were stronger in women than men, and were independent of biomedical and other psychosocial predictors.

Lutgendorf SK, Russell D, Ullrich P, Harris TB, Wallace R (2004). Religious participation, interleukin-6, and mortality in older adults. Health Psychology 23(5):465-475

Investigators from the department of psychology at the University of Iowa conducted a 12-year prospective study of 557 community-dwelling older adults (Iowa 65+ Rural Health Study), examining the effects of religious attendance at baseline on interleukin-6 (IL-6) levels and mortality during follow-up. The sample was part of the Iowa EPESE, and consisted of a random sub-sample on which IL-6 levels had been drawn in 1988; religious attendance was assessed in 1982. More than once weekly attendance at religious services predicted lower subsequent 12-year mortality (1982-1994) and elevated IL-6 levels (> 3.19 pg/mL) in 1988. The effect of religious attendance on mortality was significant, based on logistic regression model ($OR=0.32$, 95% CI 0.15-0.72, $p<0.01$) and the effect of religious attendance on IL-6 levels was significant ($OR=0.34$ (95% CI = 0.16-0.73, $p <0.01$), compared with never attending religious services. Investigators used structural equation modeling to show that IL-6 levels mediated the effect of religious attendance on mortality. These effects were independent of age, sex, health behaviors, chronic illness, social support, depression, and other variables.

Fogg SL, Weaver AJ, Flannelly KJ, Handzo GF (2004). An analysis of referrals to chaplains in a community hospital in New York over a seven-year period. Journal of Pastoral Care & Counseling 58 (3):225-235

Researchers examined the pattern of chaplain referral over 7 years in a hospital located in the Bronx, New York. Over half of all referrals to chaplains came from nurses, and among health professionals (physicians, nurses, social workers, etc.) making referrals, nurses made up 82% of all referrals. Over the years, chaplain referrals from nurses, social workers, and other staff increased, except for physicians. Of referrals, three-quarters involved visits to patients and one-quarter visits to family members or friends. The most common reasons for chaplain referrals

were anxiety, depression, and pregnancy loss. Referral rate over the 7 year period was 39 per 1000 patient stays.

Fontana, A., & R. Rosenheck (2004). Trauma, change in strength of religious faith, & mental health service use among veterans treated for PTSD. Journal of Nervous & Mental Disease 192:579–84.

Study of 1,385 veterans from Vietnam (95%), World War II and/or Korea (5%) involved in outpatient or inpatient PTSD programs. VA National Center for PTSD and Yale University School of Medicine. Weakened religious faith was an independent predictor of use of VA mental health services— independent of severity of PTSD symptoms and level of social functioning. Investigators concluded that the use of mental health services was driven more by their weakened religious faith than by clinical symptoms or social factors.

Wenger NS, Carmel S (2004). Physicians' religiosity and end-of-life care attitudes and behaviors. Mount Sinai Journal of Medicine 71(5):335-343.

Researchers surveyed 443 Jewish physicians practicing at four hospitals in Israel, examining the relationship between physician religiosity and attitudes concerning end-of-life decision-making. Results indicated that very religious physicians (vs. moderately religious and secular physicians), were less likely to believe in withdrawing life-sustaining treatments (11% vs. 36% vs. 51%, $p < 0.001$), to approve of prescribing pain medication that might hasten death (69% vs. 80% vs. 85%, $p < 0.01$), and to agree to euthanasia (5% vs. 42% vs. 70%, $p < 0.001$). Physician religiosity was not related to physician-patient communication concerning end-of-life care. Investigators concluded that, “Physicians' religiosity can have a major effect on the way their patients die...”

Ciarrocchi JW, & Deneke E (2004). Happiness and the varieties of religious experience: Religious support, practices, and spirituality as predictors of well-being. Research in the Social Scientific Study of Religion 15: 209-233.

Researchers hypothesized that spirituality, measured by perceived closeness to God, would predict well-being (SWB), over and above age, gender, personality, and religious support. Subjects ($N = 427$) were a convenience sample of volunteers, recruited over a three year period, who were acquaintances of students in a psychology of religion class. Using a series of hierarchical multiple regression analyses, results showed that personality explained from 17-28% of the significant variance in the three components of SWB, positive affect, negative affect, and cognitive well-being. Religious support made no contribution above personality. Spirituality made an independent contribution over personality in predicting positive emotion (5%) and cognitive well-being (1%) but had no effect on negative affect. Authors concluded that spirituality's association with well-being is with its positive components, and confirmed the hypothesis that spirituality makes a unique contribution to well-being.

Geary B, Ciarrocchi JW, & Scheers NJ (2004). Spirituality and religious variables as predictors of well-being in sex offenders. Research in the Social Scientific Study of Religion 15: 167-187.

Researchers hypothesized that spirituality and religious practices would account for additional variance in well-being in sex offenders, over and above personality and demographic variables. Subjects ($N = 195$) were recruited from offenders in either group or individual treatment. A hierarchical regression model was used for each of the three facts of subjective well-being, with

demographic variables entered in step one, personality in step two, and either spirituality or attendance at religious services in step three. Personality (as measured by the five-factor model) accounted for a significant amount of variance on all three facets of well-being. Spirituality, measured by the Faith Maturity Vertical scale, added an additional 3% of variance for satisfaction with life, and 2% for positive affect. Attendance at religious services contributed 2% of unique variance to satisfaction with life. Finally, spirituality predicted aspects of well-being incrementally over attendance at services, suggesting that attendance is mediated by spirituality.

Golden J, Piedmont RL, Ciarrocchi JW, & Rodgerson T (2004). Spirituality and burnout: An incremental validity study. Journal of Psychology and Theology 32(2): 115-125.

This study used a series of hierarchical regression analyses to explore whether spirituality, measured by the Spiritual Transcendence Scale (STS), had incremental validity in predicting burnout in clergy, controlling for personality and work environment. Subjects ($N = 321$) were recruited from the population of active Methodist clergy in the US. Age and gender were entered in the first step, personality (as measured by the five-factor model) was entered in the second step, work environment variables were entered in step three, and the three subscales of the STS (prayer fulfillment, connectedness, and universality) were entered in the final step. Both personality and work environment contributed a significant amount of variance. The STS explained an additional 2% of variance; of the three subscales only prayer fulfillment was a significant predictor of burnout, controlling for other independent variables. Researchers concluded personality, work environment, and spirituality should all be included in assessing clergy burnout.

Krause, N. (2004). Common facets of religion, unique facets of religion, and life satisfaction among older African Americans. Journals of Gerontology Series B-Psychological Sciences & Social Sciences 59(2): S109-17.

Analyzed data from a random national sample of older African Americans to examine relationship between religion and life-satisfaction. Religion measured by frequency of church attendance (common facet) and factors such as belief that religion sustains Black people in the face of racial adversity (unique facet). Life satisfaction measured using a standard, validated scale. Research found that religious attendance and unique aspects of religious involvement were both associated with greater life satisfaction.

Sullivan MA, Muskin PR, et al. (2004). Effects of religiosity on patients' perceptions of do-not-resuscitate status. Psychosomatics 45(2): 119-128.

Interviewed 48 hospitalized oncology patients concerning their views about do-not-resuscitate (DNR) decisions and the relationship of those views with their religiosity. A significant proportion of patients indicated that DNR decisions are morally wrong and are equivalent to suicide (17% and 23%, respectively). These negative beliefs about DNR were positively associated with frequent meditation, thinking about God, and certain intrinsic religious attitudes (i.e., agreement with the statement, "My faith sometimes restricts my action").

Selected Earlier Studies (most since 2000)

van Olphen J, Schulz A, Israel B, Chatters L, Klem L, Parker E, et al. (2003). Religious involvement, social support, and health among African-American women on the east side of Detroit. Journal of General Internal Medicine 18(7): 549-557.

Researchers studied a random sample of 679 African-American women living on the east side of Detroit to assess the associations between religious involvement and health status. Multivariate analyses controlling for education, age, income marital status, living situation, and physical functioning, found that respondents who prayed more experienced fewer depressive symptoms ($B=-0.12$, $p\leq 0.05$), but more diabetes/hypertension ($B=0.18$, $p\leq 0.001$); those who attended church more frequently had better self-rated health ($B=0.14$, $p\leq 0.01$), less diabetes/hypertension ($B=-0.16$, $p\leq 0.05$), and fewer depressive symptoms ($B=-0.13$, $p\leq 0.05$); church-related social support partly mediated these associations. Finally, importance of religious faith was related to lower rates of asthma and arthritis ($B=-0.12$, $p\leq 0.05$).

Grabovac AD, Ganesan S (2003). Spirituality and religion in Canadian psychiatric residency training. Canadian Journal of Psychiatry 48(3):171-175.

Surveyed 14 of the 16 psychiatry residency programs in Canada to determine the extent of currently available training in religion and spirituality. They discovered that 4 of the 14 had no training whatsoever on the topic, while 4 had mandatory lectures on the topic and 9 offered at least some degree of elective or case-based supervision on the interface between religion, spirituality and psychiatry. Indicated that at least 16 psychiatric residencies in USA have training in these areas.

Clark, P. A., Drain, M., Malone, M. P. (2003). Addressing patients' emotional and spiritual needs. Joint Commission Journal on Quality and Safety, 29(12), 659-70.

Patient satisfaction with emotional and spiritual care is one of the lowest ratings among all aspects of care. Also shows that emotional/spiritual care is one of the highest priorities for quality improvement, according to patients. This report was based on 1,732,562 patients surveyed between January 2001 to December 2001, representing 33% of all hospitals in the United States and 44% of all hospitals with more than 100 beds.

Van Ness, PH, Kasl SV (2003). Religion and cognitive dysfunction in an elderly cohort. Journal of Gerontology 58B (1):S21-S29

Examined cognitive dysfunction (using SPMSQ) and religious involvement in a random sample of 1847 community-dwelling older adults (>65 years) in New Haven, Connecticut. Assessed religious attendance in 1982 to see if it could predict cognitive dysfunction in 1985 and 1988 waves of the survey (Yale Health and Aging Survey). Controlling for 18 sociodemographic, behavioral, and biomedical variables using logistic regression, researchers found that 1982 religious attendance predicted 1985 cognitive dysfunction independent of other variables (OR 0.64, 95% CI 0.49-0.85) but not 1988 cognitive dysfunction. Lack of an effect in 1988 due to high mortality among those with poor cognitive dysfunction and low religious attendance (and sample size dropped from 1847 for 1985 analysis to 1245 for 1988 analysis).

Van Ness PH, Kasl SV, Jones BA (2003). Religion, race, and breast cancer survival. International Journal of Psychiatry in Medicine 33:357-376

Examined the effects of four measures of religiousness (religious attendance, subjective religiousness, comfort derived from religion, denominational affiliation) on the survival of 145 African-American and 177 White women diagnosed with breast cancer. Cox proportional hazards regression was used to examine the effects of religious characteristics on survival, controlling for sociodemographic, biomedical, treatment, behavioral, and medical care factors. Women with no religious denomination had over 4 times the mortality of those with any religious affiliation (HR=4.39, 95% CI = 1.42-13.64), compared to the Protestant reference group. While the other three religious measures were not predictive of survival, a consistent pattern emerged among African-American women indicating that non-religiousness was associated with shorter survival. African American women who were completely lacking on at least one of the four dimensions of religiousness had the greatest hazard of dying (HR=10.66, 95% CI 3.32-34.16).

McClain CS, Rosenfeld B, Breithart W (2003). Effect of spiritual well-being on end-of-life despair in terminally ill cancer patients. Lancet 361:1603-1607

Examined relationship between spiritual well-being, depression, and end-of-life despair in 160 terminally-ill patients hospitalized with cancer who had less than 3 months to live. Standardized scales of spiritual well-being (SWB), depression, hopelessness, attitudes toward hastened death, and suicidal ideation (based on responses to Hamilton Depression Scale). Researchers documented inverse relationships between SWB and desire for hastened death, hopelessness, and suicidal ideation. In fact SWB was the strongest inverse predictor of each outcome variable above (desired for hastened death, hopelessness, and suicidal ideation), independent of other predictors and covariates. Among those with low SWB, depression was positively and significantly correlated with desire for hastened death, but not in patients with high spiritual well-being. In fact, low SWB a stronger predictor of hopelessness, desire for hastened death, and suicidal ideation than depressive symptoms, number of physical symptoms, or physical functioning.

Fisch MJ, Titzer ML, Kristeller JL, Shen J, Loehrer PJ, Jung SH, Passik SD, Einhorn LH (2003). Assessment of quality of life in outpatients with advanced cancer: The accuracy of clinician estimations and the relevance of spiritual well-being—A Hoosier Oncology Group study. Journal of Clinical Oncology 21:2754-2759

Researchers examined the relationship between spiritual well-being (SWB) and quality of life (QOL) in 163 patients with advanced cancer. Oncologists caring for patients rated QOL impairment as mild, moderate, or severe. Similarly, patients also rated their QOL, and these ratings were compared. Investigators documented a strong relationship between SWB and QOL ($p < 0.0001$). In 60% of cases the clinician-rated QOL matched that of the patient's rating. Overall, the association between clinician and patient estimates of QOL was not related to SWB. However, in a subset analysis of inaccurate estimates, lower SWB was associated with clinician overestimation of QOL ($p = 0.0025$).

Kim KH, Sobal J, Wethington E (2003). Religion and body weight. International Journal of Obesity and Related Metabolic Disorders 27(4):469-477

National Survey of Midlife Development in the United States (MIDUS) involved 3032 adults aged 25-74. Found conservative Protestant men had a higher body mass index than those reporting no religious affiliation. No significant relationships between religion and body weight were present in women.

Borg J, Andree B, Soderstrom H, Farde L (2003). The serotonin system and spiritual experiences. American Journal of Psychiatry 160:1965-1969

PET scanning was used to examine the relationship between serotonin—HT(1A) receptor density and personality traits. Researchers did PET scans with radioligand [(11)C]WAY 100635 of the brains of 15 men ages 20 to 45 years to determine serotonin receptor density. PET scan results were then examined in relationship to personality traits measured by the Swedish version of the Temperament and Character Inventory. Density of serotonin receptors (based on binding potential) was determined for the dorsal raphe nuclei, the hippocampal formation, and the neocortex. Results indicated that serotonin receptor density varied inversely with scores on the personality trait measure “self-transcendence” (a trait that involves religious behaviors and attitudes). In fact, the subscale measuring “spiritual acceptance” had the strongest inverse relationship to serotonin receptor density (and the other subscales were unrelated). Serotonin receptor density is inversely related to states of depression and anxiety in some studies. Thus, religious or spiritual persons may have a serotonin system that predisposes them to negative emotional states.

Wrensch M. Chew T. Farren G. Barlow J. Belli F. Clarke C. Erdmann CA. Lee M. Moghadassi M. Peskin-Mentzer R. Quesenberry CP Jr. Souders-Mason V. Spence L. Suzuki M. Gould M (2003). Risk factors for breast cancer in a population with high incidence rates. Breast Cancer Research 5(4):R88-102

Investigators found fewer cases among women who indicated that their childhood religion was “none.” This is one of the few studies showing greater morbidity related to religion.

Al-Kandari YY (2003). Religiosity and its relation to blood pressure among selected Kuwaitis. Journal of Biosocial Science 35:463-472.

Blood pressure was measured on a convenience sample of 223 Kuwaitis (mean age 29.9 years). Sampling was done to ensure that had adequate representation of both Sunni and Shiite Muslims and urban and Bedouin participants. Two nurses measured blood pressures on each individual until differences were < 10 mm Hg on three separate occasions, averaging the readings for these three measurements (dependent variable); these were done in participants’ own homes. Religiosity was measured by a self-report of daily prayer and a scale a 15-item scale assessing devoutness to Islam, which were combined to form a single religious commitment scale. Controlling for age, gender, socioeconomic status, smoking, and body mass index using multiple regression, religious commitment was inversely related to systolic (B=-0.49, p<0.05) and diastolic (B=-0.66, p<0.05) blood pressures.

Kendler KS, Liu XQ, Gardner CO, McCullough ME, Larson D, Prescott CA (2003). Dimensions of religiosity and their relationship to lifetime psychiatric and substance use disorders. American Journal of Psychiatry 160(3):496-503.

Social religiosity and thankfulness correlated with fewer “internalizing” disorders (depression, phobias, generalized anxiety disorder, panic, eating disorders), whereas general religiosity, involved God, forgiveness and God as judge were correlated with fewer “externalizing” disorders (substance abuse and adult antisocial behavior).

Murphy SA, Johnson LC, Lohan J (2003). Finding meaning in a child's violent death: a five-year prospective analysis of parents' personal narratives and empirical data. Death Studies 27(5):381-404

Five-year prospective study of 138 parents assessed at 4, 12, 24, and 60 months after the death of their adolescent or young adult. Deaths were due to accident, suicide, or homicide. By 12 months post death, only 12% of the study sample had found meaning in a child's death. By 60 months post death, 57% of the parents had found meaning. Significant predictors of finding meaning 60 months after the death were the use of religious coping and involvement in a bereavement support group.

Krause N (2003). Religious meaning and subjective well-being in late life. Journal of Gerontology 58(3):S160-170.

Nationwide survey of older White and Black adults to assess relationship between religious meaning and subjective well-being. Found that older adults who derive a sense of meaning in life from religion have higher levels of life satisfaction, self-esteem, and optimism. Older Black adults are more likely than Whites to find meaning in religion, and relationships among religious meaning, life satisfaction, self-esteem, and optimism are stronger for older African Americans.

Wills TA, Yaeger AM, Sandy JM (2003). Buffering effect of religiosity for adolescent substance use. Psychology of Addictive Behaviors 17(1):24-31

Investigators interviewed 1,182 adolescents four times between 7th grade and 10th grade. Religiosity (Jessor's Value on Religion Scale) was inversely related to alcohol, tobacco, and marijuana use during all four interview times. Latent growth analysis revealed that religiosity reduced the impact of negative life stressors on initial substance use and rate of growth in substance use over time.

Kinney AY, Bloor LE, Dudley WN, Millikan RC, Marshall E, Martin C, Sandler RS (2003). Roles of religious involvement and social support in the risk of colon cancer among Blacks and Whites. American Journal of Epidemiology 158(11):1097-107

Investigators examined relationships between religion, colon cancer, and stage at diagnosis in 637 cases and 1,043 controls. Investigators found that infrequent attendance at religious services (less than once per month) was associated with a 67% increased likelihood of regional/advanced stage of colon cancer at diagnosis in Whites ($p=0.02$) and 21% increased likelihood in Blacks ($p=ns$).

Wollin SR, Plummer JL, Owen H, Hawkins RM, Materazzo F (2003). Predictors of preoperative anxiety in children. Anaesthesia & Intensive Care 31(1):69-74.

Researchers surveyed 120 children aged 5-12 years who were scheduled for surgery requiring general anaesthesia. Anxiety level was assessed at the time of anaesthesia using the Yale Preoperative Anxiety Scale. Significant predictors of child anxiety were increased number of people in the room, longer waiting time, negative memories of previous hospitalizations, and having a mother who was not religious.

Flynn, P. M., G. W. Joe, et al. (2003). Looking back on cocaine dependence: reasons for recovery. American Journal on Addictions 12(5): 398-411.

Researchers examined psychosocial characteristics predicting long-term recovery from cocaine dependence in 708 patients in treatment programs around the U.S. About one-third of patients were completely clean at follow-up, with negative urine and hair drug screens and negative self-report of drug use. Reasons that patients gave to explain their ability to stay clean from cocaine use were motivations to change, positive influences of family, help from drug treatment, and strength from religion and spirituality.

Medvene LJ, Wescott JV, et al. (2003). Promoting signing of advance directives in faith communities. Journal of General Internal Medicine 18(11): 914-920.

An educational program was implemented in 17 faith communities in Wichita, Kansas, to increase the completing of advanced directives (living will and durable power of attorney for health care decisions). Program was implemented and evaluated over four cycles of implementation, and involved an educational workbook and support by parish nurses. Twenty-five parish nurses worked with 361 faith community members. White, African-American and Hispanic congregations were included. 248 of 361 participants completed the program. Of these 248 completers, the percentage of those who had an advanced directive increased from 33% to 56% during the course of the program. In all, 36% of program completers revised an existing directive or signed a new one.

Messina G, Lissoni P, et al. (2003). A psychoncological study of lymphocyte subpopulations in relation to pleasure-related neurobiochemistry and sexual and spiritual profile to Rorschach's test in early or advanced cancer patients. Journal of Biological Regulators & Homeostatic Agents. 17(4): 322-326.

Researchers examined the relationship between psychological responses to Rorschach's test and immunoneuroendocrine status of 40 patients with cancer, half with distant metastases. Immune and endocrine status evaluation included assessment of lymphocyte subsets, serum levels of IL-2 and IL-10, prolactin, growth hormone, cortisol, and dopaminergic sensitivity. Investigators found that patients with normal sexual and spiritual expression on Rorschach's test showed a significantly higher number of total lymphocytes, T lymphocytes, T helper lymphocytes and NK cells compared with those who had altered Rorschach expressions. No differences were found for T cytotoxic lymphocyte number. IL-2 levels were lower in those with abnormal sexual and spiritual Rorschach results than in those with normal results (but not statistically significant); IL-10 levels were higher in those with abnormal results (statistically significant). Investigators concluded that cancer is associated with a simultaneous suppression of sexual and spiritual profiles (78%), which is associated with both neuroendocrine and immune changes.

Schwartz C, Meisenhelder JB, et al. (2003). Altruistic social interest behaviors are associated with better mental health. Psychosomatic Medicine 65(5): 778-785.

Surveyed a random sample of 2016 members of the Presbyterian Church across the U.S. Assessed were giving and receiving help, prayer activities, religious coping, and health. Regression analysis revealed that helping others and receiving help were significant predictors of mental health, after controlling for other correlates. Giving help was a stronger predictor of better reported mental health than receiving help. Among factors that predicted giving help were involvement in more prayer activities, greater satisfaction with prayer life, positive religious coping, and being a church elder.

Silvestri GA, Knittig S, et al. (2003). Importance of faith on medical decisions regarding cancer care. Journal of Clinical Oncology 21: 1379-1382.

Investigators surveyed 100 patients with advanced lung cancer, their caregivers, and 257 medical oncologists attending an annual meeting of the American Society of Clinical Oncology asked participants to rank the importance of the following seven factors that might influence treatment decisions on whether or not to accept chemotherapy. These factors included the oncologist's recommendation, faith in God, ability of treatment to cure the disease, side effects of the chemotherapy, family doctor's recommendation, spouse's recommendation, and children's recommendation. Patients, family, and physicians each ranked these factors from 1 (most important) to 7 (least important). Although patients and family members both ranked "faith in God" as No. 2 (outranked only by the recommendation of the oncologist), oncologists ranked faith in God last (7th) ($p < 0.0001$).

Pearce MJ, Little TD, et al. (2003). Religiousness and depressive symptoms among adolescents. Journal of Clinical Child & Adolescent Psychology 32(2):267-276

Examined relationship between religiousness and depression in 744 adolescents (mean age 13 years). Frequency of religious attendance, self-rated importance of religion, and positive interpersonal religious experiences were associated with lower levels of depressive symptoms. Negative interpersonal religious experiences were associated with higher levels. Gender and race did not moderate these findings. Investigators concluded that interpersonal religious experiences had a particular relationship to depressive symptoms, stronger than other aspects of religiousness/spirituality.

Mullet EJ, Barros, et al. (2003). Religious involvement and the forgiving personality. Journal of Personality 71(1): 1-19.

Researchers examined relationship between religious involvement and forgiveness in three Western European groups (largely Catholic by religious affiliation). Predictors of willingness to forgive were age and religious involvement, which also interacted. The relationship between religiousness and willingness to forgive was strong among older adults in the sample, and weaker in younger adults. Religious attendance and taking of religious vows were aspects of religion that were particularly related to forgiveness, in contrast to acknowledged personal religious beliefs that were not.

Monroe MH, Bynum D, et al. (2003). Primary care physician preferences regarding spiritual behavior in medical practice. Archives of Internal Medicine 163(22): 2751-6.

Multicenter survey of 476 physicians at teaching hospitals on the East coast of U.S. Finding indicated that 85% of physicians said they should be aware of patients' spiritual beliefs, but the majority were unwilling to ask about spiritual concerns except with dying patients. Less than a third of physicians would be willing to pray with patients even if they were dying, although this increased to 77% if the patient asked. Family physicians were more likely to be willing to engage in religious/spiritual discussions with patients than internists. Bear in mind, however, that the majority of physicians (56%) in this study were residents or fellows.

Miller BE, Pittman B, et al. (2003). Gynecologic cancer patients' psychosocial needs and their views on the physician's role in meeting those needs. International Journal of Gynecological Cancer 13(2): 111-9.

Surveyed 95 patients with gynecologic cancers 6 months or more after completion of treatment. Nearly 60 percent of patients said they needed help dealing with emotional problems; nearly three-quarters wanted their physician to ask whether help was needed. In addition, 59% said that physicians should ask whether help is needed in discussing spiritual matters. Investigators concluded that most patients want their physicians to take an active role in addressing psychosocial needs in their care.

McIllmurray MB, Francis B, et al. (2003). Psychosocial needs in cancer patients related to religious belief. Palliative Medicine 17(1): 49-54.

Surveyed 354 cancer patients concerning religious belief and psychosocial factors related to adaptation to illness. More than 4 out of 5 patients (83%) indicated they had religious faith. Compared to those without religious faith, religious patients were depended less on health professionals, had less need for information, placed less importance on maintaining independence, and indicated less need for help to deal with feelings of guilt, their sexuality or practical matters. Overall, religious patients had fewer unmet needs (32% vs. 52% of those without religious faith).

Mattis JS, Fontenot DL, et al. (2003). Religiosity, racism, and dispositional optimism among African Americans. Personality & Individual Differences 34(6): 1025-1038.

Examined relationships between social support, racism, religiosity/spirituality, and optimism in a small convenience sample of 149 African Americans. While religious attendance, early religious involvement, church involvement, and subjective religiosity were unrelated to optimism, subjective spirituality and relationship with God were. Perception of having a supportive and loving relationship with God was the most significant religiosity variable associated with optimism.

Maltby J, Day L (2003). Religious orientation, religious coping and appraisals of stress: Assessing primary appraisal factors in the relationship between religiosity and psychological well-being. Personality & Individual Differences 34(7):1209-1224.

Examined relationship between religiousness and psychological well-being in two studies, one involving 466 adults and the other involving 360 adults, both conducted in the United Kingdom. Measures of religious orientation (Intrinsic, Extrinsic, Quest), religious coping, and appraisal of stress were administered. Based on these data, investigators model the relationship between religious coping and psychological well-being that includes individual appraisals of challenges.

King DE, Wells BJ (2003). End-of-life issues and spiritual histories. Southern Medical Journal 96(4): 391-393.

Investigators reviewed the charts of 92 elderly hospitalized patients dealing with end-of-life decision-making. They found that only 6.5% of the patients had spiritual histories documented in their charts by physicians. Only 29% had a spiritual history, mention of chaplain involvement, or mention of psychiatrist involvement.

Kendler KS, Liu XQ, et al. (2003). Dimensions of religiosity and their relationship to lifetime psychiatric and substance use disorders. American Journal of Psychiatry 160(3): 496-503.

Administered a 78-item amalgam of religious questions to 2,616 twins participating in the Virginia Twins study. Psychiatric disorders were determined and categorized as either "internalizing" (major depression, phobias, generalized anxiety disorder, panic disorder, and bulimia nervosa) or "externalizing" (nicotine dependence, alcohol dependence, drug abuse or dependence, and adult antisocial behavior). Results indicated that social religiosity and thankfulness was inversely related to both internalizing and externalizing disorders. Externalizing disorders were inversely related to general religiosity, involved God, forgiveness, and God as judge. Unvengefulness was the only religious dimension inversely related to internalizing disorders only.

Francis LJ, Robbins M, et al. (2003). Correlation between religion and happiness: A replication. Psychological Reports 92(1): 51-52.

Reported on the relationship between happiness and attitude toward Christianity in 89 adult students in Wales. Scores on the Oxford Happiness Inventory and Francis Scale of Attitude Toward Christianity scales were correlated. After controlling for gender and age, a positive correlation was found ($r=0.38$).

Naeem AG (2003). The role of culture and religion in the management of diabetes: a study of Kashmiri men in Leeds. Journal of the Royal Society of Health 123(2): 110-6.

Researchers examined relationship between control of diabetes and religious beliefs among 106 Muslim men living in Leeds, England. Results indicated that large percentage of the sample were not controlling or managing their diabetes, including many men who were overweight. The general attitude among these men was to simply enjoy life and "leave the rest to Allah." Other cultural factors (such large weight being culturally more acceptable and marriage traditions involving first cousins) also played a role in poor diabetic control.

Varela JE, Gomez-Marin O, et al. (2003). The risk of death for Jehovah's Witnesses after major trauma. Journal of Trauma-Injury Infection & Critical Care 54(5): 967-72.

This was a retrospective cohort study of 557 patients that examined the relationship between risk of death and being affiliated with the Jehovah Witness religious denomination. Chart reviews of patients experiencing major trauma were conducted between 1992 and 1999 at university hospital trauma center. 82 of the 557 patients were Jehovah's Witnesses, where as the remaining patients were Baptists (9%), Catholics (18%), or other religious groups (58%). No significant difference in mean injury score was found between members of these different religious groups. However, Jehovah's Witnesses had a 6% increased risk of dying compared to Baptists and 20% increased risk compared to Catholics; there was no difference between JW and other religious

groups. When investigators controlled for other factors (i.e., age, race, blood pressure, coma level, type of trauma), Jehovah's Witnesses did not have a significant increased risk of death compared with members of other religious groups.

Smith TB, McCullough ME, et al. (2003). Religiousness and depression: evidence for a main effect and the moderating influence of stressful life events. Psychological Bulletin 129(4): 614-36.

Researchers conducted a meta-analysis of the results from 147 studies (total n = 98,975) that examined the relationship between religious involvement and depression. The average effect size (correlation) was $r=-0.10$. This relationship could not be explained by gender, age, or ethnicity. Although apparently quite small, this effect is equivalent to the effect that gender has on depression in meta-analytic studies ($r=0.10$). Thus, such an effect is clinically important. The effect was stronger in studies involving stressed subjects (mild to moderate stress, $r=-0.14$; severe stress, $r=-0.15$). The strength of the association depended on the particular measure of religiousness used. Extrinsic religiosity (i.e., using religion as a means to some other important end) and negative religious coping (feeling punished or disserved by God, blaming God) were associated with greater depression.

Armbruster CA, Chibnall JT, et al. (2003). Pediatrician beliefs about spirituality and religion in medicine: associations with clinical practice. Pediatrics 111(3): e227-35.

Surveyed 121 pediatric faculty (54%) and residents (46%) working at a medical school affiliated children's hospital. Investigators found that pediatricians in this sample infrequently ask about spiritual or religious issues in their patients/families (3.4% regularly took a spiritual history), although 82% believed that religion/spirituality positively affect health and 85 to 91% disagreed that patient/family religious beliefs were not pertinent to patient care in pediatrics. Analyses showed that physicians who expected positive patient reactions to spiritual inquiry, believed more strongly that spirituality was relevant to pediatric care, and felt more comfortable with such discusses were more likely to take a spiritual history.

King DE, Pearson WS (2003). Religious attendance and continuity of care. International Journal of Psychiatry in Medicine 33:377-389

Examined the relationship between religious attendance and continuity of care using data from the NHANES-III (national database on health and nutrition). Analyzed data on 18,162 participants 17 years of age or older. Results indicated that those who attended religious services were more likely to have continuity with a provider than non-attenders (65% vs. 35%, $p < .001$), a finding the persisted after controlling for demographic, socioeconomic, and health status variables.

Eng PM, Rimm EB, Fitzmaurice G, Kawachi I (2002). Social ties and change in social ties in relation to subsequent total and cause-specific mortality and coronary heart disease incidence in men. American Journal of Epidemiology 155:700-9

Studied 28,369 healthy men ages 40-75 over 10 years, finding that those who were socially isolated (lowest quartile on social network index) had nearly 50% greater all-cause mortality than other men, after adjusting for age (1.49, CI 1.23-1.82). Socially isolated men also had a 1.82 increase risk of fatal CHD (CI 1.02-3.23), after controls. Lack of religious attendance also increased the risk of dying (overall mortality) by 15% (RR 1.15, CI 1.02-1.30), controlling for

multiple risk factors including age, time period, occupation, smoking history, daily alcohol intake, body mass index, physical activity, routine physical examination in the last 2 years, ability to climb several flights of stairs, ability to do heavy housework, employment status, history of hypertension, diabetes, high serum cholesterol, family history of myocardial infarction, energy-adjusted intakes of total fat, saturated fat, folate, and fiber, and multivitamin and vitamin E supplement use.

Greening L, Stoppelbein L (2002). Religiosity, attributional style, and social support as psychosocial buffers for African American and white adolescents' perceived risk for suicide. Suicide & Life-Threatening Behavior 32(4):404-417.

Surveyed 1098 African American and White adolescents. Asked to rate the likelihood that they would die by suicide and complete measures of depression, hopelessness, religiosity (religious orientation and orthodoxy), social support, and style of causal attribution. Religious orthodoxy was the strongest correlate of perceived risk of suicide, after controlling for the effects of other covariates. Depression was also correlated with suicide risk, but the effect was moderated by religious orthodoxy.

Wink P, Dillon M (2002). Spiritual development across the adult life course: Findings from a longitudinal study. Journal of Adult Development 9(1):79-94.

Followed 130 persons from Berkeley, California, for 40 years from their 30's to their 70's and assessed spiritual changes over time (1959-1999). 69% Protestant, 22% Catholic, 3% Jewish. Based on answers to religious/spiritual questions at each of 4 follow-up evaluations, raters (2 of them) scored subjects from 1 to 5 on spirituality. "Spirituality was defined in terms of the importance of a personal quest for a sense of connectedness with a sacred Other (God, nature, a higher power). A score of 5 was assigned to individuals for whom a personal quest for a sense of connectedness with a sacred other plays a *central* role in daily life; the respondent is a seeker who consistently engages in systematic practices (e.g., meditation, experiential or fellowship groups, Shamanic journeying, receiving spiritual counseling) aimed at deriving meaning from, and nurturing a sense of interrelatedness with, a sacred Other." Subjects were also coded on a 1 to 5 scale in terms of religiosity, where high scores indicated frequent church attendance and religion playing a central role in subject's life. Findings indicated that women ($p < 0.001$), and men ($p = 0.001$) increased in spirituality from late middle adulthood to older adulthood. Only men, however, increased in spirituality from early adulthood to middle adulthood ($p = 0.05$). Only women tended to increase in spirituality from middle adulthood to late middle adulthood ($p < 0.10$). Due to women's greater increase in spirituality overall, they tended to be more spiritual than men in late middle adulthood ($p < 0.10$) and by older adulthood, were a lot more spiritual ($p = 0.001$). Changes in religiosity over time were not reported in this article, since it was measured at only 2 time points (baseline and last follow-up).

Walsh K, King M, et al. (2002). Spiritual beliefs may affect outcome of bereavement: Prospective study. British Medical Journal 324(7353): 1551-1556.

Prospective study of 114 relatives and friends of patients with terminal illness. Spiritual beliefs measured at baseline and core bereavement questions and a measure of grief was administered 1, 9, and 14 months after the patients' death. The basic finding was that by 14 months after the death, those without spiritual belief had not resolved their grief; in contrast, those with strong spiritual beliefs resolved grief progressively over 14 months. The time by spiritual belief analyses approached significance using repeated measures analysis ($p = 0.058$). With regard to

the core bereavement items scale at 14 months, the difference between the group with no beliefs and the combined low and high belief groups was 7.30 points (95% CI 0.86-13.73). Adjusting for confounders reduced difference to 4.64 points (95% CI 1.04 to 10.32). When analysis was done including all 114 subjects who completed the baseline and first follow up assessments by imputing missing values thereafter by carrying the last observation forward, the interaction between time and strength of belief achieved statistical significance ($p=0.03$). After covariates were added to the model, strength of belief remained significant ($p=0.02$).

Sica C, Novara C, et al. (2002). Religiousness and obsessive-compulsive cognitions and symptoms in an Italian population. Behaviour Research & Therapy 40(7): 813-823.

Surveyed 54 subjects with high religiosity, 47 subjects with medium religiosity and 64 subjects with low religiosity. Members of convents and nunneries were categorized as "high religiosity" ($n=54$). Members of well-known Catholic associations who regularly attended church activities, were well grounded in religious practices, and spent most of their spare time participating in religious activities, were categorized as "medium religiosity" ($n=47$). The college student group consisted of those who indicated no interest in religious matters ("low religiosity") ($n=64$). Results indicated that members of convents and nunneries (high religiosity) scored significantly higher on anxiety and depressive symptoms than either the actively religious group (medium religiosity) or the low religiosity group. The medium religiosity group (religiously devout lay Catholics), however, tended to score lower on both measures of anxiety and depression compared to the low religiosity group. The high religiosity group scored significantly higher than low religiosity subjects on only 1 of 5 OCD subscales (impaired mental control) of the first measure. On the second OCD measure, high and medium religiosity subjects scored significantly higher than low religiosity subjects on 4 of 6 subscales (control of thoughts, importance of thoughts, responsibility, and perfectionism). On the third OCD measure, however, it was low religiosity subjects who scored significantly higher than high religiosity subjects on importance of thoughts (the opposite that found on the second OCD measure), and there was no difference between groups on the other two subscales. It is not surprising that religious subjects score higher than non-religious subjects on subscales measuring a sense of responsibility or degree of perfectionism, since these are values endorsed by many religious groups (being responsible and paying attention to detail are considered positive traits). This illustrates a problem with some OCD scales. They often include questions that assess traditional religious values. How such bias may have contributed to other findings above is not clear.

Patel SS, Shah VS, et al. (2002). Psychosocial variables, quality of life, and religious beliefs in ESRD patients treated with hemodialysis." American Journal of Kidney Diseases 40(5): 013-22.

Researchers examined relationships between religious beliefs, psychosocial and medical factors in 53 hemodialysis patients. Religious beliefs and practices were assessed by importance of faith (spirituality) and attendance at religious services (religious involvement). Results indicated that spirituality and religiosity were associated with greater social support, greater QOL, less negative perceptions of illness, and less perceptions of depression.

Oman D, Kurata JH, et al. (2002). Religious attendance and cause of death over 31 years. International Journal of Psychiatry in Medicine 32(1): 69-89.

Investigators examined relationship between religious attendance and mortality from 1965 to 1996 in 6545 persons from Alameda County, California (Alameda County Study). Adjusting for age and sex, less than weekly attenders had significantly higher rates of mortality from circulatory diseases, cancer, digestive disorders, and respiratory illness than weekly or more frequent attenders. Adjusting for prior health status, differences in cancer mortality disappeared. Including health behaviors and prior health status in models reduced but did not eliminate associations with other mortality outcomes. In fully adjusted models, infrequent attenders had higher rates of death from circulatory (RH=1.21, CI 1.02-1.45), digestive (RH=1.99, CI 0.98-4.03, and respiratory disorders (RH=1.66, CI 0.92-3.02).

Mitchell J, Lannin DR, et al. (2002). Religious beliefs and breast cancer screening. Journal of Women's Health 11(10): 907-15.

Surveyed a representative sample of 682 eastern North Carolina women aged 40 and over. Participants were interviewed in their homes about religious and other beliefs about breast cancer screening, and what they would do if they discovered a lump in their breast. Results indicated that 44% would trust more in God to cure their cancer than medical treatment, and 13% indicated that only a religious miracle could cure cancer, not medical treatment. The impact of religious beliefs on detection of illness and screening make it imperative that health professionals ask about such beliefs.

Miller L, Gur M (2002). Religiosity, depression and physical maturation in adolescent girls. Journal of the American Academy of Child & Adolescent Psychiatry 41(2): 206-214.

Researchers examined the relationship between physical maturation, religiosity and depression in 3,356 adolescent girls who participated in the In-Home Version of the North Carolina Adolescent Health Study. They assessed physical maturation based on self-reported secondary sexual characteristics and age of menstruation onset. Religiosity, in turn, was assessed using measures of personal devotion, personal conservatism (based on religious beliefs), institutional conservatism (based on denominational affiliation), and religious attendance. Controlling for age and ethnicity, researchers found that personal devotion and religious attendance were associated with a 19%-26% decrease in the prevalence of depression among immature girls and a 32%-43% decrease in girls who were highly mature. Personal and institutional conservatism, however, were associated with a 17% to 24% decrease in depression among immature girls but no decrease was found in highly mature girls. Investigators concluded that the protective effects of religiosity among adolescent girls depend on both physical maturation level and type of religiosity.

McCullough ME, Emmons RA, et al. (2002). The grateful disposition: A conceptual and empirical topography. Journal of Personality & Social Psychology 82(1): 112-127.

Researchers used data from four different studies to determine psychosocial correlates of gratitude. The Gratitude Questionnaire was used to assess gratitude in all studies. Gratitude in the first study was associated with positive affect, psychological well-being, prosocial behaviors, and religiousness/spirituality. In the second study, investigators replicated these findings in non-students. The third study replicated results of the first two, and demonstrated an inverse relationship between gratitude and envy and materialistic attitudes. Finally, the fourth study

further documented these associations, but also controlled for extraversion, neuroticism, and agreeableness, with the findings persisting.

Lo B, Ruston D, et al. (2002). Discussing religious and spiritual issues at the end of life: a practical guide for physicians. JAMA 287(6): 749-54. (commentary; no research)

Krause N, Liang J, et al. (2002). Religion, death of a loved one, and hypertension among older adults in Japan. Journals of Gerontology Series B-Psychological Sciences & Social Sciences 57B(2): S96-S107.

Examined the ability of private religious practices, religious coping, and belief in the afterlife to reduce the negative effects of bereavement on hypertension. Researchers surveyed a random national sample of 1723 older adults (>60) in Japan at in 1996 and then again in 1999. The survey included religious items, questions about stressors (including bereavement), and about health conditions (including hypertension). Results showed that belief in a good afterlife at the baseline interview buffered against the development of self-reported hypertension in the follow-up interview.

Koenig HG (2002). An 83-year-old woman with chronic illness and strong religious beliefs. Journal of the American Medical Association 288(4): 487-493 (case report and discussion)

Francis LJ, Kaldor P (2002). The relationship between psychological well-being and Christian faith and practice in an Australian population sample. Journal for the Scientific Study of Religion 41(1):179-184.

Investigators surveyed a probability sample of 989 adults in an Australian community survey to examine the relationship between psychological well-being and religious belief/practice. Well-being was measured using the Bradburn Affect Balance Scale together. Religious belief/practice was measured by belief in God, personal prayer, and church attendance. Results of regression analyses showed a positive relationship between all three religious variables and well-being, independent of age and gender.

Ironson G, Solomon GF, Balbin EG, et al (2002). Spirituality and religiousness are associated with long survival, health behaviors, less distress, and lower cortisol in people living with HIV/AIDS: the IWORSHIP scale, its validity and reliability. Annals of Behavioral Medicine 24:34-48

Researchers examined the relationship between spirituality, religiousness, and long-term survival in patients with AIDS. S/R was measured using the Ironson–Woods Spirituality/Religiousness Index, which has four subscales (Sense of Peace, Faith in God, Religious Behavior, and Compassionate View of Others). In this study, long-term survivors with AIDS were compared to a control group of 200 HIV-positive patients. Results indicated that long-term survival was significantly related to all four subscale scores, in addition to frequency of prayer/meditation/service attendance in past month (all $p \leq 0.05$). S/R was also strongly and significantly related to less psychological distress, more hope, greater social support, better health behaviors, altruistic behaviors, and to lower urinary cortisol levels. Social support did not explain the relationship between religious behaviors and health outcomes. Analyses also revealed that the effect of S/R on long-term survival was mediated by cortisol levels and altruistic activities.

King DE, Mainous AG, 3rd, Pearson WS (2002). C-reactive protein, diabetes, and attendance at religious services. Diabetes Care 25(7):1172-1176

This was a cross-sectional examination of a nationally representative sample of 556 people with diabetes (part of the NHANES-III). The primary outcome measure was the presence of elevated CRP. Religious service non-attenders were more likely than attenders to have an elevated CRP (OR 2.17, 95% CI 1.15-4.09). After adjusting for demographic variables, health status, smoking, social support, mobility, and BMI, the association between religious attendance and CRP remained significant. In those without diabetes, there was no association. CRP (C-reactive protein) is known as a predictor of coronary heart disease.

Pearce MJ, Chen J, Silverman GK, Kasl SV, Rosenheck R, Prigerson HG (2002). Religious coping, health, and health service use among bereaved adults. International Journal of Psychiatry in Medicine 32:179-200

Examined 265 recently bereaved adults (6 months after the loss and 4 months after that). Religious coping associated with greater disability ($p < 0.01$), but fewer doctor visits during the 60 days before the interview ($p = 0.03$) and same health outcomes (lack of decline in health during 4 months of follow-up) compared with non-religious copers.

Benda BB (2002). Factors associated with rehospitalization among veterans in a substance abuse treatment program. Psychiatric Services 53:1176-1178

Examined time to hospital readmission for 600 veterans with substance abuse problems over a 2-year period. During that time, 432 (72%) were readmitted to the hospital. Multiple regression analyses with 16 demographic, social, and psychiatric predictors of re-hospitalization, found that religiosity, measured using a 5-item scale, was positively related to time spent in community before readmission to hospital – i.e., reduced the relative hazard of readmission by 34% (RH=0.66, 95% CI 0.39-0.92, $p < 0.01$).

Baetz M, Larson DB, et al. (2002). Canadian psychiatric inpatient religious commitment: an association with mental health. Canadian Journal of Psychiatry 47(2): 159-66.

Examined the relationship between religious involvement and clinical outcomes in Canadian psychiatric inpatients. Studied were 88 consecutive inpatients, split evenly by gender. Results indicated that 59% of patients believed in a God who rewards and punishes, over a quarter (27%) frequently attended religious services, and more than one-third (35%) prayed once a day or more often. Frequency of attendance at religious services was inversely related to depressive symptoms, length of hospital stay on the psychiatric unit, rates of current and lifetime alcohol abuse, and positively related to life satisfaction ($p < 0.05$). Private religiousness (with the exception of frequency of prayer) was also inversely related to depressive symptoms and alcohol use ($p < 0.05$). To my knowledge (HGK), this is the only study of religion in psychiatric inpatients in Canada.

Strawbridge WJ, Shema SJ, et al. (2001). Religious attendance increases survival by improving and maintaining good health behaviors, mental health, and social relationships. Annals of Behavioral Medicine 23(1): 68-74.

Researchers examine how (the mechanism) religious involvement increases survival. They use data from the Alameda County Study that followed 2676 community-dwelling adults from 1965

through 1994. Besides religious attendance, they also assessed smoking status, level of physical activity, amount of alcohol use, frequency of medical checkups, depressive symptoms, frequency of social interactions, and marital status. Changes in these variables were examined over time. Results showed that participants who attended religious services weekly or more at the baseline interview (1965) were significantly more likely to increase the frequency of or maintain positive health behaviors, compared to less frequent attenders. In addition, weekly attendance predicted less depression, an increase in social relationships, and greater marital stability. Results were stronger in women than in men, and are consistent with the gender differences in the effect of religious attendance on survival. This is a very important study that shows the temporal order of changes in social support, health behaviors, and mental health in relationship to religious attendance.

Steffen PR, Hinderliter AL (2001). Religious coping, ethnicity, and ambulatory blood pressure. Psychosomatic Medicine 63(4): 523-530.

In this prospective study, researchers examined the relationship between religious coping, race, and blood pressure in 78 African Americans and 77 white Americans (25-45 years old). Primary outcome was 24-hour ambulatory blood pressure and clinic taken blood pressure. Correlates measured included coping style, social support, depression, level of stress, and health behaviors. Regression analyses demonstrated an interaction between religious coping and ethnicity on average ambulatory blood pressure and clinic blood pressure. In African Americans, but not Whites, religious coping was inversely related to ambulatory blood pressure, independent of other demographics. Satisfaction with social support did not mediate this relationship.

Iler AL, Obenshain D, Camac M (2001). The impact of daily visits from chaplains on patients with chronic obstructive pulmonary disease (COPD): A pilot study. Chaplaincy Today 17:5-11.

Hospitalized patients with COPD were alternately assigned to either a chaplain-visited intervention group or a non-chaplain visited control group. Both groups were administered the Beck Anxiety Inventory on admission and discharge, and were asked questions on discharge about overall quality of care received (rated 1 to 5), whether patient would recommend hospital to others (rated 1 to 5), and length of hospital stay was measured and compared. The chaplain intervention consisted of 4.2 visits (on average), which lasted approximately 20 min in duration. Intervention included prayer (100%), and two-thirds involved venting over painful emotions. All visits were made by a single chaplain. After controlling for baseline anxiety, chaplain visited patients had significantly less anxiety on discharge ($p=0.05$) compared to controls. Length of stay was also shorter for visited patients (5.7 days vs. 9.0 days, $p=0.002$), such that visited patients stayed 3.3 fewer days on average (37% reduction in average length of stay). Patients who did not agree to participate in the study had even longer lengths of stay than control patients (12.6 days). Finally, satisfaction with quality of care was significantly higher in the chaplain-visited group ($p=0.01$), and they also tended to recommend the hospital to others ($p=0.056$), compared to control patients.

Cooper LA, Brown C, et al. (2001). How important is intrinsic spirituality in depression care? A comparison of White and African-American primary care patients. Journal of General Internal Medicine 16(9): 634-638.

Researchers in the Department of Medicine at Johns Hopkins compared the attitudes of 76 African-American and white primary care patients on how important they viewed different aspects of care for depression. Subjects rated the importance of 126 aspects of care. From the 30 aspects rated highest by patients, nine domains were created: 1) health professionals' interpersonal skills, 2) primary care provider recognition of depression, 3) treatment effectiveness, 4) treatment problems, 5) patient understanding about treatment, 6) intrinsic spirituality, 7) financial access, 8) life experiences, and 9) social support. The biggest difference between African-American and white patients' ratings was the likelihood of rating spirituality as extremely important for depression care, with African-Americans rating it extremely important three times more likely than whites.

Sephton SE, Koopman C, Schaal M, Thoreson C, Spiegel D (2001). Spiritual expression and immune status in women with metastatic breast cancer: an exploratory study. Breast Journal 7:345-353

Investigators at Stanford University examined the relationship between religious involvement and immune and endocrine function in women with metastatic breast cancer. Spiritual expression was measured by the question, "How important is religious or spiritual expression in your life?" (responses 1-4). Attendance at religious services was assessed with the question, "How frequently do you attend religious services or meetings?" (responses 1-4). Immune parameters measured were: total lymphocyte and white blood cell counts, percents and absolute numbers of T cells (CD3), T helper cells (CD4/CD3), cytotoxic T cells (CD8/CD3), and NK cells (CD56). Social network size was also assessed. Demographic characteristics, cancer status and medical treatment variables were also controlled for. Results showed that spiritual expression was positively related to WBC count ($r=0.16$, $p=0.05$), total lymphocyte count ($r=0.20$, $p<0.05$), total T cells ($r=0.24$, $p=0.01$), Helper T cells ($r=0.23$, $p=0.01$), cytotoxic T cells ($r=0.18$, $p<0.05$), and there was a trend for natural killer cells ($r=0.14$, $p=0.07$). Social network size, disease, and medical treatment variables, could not explain these relationships (partial correlations ranging from 0.16 to 0.24). Similar positive trends were found for attendance at religious services, although they failed to reach statistical significance, except for antigen-specific cell-mediated immunity, which was inversely related to attendance (-0.20 , $p=0.03$).

King DE, Mainous AG, Steyer TE, Pearson W. Relationship between attendance at religious services and cardiovascular inflammatory markers. International Journal of Psychiatry in Medicine 2001; 31:415-426

Examined a nationally representative sample of 10,059 adults aged 40 and over (NHANES-III). Examined relationship between religious attendance and the inflammatory markers C-reactive protein, fibrinogen, and white blood cell count. Participants who did not attend religious services were more likely to have elevated white blood cell counts ($p = 0.001$), highly elevated C-reactive protein ($p = 0.02$), and elevated fibrinogen ($p = 0.05$), even after controlling for demographic variables, health status, and BMI. However, when smoking was added to the model, this fully explained the effect of religious attendance on these inflammatory markers.

Sears SF, Wallace RL (2001). In J. R. Rodrigue (Ed.), Biopsychosocial Perspectives on Transplantation (pp. 173-183). Dordrecht, Netherlands: Kluwer Academic/Plenum Publishers.

Author noted evidence of a positive relationship between spirituality, coping, and survival among transplantation patients. No details available; suggest obtain original publication.

Strawbridge WJ, Cohen RD, et al. (2000). Comparative strength of association between religious attendance and survival. International Journal of Psychiatry in Medicine 30(4): 299-308.

Investigators compared the effects (stratified by gender) of religious attendance, smoking, physical activity, alcohol use, and non-religious social involvement on mortality in 5,894 persons aged 21-75 at baseline in the Alameda County Study during a 29-year follow-up. Proportional hazards models with time-dependent covariates were used to adjust for subsequent changes in religious attendance, health behaviors and social factors. Among women, the effect of weekly religious attendance on mortality of the same magnitude as for smoking, physical activity, alcohol use, and non-religious social activity. Among men, however, the effect of weekly religious attendance was weaker than for the other health behaviors and social activity.

Matthews DA, Marlowe SM, et al. (2000). Effects of intercessory prayer on patients with rheumatoid arthritis. Southern Medical Journal 93(12): 1177-86.

Clinical trial of in-person and distance intercessory prayer in 40 patients with class II or III rheumatoid arthritis. Intervention was conducted over three days and consisted of 6 hours of education and 6 hours of hands-on prayer. 19 of the 40 patients had additional distant intercessory prayer from people whom they did not know. Outcomes examined were measures of arthritis severity assessed at baseline and 3-month intervals for 1 year. Researchers found that patients receiving hands-on direct contact prayer showed significantly greater improvement during follow-up. Double-blinded supplemental, distant intercessory prayer had no effect.

Ellison CG, Hummer RA, et al. (2000). Religious involvement and mortality risk among African American adults. Research on Aging 22(6): 630-667.

Researchers explored the effects of religious involvement on mortality in a national random sample of 3,002 African Americans. Results indicated that AA who never attended religious services were twice as likely to die during a 9-yr follow-up than those who attended more than once per week. Analyses were adjusted for numerous confounding and mediating factors. The investigators concluded that, "The strong effect of nonattendance on mortality risk is robust, pervasive, and remarkably strong across all subgroups of the population, whereas a moderate level of attendance is associated with higher mortality risk among young adults, men, and Southerners, but not among older adults, women, and non-Southerners" (abstract).

Murphy PE, Ciarrocchi JW, Piedmont RL, Cheston S, & Peyrot M (2000). The relation of religious belief and practices, depression, and hopelessness in persons with clinical depression. Journal of Counseling and Clinical Psychology 68(6): 1102-1106.

This study examined the effects of religious practices and religious beliefs on hopelessness and depression for patients diagnosed with major depression or bipolar depression. Sample ($N = 271$) was recruited from recently admitted inpatients and outpatients at a Midwestern tertiary care medical center. Hierarchical regression analysis showed that religious beliefs predicted to less

depression and hopelessness, over and above the variance accounted for by demographics. Using path analysis, hopelessness was shown to mediate the effect of religious beliefs on depression, so that belief was indirectly related to less depression. There was also a small positive association between religious belief and depression. Researchers recommended further study to understand the complex ways religious beliefs both positively and negatively impact persons with depression.

Castillo-Richmond A. Schneider RH. Alexander CN. Cook R. Myers H. Nidich S. Haney C. Rainforth M. Salerno J (2000). Effects of stress reduction on carotid atherosclerosis in hypertensive African Americans. Stroke 31(3):568-573

Investigators examined the effects of transcendental meditation (TM) on carotid intima-media thickness (IMT) (a predictor of coronary heart disease and stroke) in a sample of 60 African-Americans with hypertension (stage I or II). Subjects were randomly assigned to either TM or a cardiovascular risk factor reduction health education group, and the trial was conducted over 6-9 months. Age and pretest IMT were controlled for in the analyses. Results indicated that the TM group experienced a significant decrease of IMT (-0.098 mm, 95% CI -0.198 to 0.003 mm) compared to an increase in IMT (0.054 mm, 95% CI= -0.05 to 0.158 mm) in controls ($p < 0.05$).

Regnerus MD (2000). Shaping schooling success: Religious socialization and educational outcomes in metropolitan public schools. Journal for the Scientific Study of Religion 39(3):363-370

Math and reading scores correlated positively with more frequent religious practice.

Baker DC (2000). The investigation of pastoral care interventions as a treatment for depression among continuing care retirement community residents. Journal of Religious Gerontology 12:63-85

Clinical trial involving 120 older persons living at a continuing care retirement community. Three groups were involved: 40 subjects with depression, 40 at risk for depression, and 40 normal healthy individuals. Within each group, 20 were assigned to either treatment or control groups. Treatment and control groups were matched by age, gender and level of care. Treatment consisted of 30-minute weekly sessions with a chaplain over six months, whereas control subjects received only minimal pastoral care. Results indicated that treated subjects experienced a significant reduction in depression (pre-post), and depression scores increased 3 months after cessation of the intervention. The chaplain visit included prayer, counseling for issues raised, grief work, active listening, life review, and other therapeutic activities.

Older Studies Not Included in Past Research Section on Website

Kabat-Zinn J, Wheeler E. Light T. Skillings A, Scharf M, Cropley TG, Hosmer D, Bernhard JD (1998). Influence of a mindfulness meditation-based stress reduction intervention on rates of skin clearing in patients with moderate to severe psoriasis undergoing phototherapy (UVB) and photochemotherapy (PUVA). Psychosomatic Medicine 60(5): 625-632.

Investigators examined whether Mindfulness Meditation (a Buddhist religious practice) could increase the rate of clearing of psoriasis in 37 patients receiving ultraviolet light therapy. Subjects were randomized to either MM intervention (with taped instructions on how to perform MM) or a control group (no instructions). Psoriasis plaques were measured by physicians

blinded to treatment group. Findings indicated that MM subjects cleared their psoriasis plaques significantly more rapidly than control subjects.

Khouzam HR, Smith CE, Bissett B (1994). Bible Therapy: A treatment of agitation in elderly patients with Alzheimer's Disease. Clinical Gerontologist 15(2):71-74

Researchers present a case series of geriatric patients with Alzheimer's disease reporting on the benefits of Bible therapy for treatment of agitation.

Dull VT, Skokan LA (1995). A cognitive model of religion's influence on health. Journal of Social Issues 51(2):49-64

Describes how religion may help persons undergoing traumatic life events to have meaning, which would otherwise be perceived as random and uncontrollable.

Key BF, Leppien F, Smith JB (1994). Journey out of night: Spiritual renewal for combat veterans. VA Practitioner 11(1):60-62

Discusses how religious belief may help veterans to become conscious of inaccessible memories, feelings and thoughts, which may positively affect the emotional numbness seen in PTSD.

Braam AW, Beekman AT, Van den Eeden DJ, Knipscheer KP, van Tilburg W (1999). Religious climate and geographical distribution of depressive symptoms in older Dutch citizens. Journal of Affective Disorders 54(1-2):149-159

Compared depressive symptoms among different groups in Holland, finding that reformed Calvinists had the lowest depressive symptoms, liberal Protestants had the highest, and Catholics and Dutch Reformed had medium level of depressive symptoms. Calvinists believe in predestination (reformed theology), and include Presbyterians, with leaders such as John Knox, John Bunyan, and Jonathan Edwards (in contrast to "free will" theology advocated by Charles Finney and others).