

# CROSSROADS...

Exploring research on religion, spirituality and health

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This newsletter provides updates on research, news and events related to spirituality and health, including educational resources and funding opportunities. **Please forward to colleagues or students who might benefit.** Our goal is to create a community of researchers, clinicians, clergy, and laypersons interested in spirituality and health and keep them informed and updated. An EVENTS CALENDAR concludes the newsletter and describes spirituality and health related presentations happening at Duke and around the world. This is your newsletter and we depend on you to let us know about research, news, and events in this area.

All e-newsletters are archived on our website. To view previous editions (July 2007 through March 2020) go to: <http://www.spiritualityandhealth.duke.edu/index.php/publications/crossroads>

## LATEST RESEARCH

### Religious Involvement and Mortality among Older Adults in Taiwan

Zachary Zimmer and colleagues in the Department of Family Studies in Gerontology at Mount Saint Vincent University in Halifax, Canada, and others in Taiwan, analyzed data from an 18 year-prospective study of 3,849 adults age 60 or over in Taiwan. The purpose was to examine the impact of religious activity on mortality in a population that is 60% Taoist, 20% Buddhist, and less than 5% Christian. Mortality information was obtained from the Taiwan Death Registry. By the end of the follow-up period, 64.3% of the sample had died. Religious activity was assessed by a single question: "How often do you worship gods, perform rites, pray and read religious texts?" Response options were categorized as (1) never or seldom, (2) less than once a week, (3) one or two times a week, and (4) more frequently. At baseline, 61.2% indicated never or seldom religiously active, 10.1% indicated less than once a week, 6.6% indicated once or twice a week, and 22.2% indicated more frequently. Thus, 39% indicated that they were religiously active. Also assessed were demographics (gender, mainlanders status, age, marital status, rural residence), socioeconomic status (education, economic assessment), physical health (product conditions, functional limitations, self-assessed health), health behaviors (smoking, alcohol consumption, engaging in sport/exercise), social support (emotional support, living alone, social activity, leisure activity), and psychological health (life satisfaction, depression). A series of eight stepwise Gompertz hazard models examined the effects of religious activity on mortality. **Results:** Women and mainlanders were significantly more likely to survive during follow-up. In addition, individuals who were religiously active were significantly more likely to survive during the 18-year follow-up period, controlling for demographic, socioeconomic, physical health, health behaviors, social support, and psychological health. Although controlling for health behaviors and psychological health reduced the effect of religious activity on survival (i.e., they were likely mediators of the effect), the association remained significant after all controls ( $b=-0.10$ ,  $p<0.01$ ). Researchers concluded: "Transformed into life table

functions, a 60-year-old religiously active Taiwanese female lives more than one year longer than her non-religious counterpart, *ceteris paribus* [all other things being equal]. Mainland Chinese migrants are examined carefully because of unique religious and health characteristics. They live longer, but the religiosity gap is similar."

*Citation:* Zimmer, Z., Chiu, C. T., Saito, Y., Lin, Y. H., Ofstedal, M. B., & Jagger, C. (2020). Does religious activity distinguish the mortality experiences of older Taiwanese? An analysis using eighteen years of follow-up data. *Journal of Religion and Health*, 59(1), 289-308.

*Comment:* In a county where 61% of of the older population never or seldom engages in religious activity, those who are religiously active (<5% Christian) live significantly longer, despite their age, gender, education, financial situation, physical health status, health habits, social support, or psychological health. Pretty impressive findings.

### Intrinsic Religiosity Moderates the Relationship between Depression and Cognitive Function among Older Adults in Malaysia

Investigators at the Malaysian Research Institute on Aging, University of Putra Malaysia in Serdang, analyzed data from a national random sample of 2,322 community-dwelling adults age 60 or older living in Malaysia. The purpose was to examine how intrinsic religiosity affected the relationship between depression and cognitive function. Intrinsic religiosity was assessed by the 6-item intrinsic religiosity subscale of the Revised Intrinsic/Extrinsic Religious Orientation Scale (Gorsuch & McPherson, 1989). Depression was assessed by the 15-item geriatric Depression scale and cognitive function by the Montréal Cognitive Assessment (MOCA). Controlled for in analyses were age, gender, marital status, years of education, and household income. Hierarchical multiple regression analysis was used to identify independent predictors of cognitive function. **Results:** Depressive symptoms were inversely related to cognitive function ( $b=-0.099$ ,  $p<0.001$ ). Intrinsic religiosity, however, was positively related to cognitive function ( $b=0.037$ ,  $p<0.05$ ). The interaction between depression and intrinsic religiosity was also significant ( $b=0.092$ ,  $p<0.05$ ). In other words, religiosity significantly moderated the relationship between depression and worse cognitive functioning. Researchers concluded: "Intrinsic religiosity might reduce the negative effect of depression on cognitive function. Professionals who are working with depressed older adults should seek ways to improve their intrinsic religiosity as one of the strategies to prevent cognitive impairment."

*Citation:* Foong, H. F., Hamid, T. A., Ibrahim, R., & Haron, S. A. (2018). Moderating effect of intrinsic religiosity on the relationship between depression and cognitive function among community-dwelling older adults. *Aging & Mental Health*, 22(4), 483-488.

*Comment:* One more study showing that religiosity is associated with better cognitive function in later life and specifically moderates the adverse effects that depression has on cognitive functioning, but this time in a country that is 61% Muslim, 20% Buddhist, and 9% Christian (also see Reyes-Ortiz et al. *Journal of Gerontology* 2008; 63:480-486, for similar results in Hispanic-Americans)

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## Does Depression Mediate the Relationship between Religiosity and Cognitive Function?

Examining religiosity's effect on cognitive function somewhat differently, researchers in the School of Public Health at Ningxia Medical University in Yinchuan, China, explored the mediating effects that depression has on the relationship between religiosity and cognitive function. This study was done in Muslims living in northwestern China. More than one-third of the population of the northwestern China province of Ningxia Hui Autonomous Region are Muslim. In this study, a random sample of 1,347 Muslim adults age 55 or older in this province were identified and a questionnaire was administered. Of particular interest was cognitive function, which was assessed by the Mini Mental State Exam (MMSE), religiosity (measured by the 5-item DUREL), and depression by the Geriatric Depression Scale (GDS). Mild cognitive impairment (MCI) was identified in those with a MMSE  $\leq 17$  for those with no education; MMSE  $\leq 20$  for those with only a primary school education; and MMSE  $\leq 24$  for those with a high school education or above. Logistic regression analyses and structural equation modeling were used to examine relationships between variables.

**Results** indicated a significant relationship between religiosity and likelihood of having MCI (OR=0.63, 95% CI=0.48-0.83,  $p=0.001$ ) and a significant relationship between depression and MCI (OR=1.46, 95% CI=1.10-1.95,  $p=0.02$ ), in opposite directions, effects that remained significant after controlling for age, education and gender. No interaction was found between religiosity and depressive symptoms, indicating that there was no moderating effect of religiosity on the depression-MCI relationship. However, structural equation modeling (which used continuous variables for religiosity, depressive symptoms, and cognitive functioning) confirmed that religiosity was positively related to MMSE (better cognitive function); religiosity was inversely related to depressive symptoms; and depressive symptoms were inversely related to MMSE. Mediation analysis demonstrated that depression explained 33% of the variance in the relationship between religiosity and cognitive function, suggesting that religiosity may have improved cognitive function by reducing depressive symptoms in these older Muslims.

*Citation:* Sun, Y., Ma, W., Wu, Y., Koenig, H. G., & Wang, Z. (2018). The mediating effect of depression in religiosity and cognitive function among Chinese Muslim elderly. *Neuropsychiatry* 8(3), 1046-1053

*Comment:* Although this time there was no evidence that religiosity moderated the relationship between depression and cognitive function, religiosity was positively related to cognitive function and part of this effect was due to (mediated by) lower depressive symptoms. As in the study above where 61% of participants were Muslim (Foong et al), all participants in this study were Muslim.

## Religiosity and Cognitive Functions in Alzheimer's Disease

Investigators in the Department of Psychiatry at Hallym University College of Medicine, Chuncheon, South Korea, examined the relationship between various aspects of religiosity and cognitive function in 325 patients with Alzheimer's Disease (AD) seen at a psychiatry outpatient clinic. Participants were over age 60 years and met diagnostic criteria for AD according to DSM-IV. Comprehensive workup, including geriatric examinations and neurocognitive tests, were done to rule out participants with major core morbidities. Those scoring more than five on the Global Deterioration Scale were also excluded. Cognitive functions were assessed using the Consortium to Establish a Registry for Alzheimer's Disease (CERAD) assessment packet, which assesses memory, language, and constructional ability. Religiosity was assessed by the 5-item DUREL (Duke University Religion Index, which measures organizational religious activity [ORA], nonorganizational religious activity [NORA], and intrinsic religiosity

[IR]). Regression analyses were controlled for age, gender, and years of education, as were structural equation models. **Results:** Of the 325 participants 179 (55%) indicated a religious affiliation and 45% did not. Average age of participants was 79.2 years, 72% were women, and average education was 3.6 years. ORA was positively associated with memory ( $r=0.18$ ,  $p=0.001$ ), language ( $r=0.15$ ,  $p=0.008$ ), and constructional ability ( $r=0.24$ ,  $p<0.001$ ) (all three indicators of cognitive function). NORA was significantly associated with memory ( $r=0.13$ ,  $p=0.02$ ) and constructional ability ( $r=0.23$ ,  $p<0.001$ ), but not language. IR was significantly associated with memory ( $r=0.17$ ,  $p=0.002$ ) and constructional ability ( $r=0.19$ ,  $p=0.002$ ), but again not language. The final structural equation model (which explained 58% of the overall variance in cognitive function) indicated that religiosity (ORA, NORA, IR) was significantly and positively associated with overall cognitive function ( $b=0.30$ ,  $p<0.001$ ). Researchers concluded: "The findings suggest that religiosity positively affects cognitive functions and that each religious variable [ORA, NORA, IR] is related differently to the subdomains of cognitive function in patients with AD." *Citation:* Jung, J., Lee, C. H., Shin, K., Roh, D., Lee, S. K., Moon, Y. S., ... & Kim, D. H. (2019). Specific association between religiosity and cognitive functions in Alzheimer's Disease. *American Journal of Alzheimer's Disease & Other Dementias*, 34(4), 254-260.

*Comment:* Although the analyses are cross-sectional, these results provide further evidence that religiosity may affect cognitive functioning in later life, even among those with Alzheimer's disease. Alternatively, reverse causality may also be operative here, i.e., Alzheimer's disease may also adversely affect the ability of persons to engage in religious activities and complex religious cognitive functions.

## Religiosity and Violent Crime

Researchers at Durham University in the UK and other academic institutions around the world joined together to analyze data from (1) a longitudinal study from 1945 to 2010 involving 176 countries and 1046 observations and (2) a second study involving up to 195 countries. The purpose was to determine if declines in religiosity experienced in these countries over time led to an increase in violent crime. The first study collected data on religiosity and violent crime at nine points in time. Country level religiosity was determined by percentage of the population that practiced religion (i.e., had a religious affiliation), and this information was collected every five years. IQ was determined at the country level based on several different data sets. Homicide and GDP information during this period was obtained from other data sets; figures were averaged over five-year intervals to align with religion measurements. Fixed-effects, within-country linear regressions were used to examine the data. All models controlled for time. **Results** for this first study indicated that a decline in religiosity over time was associated with increasing homicide rates, independent of GDP. Interactions with IQ were also examined, with results suggesting that the association between religiosity and homicide rates varied over time depending on country's average IQ. In other words, increases in religiosity over time were associated with simultaneous decreases in homicide rate only in countries with lower than average IQ. Among countries with above average IQs, the association between religiosity and homicide was near zero or positive.

The second study also examined the interaction between country level IQ and religiosity on homicide rates. In that study involving up to 195 countries, "multiverse analysis" was used to analyze the data. As in the first study, religiosity was operationalized as percent of the population affiliated with a religion. IQ was assessed as it was in the first study above. Homicide rates per capita were drawn from the United Nations Office on Drugs and Crime, using the most recent available information. Controls included country GDP, average educational

attainment, and region where country was located. **Results** indicated that the findings confirmed that lower rates of religiosity were associated with higher homicide rates in countries with lower IQ but not in countries with higher IQ (the same findings as the first study). Although the researchers were convinced that their results applied to Christian-majority countries, they were less certain as to whether it also applied to Muslim-majority countries. They concluded: "Our results indicated that higher religiosity was largely unrelated to homicide rates in societies with relatively high average intelligence, whereas religiosity was a significant predictor of reduced homicide rates in societies with relatively low average intelligence."

*Citation:* Clark, C. J., Winegard, B. M., Beardslee, J., Baumeister, R. F., & Shariff, A. F. (2020) Declines in religiosity predicted increases in violent crime—but not among countries with relatively high average IQ. *Psychological Science* 31(2), 170-183

*Comment:* This study is an important one given concerns about increasing rates of violent crime in countries as they become more and more secular. The statistical analyses are very complex, making them difficult to follow. The measure of "religiosity," however, was simply religious affiliation. Religious affiliation doesn't say much about religiosity, thereby affecting the credibility of the findings reported here (and all data in both studies are on the country level, not individual level).

### Genetic Mutational Load and Religiosity

Researchers at the Ulster Institute of Social Research in London, UK, Umea University in Umea, Sweden, and Western Illinois University in Macomb, IL, conducted an extensive review of the literature and analyzed data from the Midlife Development in the United States (MIDUS) study. Their aim was to test an innovative (but highly controversial) hypothesis that the rejection of "religiosity-centered worship of moral gods" (as done by atheists, for example) is associated with greater genetic mutational load. According to these researchers, left-handedness is an indicator of higher genetic mutation load, given that left-handed people have on average lower earnings, lower socioeconomic status, are more likely to have immunological disorders, reduced life expectancy, low birth weight, premature birth, autism, schizophrenia, psychosexual aberrations, and an atypical brain organization (e.g., left-handedness may occur when there is damage to the left cerebral hemisphere -- due to the accumulation of deleterious mutations -- leading to transfer of some left hemisphere functions to the right hemisphere, including handedness). *This is what the authors argue based on their review of the literature.*

Besides conducting a review of the literature, researchers also analyzed data on 612 participants in the MIDUS-II study who provided information on both religiosity and handedness. The average age of participants was 58.7 years, ranging from 35 to 86 years; 57% were women; and 93% were Caucasian white. Handedness was measured using a standard measure, the Edinburg Handedness Inventory. Religiosity was assessed by eight different scales. Items from the scales were factor analyzed to identify factor scores which were used as a measure of religiosity. In addition, religious affiliation was also assessed: Roman Catholic (n=216), Baptist (n=90), Methodist (n=66), Jewish (n=19), agnostic (n=30), and atheist (n=16). **Results:** Bivariate correlations revealed that religiosity was inversely related to left-handedness ( $r=-0.12$ ,  $p<0.01$ ), positively related to right-handedness ( $r=0.10$ ,  $p<0.05$ ), and positively related to laterality ( $r=0.11$ ,  $p<0.01$ ). Controlling for age and gender had little effect on these results, leading the authors to conclude that "Put simply, left-handed people are less religious than right-handed people, as our hypothesis predicts." The authors also examined differences in handedness between different religious affiliations. Given the small number of atheists, a stable estimate on handedness to compare to those with religious affiliation were not possible. However, left-handedness was significantly more

common in the Jewish group than in Methodists or Roman Catholics. Researchers concluded: "We examine associations between these deviations [atheism and paranormal belief] and four indicators of mutational load: (1) poor general health, (2) autism, (3) fluctuating asymmetry, and (4) left-handedness. A systematic review combined with primary research on handedness demonstrates that atheism and/or paranormal belief is associated with all of these indicators of high mutational load."

*Citation:* Dutton, E., Madison, G., & Dunkel, C. (2018). The mutant says in his heart, "There is no God": The rejection of collective religiosity centered around the worship of moral gods is associated with high mutational load. *Evolutionary Psychological Science*, 4(3), 233-244.

*Comment:* Not sure if the argument that left-handedness is an indicator of genetic mutation load is true (given many incredibly intelligent and physically fit colleagues who are left-handed!). However, the findings are certainly intriguing, to say the least.

### Maternal Spiritual Well-Being and Newborn Physical Characteristics

Researchers from the Department of Nursing and Midwifery, Shiraz University of Medical Sciences, Iran, conducted a cross-sectional study of 155 mothers giving birth to newborns at Hazrat Zeinab Hospital in 2007-2018. The 20-item Palutzian and Ellison Spiritual Well-Being Scale (SWBS) was used to measure mothers' spiritual well-being (called "spiritual health"). This scale assesses religious well-being and existential well-being (or simply well-being). Mothers' spiritual well-being was classified as low (scores 20-40), moderate (41-99), and high (100-120). Newborn physical characteristics included height, weight, size of head, size of belly, heartbeat/minute, number of breaths/minute, percent oxygen saturation, and degree of body heat. Only bivariate correlations were examined. **Results.** The average age of mothers was 27.8 with a range from 14 to 43 years. The average SWBS score was 77.6, with the lowest score being 60 in this sample. Only 4 women scored more than 100 (2.6%), whereas the remainder (97.4%) scored in the moderate range (41-99). Significant differences in newborn physical characteristics were found between women scoring high in spiritual well-being vs. women scoring in the moderate range of spiritual well-being: newborn's belly (34.3 vs. 32.5, respectively,  $p=0.02$ ) and the heartbeat/minute (144 vs. 139, respectively,  $p=0.004$ ). Percent oxygen saturation was also significantly higher among newborns of high spiritual well-being mothers vs. moderate spiritual well-being mothers (98.3% vs. 97.1%, respectively,  $p=0.007$ ). Otherwise, there were no significant differences high and low spirituality mothers on newborn height, weight, size of head, number of breaths/minute, or degree of body heat (all results based on Table 2 in the article).

*Citation:* Tayebi, S., Montaseri, Z., Edraki, M., & Akbarzadeh, M. (2020). Relationship between mother's spiritual health scores with newborn's physical development indices and physiologic parameters in Hazrat Zeinab Training Hospital. *Iranian Journal of Neonatology*, 11(1), 51-59.

*Comment:* Although the presentation of the findings in this study was poor and difficult to follow (with contradictions between the text and tables), it does provide some evidence (at least in Table 2) about there is a relationship between maternal spiritual well-being and newborn physical health indices. Although largely a negative study (i.e., relatively few findings, likely due to the fact that only 4 mothers were in the high spiritual well-being group), it does provide some systematic information on newborn physical health characteristics and the spirituality of mothers (if Table 2 can be trusted). It would be really interesting to **repeat this study here in the U.S.**, where there is a greater range of religiosity/spirituality than there is in Iran (where virtually everyone is religious and spiritual).

## Maternal Spiritual Well-being and Maternal-Fetal Attachment Behaviors

Researchers from the School of Nursing and Midwifery, Shalid Beheshti University of Medical Sciences, Tehran, Iran, conducted a cross-sectional study of 200 pregnant women who were referred to health centers in the city of Qazvin during 2015. Again, the 20-item Paloutzian and Ellison Spiritual Well-Being Scale (SWBS) was administered to assess “spiritual health.” Maternal-fetal attachment was measured using the 24-item Cranley Maternal-Fetal Attachment Scale, which assesses several domains, including interaction with the fetus, differentiation of self from fetus, role-taking, attributing characteristics to fetus, and giving of self. Bivariate and multivariate analyses were conducted. **Results.** Total score on the SWBS ranged from 61 to 120, with an average score 104 (out of a possible 120). Bivariate analyses indicated that scores on the *religious well-being* subscale were positively related to interaction with fetus ( $r=0.37$ ,  $p<0.001$ ), differentiation of self from fetus ( $r=0.23$ ,  $p<0.01$ ), role-taking ( $r=0.34$ ,  $p<0.001$ ), and overall score ( $r=0.30$ ,  $p<0.001$ ). Multivariate analyses indicated that both religious well-being and existential well-being were positively associated with maternal-fetal attachment ( $b=0.30$ ,  $p<0.001$ , and  $b=0.43$ ,  $p<0.001$ , respectively). Researchers concluded that... “The results showed that higher spiritual health was associated with an increase in maternal-fetal attachment behaviors.”

*Citation:* Zahrani, S. T., Rafiei, E. H., Hajian, S., Majd, H. A., & Izadi, A. (2020). The correlation between spiritual health and maternal-fetal attachment behaviors in pregnant women referring to the health centers in Qazvin, Iran. *International Journal of Community-Based Nursing and Midwifery* 8(1), 84-91

*Comment:* Interesting findings that to some extent complement the findings from the earlier study above, which was conducted at a different institution. One would think that greater maternal-fetal attachment might influence the physical characteristics of the newborn in a positive manner (since maternal-fetal attachment could affect how well mothers take care of themselves to ensure the health of their fetus). This underscores the need to replicate the earlier study above (Tayebi et al) by other researchers in different settings.

## Mental and Spiritual Health Problems in the “Religious but Not Spiritual”

Investigators from the Department of Health Behavior and Health Education at the University of Michigan, Ann Arbor, analyzed data from a U.S. national random sample of 2,825 adults age 18 or older (average age 46.5 years) to examine the association between different categories of religious/spiritual self-identification and measures of mental and spiritual health. Participants were asked to self-categorize themselves into religious and spiritual (RS; 53.4%), spiritual but not religious (SNR; 29.4%), neither religious nor spiritual (NRNS; 9.2%), and finally, religious but not spiritual (RNS; 8.0%; the group of particular interest here). Mental health was assessed by personality traits using the 10-item version of the Big Five Personality Inventory (which assesses openness, conscientiousness, extraversion, agreeableness, and neuroticism). In addition, religious practices, religious beliefs, church-based social relationships, religious coping, and “the virtues” (humility, compassion, forgiveness of others, gratitude) were measured using standard scales. Controlled for in logistic regression analyses were age, gender, education, marital status, and race. **Results:** Being religious but not spiritual (RNS) was unrelated to personality traits in the adjusted logistic regression model. However, RNS individuals were less likely to attend religious services, engage in private prayer, pray for others, read the Bible privately, or score high on religious commitment (i.e., they were considerably less religious than other groups, more similar to the NRNS group). In addition, they were less likely to have positive

emotions about God, less likely to believe that God reigns over the world, and less likely to feel close to God. They were less likely to feel supported by church members or to provide support to church members, and were less humble, compassionate, forgiving, and grateful compared to those in all other categories (SR, SNR, NRNS). Researchers concluded: “The findings reveal that those who are religious only have lower levels of religious practices (e.g., church attendance), they are less likely to exchange informal support with fellow church members, they are less likely to rely on religious coping responses, and they are less likely to possess virtues that have typically been associated with greater religious and spiritual involvement.”

*Citation:* Krause, N., Pargament, K. I., Hill, P. C., & Ironson, G. (2020). Exploring religious and/or spiritual identities: part 2—a descriptive analysis of those who are at risk for health problems. *Mental Health, Religion & Culture*, E-pub ahead of press

*Comment:* Based on these results, reported by a prestigious team of religion-health researchers, it appears that those who say they are religious only (but not spiritual) are actually not very religious at all.

## Childhood Trauma and Spirituality in Non-Religious Adults in the Czech Republic

Investigators in the Social Health Institute of Palacky University Oomouc, Czech Republic, analyze data from a national random sample of 1,800 Czech adults age 15 or older. Administered was the 28-item Childhood Trauma Questionnaire (CTQ; assesses emotional abuse, physical abuse, sexual abuse, emotional neglect, physical neglect). Religiosity was assessed by a single question: “At present, would you call yourself a believer?” With the response options “yes, I am a member of a church or religious society”, “yes, but I am not a member of a church or religious society”, “no”, and “no, I am a convinced atheist.” Spirituality was assessed by a 15-item version of the Daily Spiritual Experience Scale (DSES). Based on responses to the above measures, participants were categorized into (1) religious and spiritual, (2) spiritual but not religious, (3) religious but not spiritual, and (4) not religious nor spiritual. In addition, “conversion experiences” were also assessed by the question “Have you ever experience something that could be called a religious conversion (acceptance or change of denomination)?” (yes vs. no). These cross-sectional data were analyzed using multinomial logistic regression. **Results:** All types of childhood trauma (except emotional abuse) were positively associated with spirituality (DSES), after adjusting for gender, age, and education level (with ORs ranging from 1.17 to 1.31). Childhood trauma, however, was not associated with being religious. Among those who were not religious, associations between spirituality and childhood trauma were particularly strong. In fact, emotional, physical, and sexual abuse, as well as emotional and physical neglect, were significantly more common only in the group that was spiritual but not religious, after adjusting for age, gender, and education (but not in other spiritual/religious categories). Emotional abuse and emotional neglect (but not other childhood trauma) were significantly more common among those with a history of religious conversion experiences, after adjusting for age, gender, and education level (OR=1.46, 95% CI=1.17-1.82,  $p<0.01$ , for emotional abuse; OR=1.42, 95% CI=1.11-1.82,  $p<0.01$ , for emotional neglect). Researchers concluded: “Our findings show CT [childhood trauma] is associated with higher levels of spirituality in non-religious respondents. Addressing spiritual needs may contribute to the effectiveness of psychotherapeutic treatment of the victims.”

*Citation:* Kosarkova, A., Malinakova, K., Koncalova, Z., Tavel, P., & van Dijk, J. P. (2020). Childhood trauma is associated with the spirituality of non-religious respondents. *International Journal of Environmental Research and Public Health*, 17(4), 1268.

*Comment:* Bear in mind that these are cross-sectional associations, and therefore it is not possible to make inferences

regarding the causal direction in these relationships. It is very likely that those with childhood trauma cope in adult life with the difficulties caused by this trauma through spirituality (among the non-religious) or religion (among religious converts).

### Spiritual Problems among Women with Breast Cancer in Iran

Qualitative researchers in the Department of Clinical Psychology at Semnan University in Iran conducted a study to identify spiritual problems of Iranian patients with breast cancer. Qualitative content analysis was used to gather information from 12 women with breast cancer. **Results:** The major themes extracted from the interviews were (1) questioning spiritual values and (2) loss or questioning of religious faith. "Questioning spiritual values" consisted of three categories: finding spiritual causes for the illness, questioning God's justice, and dealing with God. "Loss or questioning of faith" was made up of the categories designated as lack of intimacy with God, giving up rituals, and losing religious faith. The authors note that awareness of religious/spiritual problems of women with breast cancer may help health professionals to manage these patients better, and such information may also be useful in designing spiritual care interventions to help resolve some of these spiritual struggles.

*Citation:* Ghaempanah, Z., Raieinia, P., Sabahi, P., Hosseini, S.M., Memaryan, N. (2020). Spiritual problems of women with breast cancer in Iran: a qualitative study. *Health, Spirituality and Medical Ethics*, 7 (1), 9-15

*Comment:* Many of the spiritual problems that came up in these interviews were similar to those described by Ken Pargament in his work on religious struggles, as well as by Julie Exline in her research on spiritual struggles. This study adds to this literature in identifying the specific spiritual problems that are experienced by breast cancer patients in Iran.

### Spiritual Experiences of Patients and Satisfaction with Physician Care

Investigators in the Department of Medicine at the University of Tennessee Health Science Center examined the relationship between hospitalized patients' spirituality and the satisfaction they expressed with the physicians caring for them. Participants were 463 patients (58% female, 84% Caucasian, average age 52) hospitalized in Chattanooga, Tennessee. Spirituality was assessed with the 16-item Daily Spiritual Experiences Scale (DSES), with lower scores indicating greater spirituality. Patient satisfaction with physician care was assessed by two measures: a 5-question scale developed internally by investigators (5QS, which measured overall physician quality, physician communication skills, physician ability to include patients in shared decisions, physician explanation of test results and changes in treatment, and physician teamwork with other healthcare team members) and a 15-item validated measure commonly used in hospitalized patients (TAISCH Survey, which measures physician compassion, communication skills, medical knowledge, inclusion of patients' opinions and involvement in medical plan). Higher scores on both of these measures indicate greater satisfaction with physician care. Control variables included in mixed linear regression models were patient's age, gender, and race. **Results:** Low DSES scores (i.e., more daily spiritual experiences) were associated with significantly higher scores on patient satisfaction with physician care on both the 5QS ( $b=-0.20$ , 95% CI= $-0.31$  to  $-0.10$ ,  $p<0.001$ ) and the TAISCH ( $b=-0.13$ , 95% CI= $-0.22$  to  $-0.04$ ,  $p=0.005$ ), independent of age, gender, and race. Researchers concluded: "With the increasing influence [that] patient satisfaction scores have on the healthcare system, the results from this study help us better understand how these scores are influenced."

*Citation:* Uhelski, A. C. R., Sheikh, M. M., Panda, M., & Qayyum, R. (2020). Spirituality and satisfaction with physicians among

hospitalized patients. *Journal of Health Care Chaplaincy*, E-pub ahead of press

*Comment:* Although this is a cross-sectional study incapable of determining whether patient spirituality influences patient satisfaction with physicians, it certainly establishes that hospitalized patients who experience more daily spiritual experiences report greater satisfaction with the care they receive from their physicians. This finding, then, underscores the impact that good pastoral care (which increases daily spiritual experiences) may have on physician satisfaction, behooving physicians to refer patients to chaplains.

## NEWS

### Growing Awareness of the Impact of Religion on Mental Health

Two comprehensive reviews are forthcoming in the *British Journal of Psychiatry Advances* publication, providing further evidence of growing acknowledgment in mainstream journals of the relationship between religion and mental health. Readers should be aware of these two articles since they summarize the most recent research and latest recommendations for clinical application:

Koenig, H. G., Al Zaben, F., & VanderWeele, T. J. (2020). Religion and psychiatry: Recent developments in research. *BJPsych Advances*, vol 26, forthcoming (DOI: <https://doi.org/10.1192/bja.2019.81>)

Koenig, H. G., Peteet, J. R., & VanderWeele, T. J. (2020). Religion and psychiatry: Clinical applications. *BJPsych Advances*, forthcoming (DOI: <https://doi.org/10.1192/bja.2020.11>)

## SPECIAL EVENTS

### Research Workshop on Religion, Spirituality and Health in Lisbon, Portugal

The 7<sup>th</sup> European Conference will also host a 4-day pre-conference spirituality and health research workshop on May 24-27 with Prof. Koenig from the U.S., along with Dr. Rene Hefti, Prof. Arndt Buessing, Prof. Niels Hvidt, Prof. Constantin Klein, and a number of other European presenters. For more information, go to: <http://ecrsh.eu/ecrsh-2020> or contact Dr. Rene Hefti at [info@rish.ch](mailto:info@rish.ch).

### 7<sup>th</sup> European Conference on Religion, Spirituality and Health

(Lisbon, Portugal, May 28-30, 2020)

The 2020 European Conference will focus on "Aging, Health and Spirituality" and will be held at the Catholic University of Portugal in Lisbon, one of the most beautiful cities in Europe. See <https://ecrsh.eu/ecrsh-2020>.

## RESOURCES

### Books

#### Biblical and Theological Visions of Resilience (Routledge Publishers, 2020)

From the publisher: "In recent years, resilience has become a near ubiquitous cultural phenomenon whose influence extends into many fields of academic enquiry. Though research suggests that religion and spirituality are significant factors in engendering resilient adaptation, comparatively little biblical and theological

reflection has gone into understanding this construct. This book seeks to remedy this deficiency through a breadth of reflection upon human resilience from canonical biblical and Christian theological sources. Divided into three parts, biblical scholars and theologians provide critical accounts of these perspectives, integrating biblical and theological insight with current social scientific understandings of resilience. Part 1 presents a range of biblical visions of resilience. Part 2 considers a variety of theological perspectives on resilience, drawing from figures including Thomas Aquinas, Martin Luther, and Dietrich Bonhoeffer. Part 3 explores the clinical and pastoral applications of such expressions of resilience. This diverse yet cohesive book sets out a new and challenging perspective of how human resilience might be re-envisioned from a Christian perspective. As a result, it will be of interest to scholars of practical and pastoral theology, biblical studies, and religion, spirituality and health. It will also be a valuable resource for chaplains, pastors, and clinicians with an interest in religion and spirituality." Available for \$130.97 (hardback) from <https://www.amazon.com/Biblical-Theological-Visions-Resilience-Routledge/dp/0367029111/>

### **Religion and Recovery from PTSD**

(Jessica Kingsley publishers, December 19, 2019)

From the publisher: "This volume focuses on the role that religion and spirituality can play in recovery from post-traumatic stress disorder (PTSD) and other forms of trauma, including moral injury. Religious texts, from the Bible to Buddhist scriptures, have always contained passages that focus on helping those who have experienced the trauma of war. Many religions have developed psychological, social, behavioral, and spiritual ways of coping and healing that can work in tandem with clinical treatments today in assisting recovery from PTSD and moral injury. In this book the authors review and discuss systematic research into how religion helps people cope with severe trauma, including trauma caused by natural disasters, intentional interpersonal violence, or combat experiences during war. They delve into the impact that spirituality has in both the development of and recovery from PTSD. Beyond reviewing research, they also use case vignettes throughout to illustrate the very human story of recovery from PTSD, and how religious or spiritual beliefs can both help or hinder depending on circumstance. A vital work for any mental health or religious professionals who seek to help people dealing with severe trauma and loss." Available for \$29.95 at <https://www.amazon.com/Religion-Recovery-PTSD-Harold-Koenig/dp/1785928228/>.

### **Religion and Mental Health: Research and Clinical Applications**

(Academic Press, 2018) (Elsevier)

This 384 page volume summarizes the latest research on how religion helps people cope with stress, covering its relationship to depression, anxiety, suicide, substance abuse, well-being, happiness, life satisfaction, optimism, generosity, gratitude and meaning and purpose in life. It integrates research findings with best practices for treating mental health disorders in religious clients with depression, anxiety, posttraumatic stress disorder, and other emotional (and neuropsychiatric) problems. Available for \$67.38 (paperback) at <https://www.amazon.com/Religion-Mental-Health-Research-Applications-dp-0128112824/dp/0128112824/>

### **Hope & Healing for Those with PTSD: Psychological, Medical, and Spiritual Treatments.**

(Amazon: CreateSpace Publishing Platform, 2018)

From the author: "If you or a family member has PTSD or are experiencing the aftermath of severe trauma, you will know a lot more about this disabling condition and how to deal with it after

reading this book." Available for \$5.38 at <https://www.amazon.com/dp/172445210X>.

### **Protestant Christianity and Mental Health: Beliefs, Research and Applications** (part of the Religion and Mental Health Book Series; Amazon: CreateSpace Platform, 2017)

For mental health professionals, clergy, researchers, and laypersons interested in the relationship between religious involvement and mental health in Protestant Christians. Available for \$7.50 at: <https://www.amazon.com/dp/1544642105/>

### **Catholic Christianity and Mental Health: Beliefs, Research and Applications** (part of the Religion and Mental Health Book Series; Amazon: CreateSpace Platform, 2017)

For mental health professionals, clergy, researchers, and laypersons interested in the relationship between religion, spirituality and mental health in Catholics. Available for \$7.50 at: <https://www.amazon.com/Catholic-Christianity-Mental-Health-Applications/dp/1544207646>

### **Islam and Mental Health: Beliefs, Research and Applications**

(part of the Religion and Mental Health Book Series; Amazon: CreateSpace Platform, 2017)

For mental health professionals, clergy, researchers, and laypersons interested in the relationship between religion, spirituality and mental health in Muslims. Available for \$7.50 at: <https://www.amazon.com/Islam-Mental-Health-Research-Applications/dp/1544730330>.

### **Hinduism and Mental Health: Beliefs, Research and Applications**

(part of the Religion and Mental Health Book Series; Amazon: CreateSpace Platform, 2017)

For mental health professionals, clergy, researchers, and laypersons interested in the relationship between religion, spirituality and mental health in Hindus. Includes original research on current religious beliefs/practices in Hindus from India and throughout the world. Available for \$7.50 at: <https://www.amazon.com/dp/1544642105/>

### **Judaism and Mental Health: Beliefs, Research and Applications**

(part of the Religion and Mental Health Book Series; Amazon: CreateSpace Platform, 2017)

For mental health professionals, clergy, and researchers interested in the relationship between religion, spirituality and health in Judaism. Available for \$7.50 at: <https://www.amazon.com/Judaism-Mental-Health-Research-Applications/dp/154405145X/>

### **Buddhism and Mental Health: Beliefs, Research and Applications**

(part of the Religion and Mental Health Book Series; Amazon: CreateSpace Platform, 2017)

For mental health professionals, clergy, researchers, and laypersons interested in the relationship between religion, spirituality and mental health in Buddhists. Available for \$7.50 at <https://www.amazon.com/dp/1545234728/>

## Spirituality & Health Research: Methods, Measurement, Statistics, & Resources (Templeton Press, 2011)

This book summarizes and expands the content presented in the Duke University's Annual Summer Research Workshop on Spirituality and Health. Available for \$29.15 (used) at: <http://www.amazon.com/Spirituality-Health-Research-Measurements-Statistics/dp/1599473496/>

### Other Resources

#### **CME/CE Videos (Integrating Spirituality into Patient Care)**

Five professionally produced 45-minute videos on **why and how** to "integrate spirituality into patient care" are now available on our website (*for free*, unless CME/CE is desired). Videos are targeted at physicians, nurses, chaplains, and social workers in an effort to help them form **spiritual care teams** to provide "whole person" healthcare that includes the identifying and addressing of spiritual needs. Go to: <http://www.spiritualityandhealth.duke.edu/index.php/cme-videos>.

## TRAINING OPPORTUNITIES

### **Full Scholarships to Attend Research Training on Religion, Spirituality and Health**

With support from the John Templeton Foundation, Duke University's Center for Spirituality, Theology and Health is offering eleven \$3,600 scholarships to attend the university's 5-day Workshop on conducting research on religion, spirituality, and health. The workshop will be held on August 10-14, 2020. These scholarships will cover the \$1200 tuition, up to \$1500 in international travel costs, and up to 900 in living expenses. They are available only to academic faculty and graduate students living in third-world underdeveloped countries in Africa, Central and South America (including Mexico), Eastern Europe and North Asia (Russia and China), and portions of the Middle East, Central and East Asia. The scholarships will be competitive and awarded to talented well-positioned faculty and graduate students with the potential to conduct research on religion, spirituality, and health, and serve as research leaders in their part of the world. If you want to know more about this program, contact [Harold.Koenig@duke.edu](mailto:Harold.Koenig@duke.edu) or go to our website for a description of the workshop: <https://spiritualityandhealth.duke.edu/index.php/5-day-summer-research-course>. **Please let your academic colleagues in developing countries know about this unusual and time-limited opportunity.**

Since the demand for such scholarships has far exceeded availability already, and we are set up to evaluate potential scholarship recipients and are hoping to identify individuals or foundations willing to support highly qualified third-world applicants whom we are unable to provide scholarships to in 2020-2022 and the years ahead. A donation of \$3,500 to our

Center will sponsor a faculty member or graduate student from a disadvantaged region of the world to attend the workshop in 2020 or future years. If you are interested in sponsoring one or more such applicants and want to know more about this program, or have ideas about other sources of support, please contact [Harold.Koenig@duke.edu](mailto:Harold.Koenig@duke.edu).

### **Certificate in Theology and Healthcare**

The Duke University Divinity School is now accepting applications for a new graduate certificate, the Certificate in Theology and Health Care. This one-year residential program provides robust theological and practical engagement with contemporary practices in medicine and health care for those individuals with vocations in health-related fields (e.g., trainees or practitioners of medicine, nursing, and other health care professions). The Certificate aims to equip Christian health care practitioners with the training to embrace that calling and live into it with theological clarity and spiritual joy. This fully accredited course of study focuses on combining foundational courses in Christian theology, scripture, and church history with courses engaging the practical issues that health care practitioners encounter in contemporary culture. If you, or some you know, seek theological formation and further confidence engaging questions of suffering, illness, and the place of health care in a faithful life, go to the following website: <https://tmc.divinity.duke.edu/programs/certificate-in-theology-and-health-care/>

## FUNDING OPPORTUNITIES

### **Templeton Foundation Online Funding Inquiry**

The John Templeton Foundation is now accepting new Online Funding Inquiries (OFIs; essentially letters of intent) through their funding portal. The next deadline for Small Grant requests (\$234,800 or less) and Large Grant requests (more than \$234,800) is **August 14, 2020**. The Foundation will communicate their decision (rejection or invitation to submit a full proposal) for all OFIs by October 9, 2020. JTF's current interests on the interface of religion, spirituality, and health include: (1) investigating the causal relationships between health, religion, and spirituality (determining direction of causation in associations reported; identifying the underlying causal mechanisms responsible), with a specific focus on longitudinal studies, and (2) engaging religious and spiritual resources in the practice of health care (increasing the religious and spiritual competencies of health care practitioners; testing the impact of religiously integrated therapies; and increasing the scientific literacy of health care chaplains). More information: <https://www.templeton.org/project/health-religion-spirituality>.

[continued]

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**PLEASE Partner with us to help the work to continue...**

<http://www.spiritualityandhealth.duke.edu/index.php/partner-with-us>

## 2020 CSTH CALENDAR OF EVENTS...

### April

- 8 **Spirituality, recovery from mental illness (trauma and PTSD), and effects on physical health and longevity**  
Senior U.S. Army Chaplain Training  
Columbia University, New York City  
**Speakers:** Koenig and others  
**Contact:** Dr. Lisa Miller ([drlisamiller@gmail.com](mailto:drlisamiller@gmail.com))
- 9 **Duke CPE Chaplain Residents' Research Symposium**  
**Speakers:** Multiple research projects to be presented  
10:00-12:00 noon  
**Contact:** Ashley Acken ([ashley.acken@duke.edu](mailto:ashley.acken@duke.edu))
- 17 **Religion and medicine**  
Campbell University School of Osteopathic Medicine  
Bues Creek, North Carolina, 10:30-11:30 AM  
**Speaker:** Harold G. Koenig, M.D.  
**Contact:** Teresa Butrum ([butrum@campbell.edu](mailto:butrum@campbell.edu))
- 29 **Spirituality in Medical Education: What is Taught and What is Experienced**  
**Speaker:** Zachary Smothers, M.Sc.  
Doctor of Medicine Candidate  
Duke University School of Medicine (Class of 2021)  
Center for Aging, 3rd floor, Duke South, 3:30-4:30  
**Contact:** Harold G. Koenig ([Harold.Koenig@duke.edu](mailto:Harold.Koenig@duke.edu))

### May

- 14 **Moral Injury in Veterans and Active Duty Military**  
Women Veteran Moral Injury Conference  
Virginia Commonwealth University  
**Speakers:** Koenig and others  
**Contact:** Christi Siefring ([cobrennan1@bellsouth.net](mailto:cobrennan1@bellsouth.net))
- 20 **Trauma and Loss Among Adolescents in Foster Care**  
**Speaker:** Aurellia Anderson, MDiv, MA  
Center for Aging, 3rd floor, Duke South, 3:30-4:30  
**Contact:** Harold G. Koenig ([Harold.Koenig@duke.edu](mailto:Harold.Koenig@duke.edu))
- 24-27 **Spirituality & Health Research Workshop**  
Pre-European Conference on Spirituality & Health  
Lisbon, Portugal  
**Speakers:** Koenig and others  
**Contact:** Dr. René Hefti ([rene.hefti@rish.ch](mailto:rene.hefti@rish.ch))
- 28-30 **European Conference on Religion, Spirituality & Health**  
**Speakers:** Idler, Koenig, and many others  
Catholic University Lisbon  
Lisbon, Portugal  
**Contact:** Dr. René Hefti ([rene.hefti@rish.ch](mailto:rene.hefti@rish.ch))