

# 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 November 2018) go to: <http://www.spiritualityandhealth.duke.edu/index.php/publications/crossroads>

## LATEST RESEARCH

### Religious Attendance and Biological Risk

Researchers in the department of sociology at the University of Arizona analyzed data on 2,912 participants age 50 or over participating in the Health and Retirement Study between 2006 and 2010 (4-year longitudinal analysis of a representative sample of older adults in the U.S.). Religious attendance was assessed in 2006 with a single question "About how often have you attended religious services during the last year?" Responses were categorized into (1) no attendance or yearly attendance, (2) monthly attendance, and (3) weekly attendance. A physical exam was conducted and blood specimens collected in 2006 and 2010. Metabolic functioning included body mass index (BMI), waist circumference (WC), glycosylated hemoglobin (HbA1c), and non-high density lipoprotein (non-HDL-C) cholesterol. Cardiovascular functioning was assessed by systolic blood pressure (SBP), diastolic blood pressure (DBP), and pulse rate. Inflammatory markers assessed included C-reactive protein (CRP) and Cystatin-C (CC). Overall allostatic load (summation of measures above) was calculated as either a variable expressed as the mean of the individual biomarkers ("continuous" allostatic load) or as a variable expressed as a count of the individual biomarkers at levels considered high-risk for disease ("count" allostatic load). Controlled for in multivariate analyses were age, gender, marital status, employment status, race/ethnicity, education, household wealth, and financial debt. **Results:** Controlling for measures of allostatic load at baseline in 2006, weekly religious attendance in 2006 tended to predicted lower levels of overall "continuous" allostatic load A ( $b=-0.02$ ,  $p<0.10$ ) and significantly predicted lower levels of "count" allostatic load ( $b=-0.06$ ,  $p<0.05$ ) in 2010. With regard to individual biomarkers assessed as "continuous" variables, weekly religious attendance weakly predicted lower levels of CRP ( $b=-0.64$ ,  $p<0.10$ ) and CC ( $b=-0.02$ ,  $p<0.10$ ), and significantly predicted lower pulse rate ( $b=-0.77$ ,  $p<0.05$ ). With regard to individual biomarkers assessed by high-risk status ("count"), weekly attendance predicted significantly less high-risk CRP levels ( $b=-0.18$ ,  $p<0.05$ ) and significantly less high-risk CC levels ( $b=-0.22$ ,  $p<0.05$ ), and there was a trend towards lower

high-risk non-HDL-C level ( $b=-0.18$ ,  $p<0.10$ ) and lower DBP ( $b=-0.19$ ,  $p<0.10$ ). Researchers concluded: "Our analysis of Health and Retirement Study (2006/2010) data suggests that older adults who attended religious services weekly or more in 2006 tend to exhibit fewer high-risk biomarkers in 2010 and greater reductions in allostatic load over the 4-year study period than respondents who attended yearly or not at all."

*Citation:* Suh, H., Hill, T. D., & Koenig, H. G. (2018). Religious attendance and biological risk: A national longitudinal study of older adults. *Journal of Religion and Health*, E-pub ahead of press. *Comment:* Effects of religious attendance were particularly strong for indicators of body inflammation (CRP and CC); inflammation is known to have widespread negative effects on the cardiovascular system and brain in later life. While the effects of weekly religious attendance reported here are admittedly weak, note that a follow-up time of only 4 years does not allow much opportunity for change to occur in these biological risk factors (and "change" is what is being predicted here). Thus, a longer follow-up period might demonstrate even larger effects than found here. In any case, with the exception of waist circumference, the effect of weekly attendance on every individual biological risk factor assessed in this study was in a negative direction (weak, but negative) after appropriate control for baseline values of the risk factor. Findings like those from this study help to explain the effects of religious attendance on all-cause mortality, cancer mortality, and especially cardiovascular mortality, as reported previously from the Nurse's Health Study (*JAMA Internal Medicine* 2016; 176(6):777-785).

### Effects of Religiosity during Childhood and Adolescence on Crack Cocaine Addiction in Adulthood in Brazil

Investigators in the school of medicine at the Universidade Federal de Juiz de Fora, Brazil, examined the relationship between childhood religiosity and drug use in 531 heavy users of crack cocaine age 18 or older currently in treatment. Past frequency of religious involvement was assessed at ages 8-11 years, 12-14 years, and 15-17 years by the question "When you were between X and Y years old, did you attend any religious services, such as masses, evangelical cults, spiritualist sessions and/or Afro-Brazilian religions?" Past religious participation was assessed by the question "When you were between X and Y years old, how often did you participate in activities relating to religion, such as meetings, youth groups, social and charitable works?" A global religious history score (GRHS) was obtained by summing the frequency and participation scores in each of the three age groups. Outcomes included severity of cocaine consumption, involvement in criminality and sexual risk-seeking behavior, quality-of-life, and psychiatric comorbidity. Mediator variables included social environment and family ties. Logistic regression was used to adjust analyses for age, gender, living with a partner, and education; linear regression was used to evaluate the relationship between religious history and quality of life. **Results:** Current frequency of religious attendance was associated with a marked decrease in imprisonment after 18 years of age (36-49% reduction), and intrinsic religiosity was associated with less craving and better

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quality of life across all four dimensions measured by the World Health Organization's WHOQOL-BREF (social, physical, psychological, and environmental). Global religious frequency was associated with higher educational level, later onset of and lower intensity of crack consumption, less imprisonment as an adult, and less likelihood of lifelong criminal activities. Religious history (frequency and participation) was associated with better quality of life in the domain of psychological health. While higher global religious history scores were associated with better physical health, global religious frequency was surprisingly associated with worse physical health. Global frequency of attendance at religious services, however, protected against cocaine consumption onset before age 18 years and consumption of more than 10 crack rocks at a single time. Overall, religious involvement during youth and adolescence predicted significantly less drug consumption before age 18 (OR=0.95, 95% CI=0.92-0.98) and less craving (OR=0.95, 95% CI 0.91-0.99), mainly due to greater religious involvement between ages 15 and 17 years. Researchers concluded "Religiosity provides some protection against drug consumption patterns in crack cocaine addicts."

*Citation:* Rezend-Pinto, A., Moreira-Almeida, A., Ribeiro, M., Laranjeira, R., & Vallada, H. (2018). The effect of religiosity during childhood and adolescence on drug consumption patterns in adults addicted to crack cocaine. *British Journal of Psychiatry Open*, 4(5), 324-331.

*Comment:* Although cross-sectional, this is one of the few studies that have examined **religious history** as a predictor of substance use patterns in adulthood, or for that matter, any mental, social, or physical health outcome in adulthood. More studies are needed like this one to assess religious history, which is an important indicator of lifetime exposure to the effects of religious involvement. This approach is far better than simply measuring current religious involvement.

### Religious vs. Non-Religious Persons: How Positive are They?

Investigators from the department of psychology at the University of Pennsylvania and other universities across the US examined the relationship between religious affiliation and the use of positive emotion words based on the online posts of 12,815 Facebook users. Religious affiliation was abstracted from self-reported information on participants' Facebook accounts (MyPersonality participants on Facebook, who allow such information to be collected; primarily users from US or UK). Participants in the MyPersonality application have been shown to be representative of Facebook users more generally, although tend to be slightly younger. Positive emotions here were defined as the frequency of words such as happy, joy, love, good, etc. These were identified using the Linguistic Inquiry and Word Count program (LIWC; Pennebaker et al). As a backup, Differential Language Analysis (DLA) was also used to compare the language of religious and nonreligious individuals. Results were controlled for age and gender in multivariate analyses, and p values were adjusted for multiple comparisons. **Results:** For religiously affiliated individuals, "religion" was the most correlated LIWC category, with the most common words being devil, blessing, and praying. Religiously affiliated individuals were significantly more likely to use positive emotion (love, good, happy, etc.), family (mothers, uncle, aunt), and social (speaking, we, they) categories (B's ranging from 0.19 to 0.28, all statistically significant). In contrast, those with no religious affiliation were more likely to use words in the anger (hate, lying, sucks), negative emotion (bad, hate, cried), cognitive processes (expected, figured, barely), and insight (figured, noticed, reasons) (B's ranging from 0.08 to 0.43). Nonreligious individuals were also more likely to use words in the swearing (kiss, screw, heck), body (heads, neck, chest), and death (die, dead, died) categories (B's ranging from 0.25 to 0.40). Linguistic analysis using DLA indicated a similar pattern of

findings. Researchers concluded "... The language of religious individuals was more emotionally positive and socially oriented, whereas that of nonreligious individuals was more emotionally negative and contained some indications of a more analytical cognitive style."

*Citation:* Yaden, D. B., Eichstaedt, J. C., Kern, M. L., Smith, L. K., Buffone, A., Stillwell, D. J., ... & Schwartz, H. A. (2018). The language of religious affiliation: social, emotional, and cognitive differences. *Social Psychological and Personality Science*, 9(4), 444-452.

*Comment:* This study builds on the work of Ritter et al (2014) who compared linguistic differences between Christians and atheists on Twitter ("Happy tweets: Christians are happier, more socially connected, and less analytical than atheists on Twitter. *Social Psychological and Personality Science* 5(2), 243-249).

### Religiosity and Well-Being in Different Religious Groups around the World

Investigators at the department of social policy and social work at the University of York in the United Kingdom analyzed data from World Values Surveys conducted between 1981 and 2014 to examine the relationship between religiosity and psychological well-being in 330,319 adults from 100 countries. Religious variables assessed included religious affiliation (Buddhist, Hindu, Jew, Muslim, Roman Catholic, Orthodox Protestant, other religions, and nonreligious), frequency of attendance at religious services (1=every week vs. 0=otherwise), importance of God in life (1=not important at all, 10=very important), and religious self-categorization (religious person, not a religious person, or atheist). Psychological well-being was assessed by two questions asking about happiness ("Taking all things together, would you say that you are "not at all happy," "not very happy," "quite happy," or "very happy") and life satisfaction ("All things considered, how satisfied are you with your life as a whole these days?" with response options ranging from 1 to 10 where 1 represents "very dissatisfied" and 10 represents "very satisfied." Controlled for in multilevel mixed-effects regression analyses were income, employment status, education, age, gender, marital status, household financial satisfaction, preference for income inequality, state of health, freedom of choice and control over life, trust, importance of friends, family and leisure, country GDP per capita, human development index, government restrictions index, social hostilities index, and geographical region. **Results:** Happiness was highest among Protestants, followed by Buddhists, other religions, Roman Catholics, Jews, Hindus, Muslims, nonreligious, and finally Orthodox ( $p < 0.0001$ ). Life satisfaction was highest in Catholics, followed by Protestants, other religions, Buddhists, Jews, nonreligious, Hindus, Muslims, and Orthodox ( $p = 0.001$ ). Those affiliated with the Orthodox tradition had the lowest happiness and life satisfaction ( $r = -0.144$  and  $r = -0.155$ , respectively). Multilevel analysis indicated a positive association between happiness and Protestant religious affiliation ( $B = 0.023$ ,  $SE = 0.005$ ,  $p < 0.0001$ ), weekly religious attendance ( $B = 0.020$ ,  $SE = 0.006$ ,  $p = 0.001$ ), and importance of God in life ( $B = 0.013$ ,  $SE = 0.003$ ,  $p < 0.0001$ ). With regard to life satisfaction, multilevel analysis indicated a positive association with weekly religious attendance ( $B = 0.016$ ,  $SE = 0.005$ ,  $p = 0.002$ ) and importance of God in life ( $B = 0.040$ ,  $SE = 0.002$ ,  $p < 0.0001$  (but not with religious affiliation). Researchers concluded: "...this study found that individual religiosity and country level of development play a significant role in shaping people's subjective well-being (SWB)."

*Citation:* Ngamaba KH, Soni D (2018). Are happiness and life satisfaction different across religious groups? Exploring determinants of happiness and life satisfaction. *Journal of Religion and Health* 57:2118-2139

*Comment:* Although these cross-sectional associations were weak, they were quite consistent. The large sample size and worldwide reach underscores how widespread this relationship is. Also, it

appears that the particular religious affiliation matters less in terms of psychological well-being than does the degree of religiosity.

### Is the Association between Religiosity and Self-Rated Health Stronger in Men or Women?

Investigators from the department of economics at Bentley University (Waltham, MA) analyzed General Social Survey (GSS) data on a random sample of 23,353 adults in the U.S. surveyed between 1974 and 2012 (cross-sectional samples gathered during years when the GSS was conducted). The purpose was to compare the strength of the association between religiosity and self-rated health in men and women. Self-rated health was assessed with a single question rated from poor to excellent, dichotomized into 0= "fair" or "poor" and 1= "good" or "excellent." Religiosity was assessed by religious attendance (dichotomized into "less than monthly"=0 and "monthly or more"=1), self-rated strength of religious belief (dichotomized into "don't believe" or "not strong"=0, and "somewhat strong" or "strong"=1), and religious preference ("none" used as the reference category). Probit regression models were used to predict self-rated health ("good" or "excellent") and controlled for income, age, race, marital status, household size, employment status, and education level. **Results:** Religious affiliation was unrelated to self-rated health in either men or women. In men, the association between religious attendance and self-rated health (with all control variables in the model) was  $B=0.029$  ( $SE=0.008$ ,  $p<0.01$ ); for strength of religious belief, the association was similar ( $B=0.028$ ,  $SE=0.008$ ,  $p<0.01$ ) [for comparison, note that the relationship between income and self-rated health in men was  $B=0.028$ ,  $SE=0.004$ , and for education and self-rated health it was  $B=0.016$ ,  $SE=0.001$ ]. In women, the association between religious attendance and self-rated health (with all control variables in the model) was  $B=0.020$  ( $SE=0.009$ ,  $p<0.05$ ); for strength of religious belief, the association was slightly stronger ( $B=0.024$ ,  $SE=0.008$ ,  $p<0.01$ ) [for comparison, note that the relationship between income and self-rated health in women was also  $b=0.029$ ,  $SE=0.004$ , and for education and self-rated health it was  $b=0.020$ ,  $SE=0.01$ ]. Thus, the relationship between religiosity and self-related health appeared to be weaker in women than in men. When the time pattern in the health-religiosity gradient was examined, the relationship between *religious attendance* and self-rated health was stronger in women compared to men between 1974 and 1992, but the opposite was true between 2003 and 2012. After controlling for other variables, men showed a 4.5% increase in probability of reporting good or excellent health with an increase in attendance during 2003-2012, whereas for women during this period it was 0%. In fact between 1974 and 2012 there was a continual decline in the association in women from 3.9% (1974-1983) to 3.7% (1984-1992) to 1.0% (1993-2002) to 0% (2003-2012). Researchers concluded: "The overall positive association between religiosity and health masks considerable heterogeneity across gender and time; higher and stable for males, there is no longer a significant association for females. Increased education, income, and labor force participation can explain only part of this association. Education is the strongest mediator." They went on to speculate: "Moving away from church networks could be due to a perceived lack of support or substitution by other social networks."

*Citation:* Mukerjee, S., & Venugopal, A. (2018). Religiosity and health through the decades: Is there a gender difference? *American Journal of Health Promotion*, 32(4), 1028-1041.

*Comment.* Of course, these are cross-sectional data, which means that there is no way to determine if religiosity now no longer affects self-rated health in women, or whether self-rated health no longer affects religiosity in women (women might become more religious in recent times when their health fails as they seek to cope with health problems, which could nullify any positive cross-sectional correlation between religiosity and better health in the last decade). Also, there is only weak evidence that recently women

have been moving away from church networks because of a perceived lack of support, since frequency of at least monthly religious attendance in women decreased in this study only slightly over time (from 56% in 1974-1983 to 49% in 2003-2012) and social support was not examined at all.

### Physical and Mental Health of Atheists, Agnostics, Unaffiliated Theists, and Religiously Affiliated Theists in the United States

Researchers from the department of sociology & anthropology at East Tennessee State University and Louisiana State University analyzed data from a national random sample of 1,714 Americans participating in the 2010 Baylor Religion Survey (out of 7000 potential respondents for a 25% response rate). Two questions were used to categorize respondents, the first one being "Which one statement comes closest to your personal beliefs about God?" Atheists were determined by a positive response to "I am an atheist" and agnostics by a positive response to "I don't know and there is no way to find out." The second question asked about religious affiliation, with possible responses being "no religion" (unaffiliated) vs. indicating an affiliation (affiliated). These two questions were used to form the following categories: atheists ( $n=86$ , 5%), agnostics ( $n=102$ , 6%), nonaffiliated theists ( $n=75$ , 4%), and religiously affiliated theists ( $n=1451$ , 85%). Communal religious participation was also assessed by a 2-item index consisting of frequency of religious service attendance and participation in congregational activities. Outcomes were overall poor physical health, overall poor mental health, pain affecting ability to perform usual activities, feeling depressed, and feeling very healthy and full of energy. In addition, severity of psychiatric symptoms in terms of general anxiety, social anxiety, paranoia, obsessions, and compulsions were also assessed. Controlled for in all analyses were gender, age, marital status, race, ethnicity, education, income, place of residence, parental status, employment, political views, and civic engagement. **Results:** The age and demographic characteristics of participants were unfortunately not reported. Multivariate analyses indicated that nonaffiliated theists, Catholics, agnostics, and members of other religions had significantly worse overall physical health compared to atheists; additional analyses with nonaffiliated theists as the reference group indicated that evangelical and mainline Protestants reported significantly fewer physical health problems than nonaffiliated theists. Atheists also had significantly fewer overall mental health problems compared to mainline Protestants, Catholics, members of minority religions, and nonaffiliated theists; additional analyses with nonaffiliated theists as the reference category, indicated that the latter had significantly more mental health problems than evangelicals, mainline Protestants, black Protestants, Catholics, and agnostics. Atheists also had significantly fewer problems with pain compared to evangelicals, mainline Protestants, Catholics, members of other religions and nonaffiliated theists; additional analyses indicated that nonaffiliated theists had significantly more pain than evangelicals, mainline Protestants, and agnostics. Nonaffiliated theists also reported more problems with depression compared to atheists, evangelicals, mainline Protestants, Catholics, and agnostics. In addition, nonaffiliated theists had lower levels of health and energy, greater general anxiety, paranoia, and obsessive cognitions than other religious and secular categories (except for agnostics who had higher levels of obsessive cognitions). Atheists had significantly lower scores than other groups on general anxiety, paranoia (except when compared to Jewish respondents who also had low scores), obsessive cognitions, and compulsive behavior. Despite these negative results for religious affiliation, level of religious community participation was associated with fewer mental health problems, better health and higher energy, less depression, less anxiety, and less paranoia, controlling for religious affiliation, secular categories, and other predictors.

Researchers concluded: "Results indicate better physical health outcomes for atheists compared to other secular individuals and members of some religious traditions. Atheists also reported significantly lower levels of psychiatric symptoms (anxiety, paranoia, obsession, and compulsion) compared to both other seculars and members of most religious traditions. In contrast, physical and mental health were significantly worse for nonaffiliated theists compared to other secular and religious affiliates on most outcomes."

*Citation:* Baker, J. O., Stroebe, S., & Walker, M. H. (2018). Secularity, religiosity, and health: Physical and mental health differences between atheists, agnostics, and nonaffiliated theists compared to religiously affiliated individuals. *Social Science Research*, 75, 44-57.

*Comment:* Although results are reported as "outcomes," these are all cross-sectional associations. However, the results suggest here that the mental and physical health of atheists (at least for the highly selected group of 86 atheists in this analysis) is significantly better than that of most religiously affiliated theists and especially nonaffiliated theists. Thus, believing in God and yet not being religiously affiliated appear to be not a very healthy state to be in, much less healthy than not believing in God at all. Of course, religious affiliation tells us very little about level of religious involvement. It is interesting that in contrast to religious affiliation, level of religious participation was one of the strongest predictors of both mental and physical health. Unfortunately, the mental and physical health of actively religious participants was not compared to that of atheists.

### Taoist Meditation and Pain

Investigators in the department of anesthesiology at the University of Medicine in Graz, Austria, examined the effects of a single session of meditation on pain perception, heart rate, and religious/spiritual well-being. Participants were 113 long-term practitioners and novices (average age 42 years, range 18 to 69 years, two-thirds female, 100% Caucasian). They were randomly assigned to either the experimental condition where they underwent a single 20-minute guided meditation provided by headphone (n=56) or to a control group (n=57) who also had a headphone (but with an empty tape). Both groups received written instructions on how to relax physically with eyes closed. Those in the intervention group were instructed to make themselves calm, focus on their meditation, pay attention to their breathing, and direct their full attention to a place of rest within their self. The mantra "I am loved, protected and guided, embedded in the big picture" was used to help participants focus their meditation. The intervention was described as a "kind of Taoist meditation which has many similarities in Hindu and Buddhist systems."

Demographics and religious and spiritual well-being were assessed, the latter by the 48-item Multidimensional Inventory for Religious/Spiritual Well-Being, MI-RSB48 [Unterrainer et al, 2010]. The primary outcome, pain level, was assessed by the cold pressure test (CPTest), which determines a person's pain tolerance by asking them to place their hands into a bath of near freezing water and recording the length of time the person is able to leave their hands in the bath before removing them due to unbearable pain. Participants were also asked to rate their pain and stress level on a visual analogue scale (VAS). In addition, participants' cold detection threshold, warmth detection threshold, cold pain threshold, heat pain threshold, and pain intensity for cold and heat were determined. Finally, they were hooked up to a monitor to determine heart rate. Both intervention and control groups were assessed at baseline and after the 20-min intervention with the measures described above. Within-group change scores were calculated for each group and compared by t-test for independent samples. **Results:** At baseline, participants did not differ in terms of gender, age, and frequency or regularity of practicing meditation, although length of meditation practice (i.e.,

percentage of novices vs. experienced meditators in each group) was not provided. Those in the meditation group demonstrated a larger increase in pain tolerance on the CPTest ( $p=0.01$ ,  $\eta^2=.06$ ) and a greater decrease in pain intensity for heat ( $p=0.01$ ,  $\eta^2=.06$ ) compared to those in the relaxation only group (note that an  $\eta^2$  of .02 indicates a small effect and one of .13 a medium effect). Of the eight physiological measurements, these were the only significant differences ( $p$  values were not corrected for multiple comparisons). Subjective stress and pain did not differ between groups. Those in the meditation group also reported greater increases in overall religious/spiritual well-being, specifically in the areas of general religiosity, forgiveness, and connectedness, compared to the relaxation group. Researchers concluded "... meditation increases pain tolerance and reduces pain intensity, however, further work is required to determine whether meditation contains similar implications for pain patients."

*Citation:* Sollgruber, A., Bornemann-Cimenti, H., Szilagyi, I. S., & Sandner-Kiesling, A. (2018). Spirituality in pain medicine: A randomized experiment of pain perception, heart rate and religious spiritual well-being by using a single session meditation methodology. *PLoS One*, 13(9), e0203336.

*Comment:* Again, note that these were not persons with chronic pain, but rather healthy volunteers in whom pain threshold and intensity were examined. There are numerous concerns with the design, the multiple statistical comparisons, and the relatively small size of the effects. Still, these results are pretty remarkable for only a single 20-minute meditation session. The religious composition of the sample was not provided, although one might assume that the majority were Christian since the study was done in Austria (67.0% Christian; 0.3% Buddhist). Investigators did not clarify why a Christian form of meditation was not used in this study, but rather a Taoist version.

### Effects of Religious Engagement on Outcomes of Early Childhood Maltreatment

Researchers in the department of Population Health Sciences at the University of Bristol in the United Kingdom examined protective factors for academic achievement, self-esteem, and emotional well-being in adolescents who had experienced maltreatment during early childhood (prior to age 5 years). This was a longitudinal study of 1118 emotionally maltreated children and 375 physically maltreated children, identified from 14,062 live births in 1991-1992 (Avon Longitudinal Study of Parents and Children). Maltreatment was based on maternal reports of physical or emotional maltreatment towards the child, which could have been perpetrated by either the mother or her partner. Of the 1118 emotionally maltreated children, information on educational attainment was based on a national exam taken at age 16 years (General Certificate of Secondary Education exam) by 904 participants and information on self-esteem (Rosenberg Self-Esteem Scale) and well-being (Warwick-Edinburg Mental Well-Being Scale) were assessed at age 17.5 years by 391; of the 375 children experiencing physical maltreatment, 280 had information on educational achievement assessed at age 16 and 145 had data on well-being and self-esteem at age 17.5. Outcomes were dichotomized into high vs. low educational achievement, high vs. low self-esteem, and high vs. low well-being. The resilience factors examined were male gender, high IQ, internal locus of control, less emotional temperament, good social communication, close attachment to a grandparent, positive sibling interaction, good school attendance, positive opinion of school, not being bullied, supportive friendships, regular participation in extracurricular activities, and engagement with religion (otherwise not defined). Adjusted for in all analyses were gender, maternal age at birth, level of parental education, family financial status, housing adequacy, maternal reports of persistent maltreatment from mother or her partner continuing into later childhood (up to 10 years of age), and exposure to interpersonal violence between

parents in early childhood. Logistic regression was used to analyze the data. **Results:** Among emotionally maltreated children, controlling for many factors, engagement with religion predicted a 42% increased likelihood of academic success (OR=1.42, 95% CI 0.99-2.03, p=0.058), but was unrelated to either well-being or self-esteem. Among physically maltreated children, engagement in religion was unrelated to any of the three outcomes. Researchers did not mention religion in either the abstract or the conclusions. *Citation:* Khambati, N., Mahedy, L., Heron, J., & Emond, A. (2018). Educational and emotional health outcomes in adolescence following maltreatment in early childhood: a population-based study of protective factors. *Child Abuse & Neglect*, 81, 343-353. *Comment:* Unfortunately, the methods are not clear on whether this was a longitudinal or a cross-sectional study, since no information was provided on when mothers were asked about religious engagement (or when in the child's life that occurred). The focus of this study was not on religion, and the measurement of religion was quite superficial, i.e., "engagement with religion," with no further information. The only reason to present the study here is that this is one of the few (and perhaps the first) examination of the possible effects of religious involvement on academic performance and mental health outcomes of maltreated children in the United Kingdom. Future studies of this type are needed, preferably longitudinal, although with more detailed measures of religious engagement and specification of when in the child's life this occurs.

### Religiosity, "Spiritual Health Locus of Control," and Health Behaviors in African-Americans

Researchers from the department of psychology at St. Louis University and other universities in the US followed a national sample of 766 African-American adults over a 5-year period examining the effects of religious beliefs and behaviors (RBB) at baseline (T1) on active and passive spiritual health locus of control (SHLOC) at time 2 (T2), and changes in physical and mental health behaviors from T2 to time 3 (T3). A 9-item measure was used to assess RBB. The 11-item measure of SHLOC assessed both active SHLOC (9 items, focused on healthier spiritual attitudes towards locus of control) and passive SHLOC (2 items, measuring less healthy spiritual attitudes in this regard). Outcomes included depressive symptoms, physical and emotional functioning, health behaviors, and cancer screening behaviors. Controlled for in analyses were gender, race, date of birth, marital status, education, employment status, and self-rated health. Structural equation modeling was used to analyze the data.

**Results:** RBBs were associated with greater changes in active SHLOC, and had direct effects on change in health behaviors. Religious behaviors (specifically) were related to greater passive SHLOC for had some health outcomes, and these were associated with less desirable health outcomes over time. Researchers concluded: "It is important for physicians and mental health professionals to intervene with patients whose psychosocial, religious or cognitive approach to health puts them at risk of delayed cancer screening and nonadherence to follow-up care, as well as other health-compromising behaviors (e.g., poor diet, alcohol abuse)."

*Citation:* Clark, E. M., Williams, B. R., Huang, J., Roth, D. L., & Holt, C. L. (2018). A longitudinal study of religiosity, spiritual health locus of control, and health behaviors in a national sample of African Americans. *Journal of Religion and Health*, EPUB ahead of press

*Comment:* This study is summarized here because of its longitudinal design and examination of the effects of religious beliefs and behaviors on spiritual locus of control. However, the statistical analyses and presentation of results were complex and a bit confusing, making it somewhat difficult to determine the implications of the results.

### Religious Coping and Panic Disorder in Brazil

Researchers in the department of psychiatry and behavioral sciences at the Universidade Federal do Rio grande do Sul, Porte Alegre, Brazil, followed 101 outpatients with panic disorder (PD) for 12 to 16 weeks, examining predictors of outcome. Participants were involved in a randomized clinical trial that compared individual drug treatment with cognitive behavioral group therapy. Religious coping was assessed with the 49-item RCOPE-BREF, consisting of 34 items assessing positive religious coping (PRC) and 15 items assessing negative religious coping (NRC). Panic disorder was diagnosed using the MINI. Also administered was the 21-item Beck Depression Inventory. Finally, the 26-item WHOQOL-BREF was used to assess quality of life. Treatment response for PD was defined as partial remission if either the Clinical Global Impressions score was 2 or lower or there were no panic attacks during the interval; full remission was defined as both of these conditions being met. **Results:** By the end of the trial, 69% of patients achieved complete or partial remission of PD. Higher PRC at baseline predicted a lower likelihood of complete or partial remission of PD (Prevalence Ratio [PR]=0.81, p<0.01), although when adjusting for other predictors, the relationship lost statistical significance (PR=0.88, p=0.075). NRC was unrelated to PD remission status. NRC was related to change in the social QOL domain (r=0.21, p=0.04), although this lost statistical significance when other factors were controlled (demographics and clinical variables). PRC was not related to any quality-of-life domain. Researchers concluded: "We expected that S/R [spiritual/religious] coping was associated with increased odds of PD improvement, which was not confirmed. A possible explanation is that a greater use of positive S/R coping could be associated with more severe patients in this sample."

*Citation:* Zimpel, R. R., Panzini, R. G., Bandeira, D. R., Heldt, E., Manfro, G. G., Fleck, M. P., & da Rocha, N. S. (2018). Can religious coping and depressive symptoms predict clinical outcome and quality of life in panic disorder? A Brazilian longitudinal study. *Journal of Nervous and Mental Disease* 206(7), 544-548.

*Comment:* This study found no effect of religious coping on panic disorder outcome. More studies of this kind are needed to determine the effects of R/S on outcomes of mental disorders, particularly in the setting of ongoing treatment studies. Future research, however, should measure "trait" indicators of R/S involvement (such as religious attendance, intrinsic religiosity, etc.), rather than "state" measures such as religious coping or private religious activities that tend to increase in response to emotional distress, potentially confounding the effect of R/S on outcomes.

### NEWS

Congratulations to Dr. Lindsay Carey (Palliative Care Unit, La Trobe University, Victoria, Australia and Life Member of Spiritual Care Australia) for being recognised in *The Australian Magazine* "Research" Supplement (26th September 2018) for his 'Excellence in Research'. Dr. Carey was listed as the Australian National 'Field Leader' under the category of 'Humanities, Arts and Literature' for his exploratory public health research and publications relating to 'Religion' and pastoral/spiritual and palliative care. Dr. Carey has over 100 publications (comprising research articles, book chapters and an edited book). He was previously the National Research Fellow for the AHWCA for 10 years and was made in 2010 an Honorary Scholar of the Centre for Spirituality, Theology and Health at Duke University in North Carolina, USA (see <https://specialreports.theaustralian.com.au/1163512/>).

## SPECIAL EVENTS

### VIII International Symposium on Brain Death and Disorders of Consciousness Conference

(December 4-7, 2018, Havana, Cuba)

Spirituality and health research is a topic at this year's symposium. Dr. Robert Hesse will be presenting on the topic of Spirituality and Health, with a focus on Near Death Experiences (based on the work of Dr. Calixto Machado). For more information, go to: <http://www.komabraindeathcuba.com/en/default/principal>.

### 2019 David B. Larson Memorial Lecture

(March 21, Duke University Hospital North, Room 2001, 5:30-6:30P, Durham, NC)

Gail Ironson, M.D., Ph.D., from the department of psychology and psychiatry at the University of Miami, Coral Gables, will give the 2019 DBL Memorial Lecture. Dr. Ironson has over 200 publications in the field of behavioral medicine applied to HIV/AIDS, cancer, and cardiovascular disease, and is past president of the Academy of Behavioral Medicine Research Society (a senior level organization by invitation only). She has directed or co-directed federally funded research studies investigating psychological factors in long survival with HIV/AIDS, stress management in HIV and cancer, massage therapy and immunity, and the biological effects of trauma in underprivileged people, people with HIV, and people at risk for HIV. Finally, she set up and runs the trauma treatment program at the University of Miami Psychological Services Center, which makes available to the community (on a sliding scale basis) both traditional (PE, CPT) and newer (EMDR) approaches to treatment. Her current areas of focus include examining positive psychological factors and health (especially spirituality) and trauma. She is one of the core investigators in the nationwide Templeton Landmark study on Spirituality and Health, and has just completed another study on treating trauma in men at risk for HIV. All are welcome to this lecture, including members of the general public. For more information, contact [Harold.Koenig@Duke.edu](mailto:Harold.Koenig@Duke.edu).

### 2019 Conference on Medicine and Religion

(March 29-31, Durham, NC)

The theme of this year's conference is: *Medicine and Faithful Responses to Suffering: "My Pain is Always With Me"*. Pain haunts human experience and frequently leads people to seek help from medical practitioners. As many as one in four American adults suffers chronic pain. On one hand, relieving pain seems the most obvious of responsibilities for clinicians. "To cure sometimes, to relieve often, to comfort always," the saying goes. On the other hand, pain often seems to defy medical solutions and to bedevil the efforts of both patients and clinicians. What, then, should we make of pain? What are traditioned practices of responding wisely to pain? What role does medicine play in those practices? Jewish, Christian, and Islamic scriptures and traditions all speak to the experience of pain, why it exists, how it affects an individual and a community, how one might respond faithfully to pain in oneself and in one's neighbor, and what may be hoped for when pain will not go away. The 2019 Conference on Medicine and Religion invites health care practitioners, scholars, religious community leaders, and students to take up these questions about pain by relating them to religious traditions and practices, particularly, but not exclusively, those of Judaism, Christianity and Islam. The conference is a forum for exchanging ideas from an array of disciplinary perspectives, from accounts of clinical practices to empirical research to scholarship in the humanities. For more information or for those wishing to submit an abstract (deadline October 18), go to: <http://www.medicinandreligion.com/>.

## RESOURCES

### Building Healthy Communities through Medical-Religious Partnerships (3<sup>rd</sup> Ed)

(Johns Hopkins University Press, 2018)

From the publisher: "Because health care works best when patients assume greater responsibility for their own health, community outreach and patient education are essential. But where can health care organizations find the resources to educate large numbers of people about chronic diseases? How can they tailor programs to meet the needs of increasingly diverse communities? And how can they reach people who have no ties to the health care system? [This book] presents an innovative approach to community-based health education and patient advocacy programs targeted at the prevention and management of disease. Offering valuable guidance for religious and medical leaders interested in developing programs in their congregations and communities, the book includes practical and accessible information for establishing health education programs, identifies additional resources that can be obtained from local and national organizations, and discusses a range of medical topics. It also outlines how to train volunteers to assist others in navigating our complex health system. This latest edition, which has been thoroughly revised and updated, incorporates new chapters on medical topics across the lifespan, including lung disease, kidney disease, and child and adolescent health issues; a thorough assessment of medical-religious partnerships that have emerged over the past twenty-five years; and a user-friendly website with downloadable resources—including an instructor's guide, PowerPoint slides, and ready-made handouts." Available for \$21.95 at <https://www.amazon.com/Building-Healthy-Communities-Medical-Religious-Partnerships/dp/1421425807>.

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

(Academic Press, 2018) (Elsevier)

From the publisher: "[This 384 page volume] summarizes the latest research on how religion may help people better cope or exacerbate their stress, covering its relationship to depression, anxiety, suicide, substance abuse, well-being, happiness, life satisfaction, optimism, generosity, gratitude and meaning and purpose in life. The book looks across religions and specific faiths, as well as to spirituality for those who don't ascribe to a specific religion. It integrates research findings with best practices for treating mental health disorders for religious clients, also covering religious beliefs and practices as part of therapy to treat depression and posttraumatic stress disorder. [In brief, this volume] summarizes research findings on the relationship of religion to mental health, investigates religion's positive and negative influence on coping, presents common findings across religions and specific faiths, identifies how these findings inform clinical practice interventions, and describes how to use religious practices and beliefs as part of therapy." Available for \$72 at <https://www.amazon.com/Religion-Mental-Health-Research-Applications/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 is struggling with a condition called posttraumatic stress disorder (PTSD), then this little book is for you. As a psychiatrist and research scientist for more than 30 years, I've been struck by how many people with PTSD are not being treated correctly for this disorder (and why more than 50% of persons with PTSD continue to suffer disabling

symptoms despite treatment). For that reason, I've written this book to inform those affected by PTSD about the condition and the best whole person treatments available today. I describe here what PTSD is, the causes for it, and the factors that protect against it. I also examine a separate condition called moral injury that often accompanies PTSD and can interfere with recovery unless identified and treated at the same time. I then focus on the best evidence-based treatments for PTSD today -- psychological, medical / pharmacological, and especially, religious or spiritual. 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 at <https://www.amazon.com/dp/172445210X>.

### **Religion and Mental Health Book Series**

#### **Protestant Christianity and Mental Health: Beliefs, Research and Applications**

(CreateSpace Platform, 2017)

Available for \$7.50 at: <https://www.amazon.com/dp/1544642105/>

#### **Catholic Christianity and Mental Health: Beliefs, Research and Applications**

(CreateSpace Platform, 2017)

Available for \$7.50 at: <https://www.amazon.com/Catholic-Christianity-Mental-Health-Applications/dp/1544207646>

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

(CreateSpace Platform, 2017)

Available for \$7.50 at: <https://www.amazon.com/Islam-Mental-Health-Research-Applications/dp/1544730330>.

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

(CreateSpace Platform, 2017)

Available for \$7.50 at: <https://www.amazon.com/dp/1544642105/>

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

(CreateSpace Platform, 2017)

Available for \$7.50 at: <https://www.amazon.com/Judaism-Mental-Health-Research-Applications/dp/154405145X/>

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

(CreateSpace Platform, 2017)

Available for \$7.50 at <https://www.amazon.com/dp/1545234728/>

#### **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>.

### **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/>

## **TRAINING OPPORTUNITIES**

### **Spiritual Competency Training in Mental Health**

Spiritual Competency Training in Mental Health (SCT-MH) is a multi-disciplinary online program designed to train mental health providers in basic spiritual and religious competencies (*a program that is now provided free of charge*). The goal of the program is to equip providers with greater confidence and competence in helping clients with religious/spiritual issues. The online training takes six to eight hours to complete and consists of a number of engaging resources and learning activities. The modules cover a number of key topics: common stereotypes about religion/spirituality (RS); the diversity of RS expressions; why it is important to address RS in treatment; the importance of the therapist's own RS attitudes, beliefs, and practices; how to assess RS; how to help clients access RS resources, and; how to respond to RS problems that arise in treatment. Mental health providers (MD, PhD, Masters level) of all disciplines are welcome to participate. Free CE and CME credits are available upon completion of the program. If you are interested in participating, please email Dr. Michelle Pearce at [mpearce@som.umaryland.edu](mailto:mpearce@som.umaryland.edu) for further information or go to this website for the eligibility screen: <http://bit.ly/SCTMH>. Please feel free to share this training program with other colleagues.

### **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 30, 2019**. The Foundation will communicate their decision (rejection or invitation to submit a full proposal) for all OFIs by October 4, 2019. JTF's current interests on the interface of religion, spirituality, and health include: (1) research on causal relationships and underlying mechanisms (basic psychosocial, behavioral, and physiological pathways), (2) increasing competencies of health care professionals in working with religious patients and issues (especially in mental health and public health), (3) research involving the development of religious-integrated interventions that lead to improved health, (4) efforts to increase collaboration and rates of referrals between mental health professionals and religious clergy. More information: <https://www.templeton.org/what-we-fund/grantmaking-calendar>.

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

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

## 2018-2019 CSTH CALENDAR OF EVENTS...

### Dec

19 **When Professionals Retire: Critical Transitions in Later Life and the Role of Spirituality**  
**Speaker:** Dan G. Blazer, M.D., PhD  
J. P. Gibbons Professor of Psychiatry, Emeritus  
Duke University Medical Center  
Learning Lab 1502, 1<sup>st</sup> floor, Duke South, 3:30-4:30  
**Contact:** Harold G. Koenig ([Harold.Koenig@duke.edu](mailto:Harold.Koenig@duke.edu))

### Jan

30 **Spirituality and aging in military personnel**  
**Speaker:** James Helton, PsyD, MPH, MDiv  
(student of Henri Nouwen)  
Founder and Director, Crisis Team Leadership  
Development, U.S. Military Trainer and Veteran  
Center for Aging, 3rd floor, Duke South, 3:30-4:30  
**Contact:** Harold G. Koenig ([Harold.Koenig@duke.edu](mailto:Harold.Koenig@duke.edu))