

INTRODUCTION

IBCSR Research Review (IRR) is published by the Institute for the Bio-Cultural Study of Religion, a non-profit research institute dedicated to the scientific study of religion using biocultural techniques. *IRR* briefly annotates and furnishes online information about scientific research articles related to brain, behavior, culture, and religion published in English in leading journals. It also lists relevant books. Articles in press are listed without annotation. Annotations for articles aim to supply a preliminary understanding of the methods and results of a research study, or the argument of a paper. Annotations typically furnish more detail for articles in the scientific study of religion related to religion, brain, and behavior, than for articles in the area of spirituality and health, in accordance with IBCSR research priorities.

Articles for this issue were located by searching the following databases: H. W. Wilson Applied Science and Technology, ATLA Religion Database, H. W. Wilson General Science, PubMed, EBSCO Psychology and Behavioral Sciences Collection, PsycARTICLES, PsycINFO, ScienceDirect, and Web of Science. The search terms were altruism, god, goddess, meditat*, prayer, relig*, ritual, spiritu*, and yoga, tailored to the database being searched. Books were located on Amazon.com. Articles not directly relevant to the scientific study of religion were excluded, as were correspondence and reviews. From a universe of 795 articles, 119 articles have been retained from 68 journals. There are 40 pre-publication citations from 31 journals.

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PART 1: ARTICLES IN RELIGION, BRAIN, AND BEHAVIOR

1.1 SCIENTIFIC STUDY OF RELIGION: COGNITIVE NEUROSCIENCE

Boccia, Maddalena, Laura Piccardi & Paola Guariglia. 2015. The Meditative Mind: A Comprehensive Meta-Analysis of MRI Studies. *BioMed Research International* 2015. 419808. doi:10.1155/2015/419808.

Over the past decade mind and body practices, such as yoga and meditation, have raised interest in different scientific fields; in particular, the physiological mechanisms underlying the beneficial effects observed in meditators have been investigated. Neuroimaging studies have studied the effects of meditation on brain structure and function and findings have helped clarify the biological underpinnings of the positive effects of meditation practice and the possible integration of this technique in standard therapy. The large amount of data collected thus far allows drawing some conclusions about the neural effects of meditation practice. In the present study researchers used activation likelihood estimation (ALE) analysis to make a coordinate-based meta-analysis of neuroimaging data on the effects of meditation on brain structure and function. Results indicate that meditation leads to activation in brain areas involved in processing self-relevant information, self-regulation, focused problem-solving, adaptive behavior, and interoception. Results also show that meditation practice induces functional and structural brain modifications in expert meditators, especially in areas involved in self-referential processes such as self-awareness and self-regulation. These results demonstrate that a biological substrate underlies the positive pervasive effect of meditation practice and suggest that meditation techniques could be adopted in clinical populations and to prevent disease.

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Grecucci, Alessandro, Edoardo Pappaianni, Roma Siugzdaite, Anthony Theuninck & Remo Job. 2015. Mindful Emotion Regulation: Exploring the Neurocognitive Mechanisms behind Mindfulness. *BioMed Research International* 2015. 670724.
doi:10.1155/2015/670724.

The purpose of this paper is to review some of the psychological and neural mechanisms behind mindfulness practice in order to explore the unique factors that account for its positive impact on emotional regulation and health. After reviewing the mechanisms of mindfulness and its effects on clinical populations researchers will consider how the practice of mindfulness contributes to the regulation of emotions. The authors argue that mindfulness has achieved effective outcomes in the treatment of anxiety, depression, and other psychopathologies through the contribution of mindfulness to emotional regulation. They first consider the unique factors that mindfulness meditation brings to the process of emotion regulation that may account for its effectiveness, and then review experimental evidence that points towards the unique effects of mindfulness specifically operating over and above the regulatory effects of cognitive reappraisal mechanisms. A neuroanatomical circuit that leads to mindful emotion regulation is also suggested. This paper thereby aims to contribute to proposed models of mindfulness for research and theory building by proposing a specific model for the unique psychological and neural processes involved in mindful detachment that account for the effects of mindfulness over and above the effects accounted for by other well-established emotional regulation processes such as cognitive reappraisal.

Kurth, Florian, Nicolas Cherbuin & Eileen Luders. 2015. Reduced age-related degeneration of the hippocampal subiculum in long-term meditators. *Psychiatry Research: Neuroimaging* 232(3). 214–218.
doi:10.1016/j.psychresns.2015.03.008.

Normal aging is known to result in a reduction of gray matter within the hippocampal complex, particularly in the subiculum. The present study was designed to address the question whether the practice of meditation can amend this age-related subicular atrophy. For this purpose, researchers established the correlations between subicular volume and chronological age within 50 long-term meditators and 50 control subjects. High-resolution magnetic resonance imaging (MRI) scans were automatically processed combining cytoarchitectonically defined probabilistic maps with advanced tissue segmentation and registration methods. Overall, steeper negative regression slopes were observed in controls. The analysis further revealed a significant group-by-age interaction for the left subiculum with a significant negative correlation between age and subicular volume in controls, but no significant correlation in meditators. Altogether, these findings seem to suggest a reduced age-related atrophy of the left subiculum in meditators compared to healthy controls. Possible explanations might be a relative increase of subicular tissue over time through long-term training as meditation is a process that incorporates regular and ongoing mental efforts. Alternatively, because meditation is an established form of reducing stress, this observation might reflect an overall preservation of subicular tissue through a reduced neuronal vulnerability to negative effects of stress.

McDougall, Graham J., David E. Vance, Ernest Wayde, Katy Ford & Jeremiah Ross. 2015. Memory Training Plus Yoga for Older Adults. *Journal of Neuroscience Nursing* 47(3). 178–188.

doi:10.1097/JNN.000000000000133.

Previous tests of the SeniorWISE intervention with community-residing older adults that were designed to improve affect and cognitive performance were successful and positively affected these outcomes. In this study, researchers tested whether adding yoga to the intervention would affect the outcomes. Using a quasiexperimental pre-post design, the researchers delivered 12 hours of SeniorWISE memory training that included a 30-minute yoga component before each training session. The intervention was based on the four components of self-efficacy theory: enactive mastery experience, vicarious experience, verbal persuasion, and physiologic arousal. Participants were 133 older adults between the ages of 53 and 96 years from four retirement communities in Central Texas. Individuals were screened and tested and then attended training sessions two times a week over 4 weeks. A septuagenarian licensed psychologist taught the memory training, and a certified yoga instructor taught yoga. Eighty-three participants completed at least 9 hours (75%) of the training and completed the posttest. Those individuals who completed made significant gains in memory performance, instrumental activities of daily living, and memory self-efficacy and had fewer depressive symptoms. Thirteen individuals advanced from poor to normal memory performance, and seven improved from impaired to poor memory performance; thus, 20 individuals improved enough to advance to a higher functioning memory group. The findings from this study of a memory training intervention plus yoga training show that the benefits of multifactorial interventions had additive benefits. The combined treatments offer a unique model for brain health programs and the promotion of nonpharmacological treatment with the goals of maintaining healthy brain function and boosting brain plasticity.

Simon, Rozalyn & Maria Engström. 2015. The default mode network as a biomarker for monitoring the therapeutic effects of meditation. *Frontiers in Psychology* 6. 776.
doi:10.3389/fpsyg.2015.00776.

The default mode network (DMN) is a group of anatomically separate regions in the brain found to have synchronized patterns of activation in functional magnetic resonance imaging (fMRI). Mentation associated with the DMN includes processes such as mind wandering, autobiographical memory, self-reflective thought, envisioning the future, and considering the perspective of others. Abnormalities in the DMN have been linked to symptom severity in a variety of mental disorders indicating that the DMN could be used as a biomarker for diagnosis. These correlations have also led to the use of DMN modulation as a biomarker for assessing pharmacological treatments. Concurrent research investigating the neural correlates of meditation, have associated DMN modulation with practice. Furthermore, meditative practice is increasingly understood to have a beneficial role in the treatment of mental disorders. Therefore the present researchers propose the use of DMN measures as a biomarker for monitoring the therapeutic effects of meditation practices in mental disorders. Recent findings support this perspective, and indicate the utility of DMN monitoring in understanding and developing meditative treatments for these debilitating conditions.

Singh, Nilkamal & Shirley Telles. 2015. Neurophysiological Effects of Meditation Based on Evoked and Event Related Potential Recordings. *BioMed Research International* 2015. 406261.
doi:10.1155/2015/406261.

Evoked potentials (EPs) are a relatively noninvasive method to assess the integrity of sensory pathways. As the neural generators for most of the components are relatively well worked out, EPs have been used to understand the changes occurring during meditation. Event-related potentials (ERPs) yield useful information about the response to tasks, usually assessing attention. A brief review of the literature yielded eleven studies on EPs and seventeen on ERPs from 1978 to 2014. The EP studies covered short, mid, and long latency EPs, using both auditory and visual modalities. ERP studies reported the effects of meditation on tasks such as the auditory oddball paradigm, the attentional blink task, mismatched negativity, and affective picture viewing among others. Both EP and ERPs were recorded in several meditations detailed in the review. Maximum changes occurred in mid latency (auditory) EPs suggesting that maximum changes occur in the corresponding neural generators in the thalamus, thalamic radiations, and primary auditory cortical areas. ERP studies showed meditation can increase attention and enhance efficiency of brain resource allocation with greater emotional control.

1.2 SCIENTIFIC STUDY OF RELIGION: EVOLUTION

Anglin, Stephanie M. 2015. On the nature of implicit soul beliefs: When the past weighs more than the present. *The British Journal of Social Psychology / the British Psychological Society* 54(2). 394–404.
doi:10.1111/bjso.12094.

Intuitive childhood beliefs in dualism may lay the foundation for implicit soul and afterlife beliefs, which may diverge from explicit beliefs formed later in adulthood. Brief Implicit Association Tests were developed to investigate the relation of implicit soul and afterlife beliefs to childhood and current beliefs. Early but not current beliefs covaried with implicit beliefs. Results demonstrated greater discrepancies in current than in childhood soul and afterlife beliefs among religious groups, and no differences in implicit beliefs. These findings suggest that implicit soul and afterlife beliefs diverge from current self-reported beliefs, stemming instead from childhood beliefs.

Boyer, Pascal & Nora Parren. 2015. Threat-Related Information Suggests Competence: A Possible Factor in the Spread of Rumors. *PloS One* 10(6). e0128421.
doi:10.1371/journal.pone.0128421.

Information about potential danger is a central component of many rumors, urban legends, ritual prescriptions, religious prohibitions and witchcraft crazes. Researchers investigate a potential factor in the cultural success of such material, namely that a source of threat-related information may be intuitively judged as more competent than a source that does not convey such information. In five studies, the researchers asked participants to judge which of two sources of information, only one of which conveyed threat-related information, was more knowledgeable. Results suggest that mention of potential danger makes a source appear more competent than others, that the effect is not due to a general negativity bias, and that it concerns competence rather than a more generally positive evaluation of the source.

Chiang, Yen-Sheng. 2015. Good Samaritans in Networks: An Experiment on How Networks Influence Egalitarian Sharing and the Evolution of Inequality. *Plos One* 10(6). e0128777.
doi:10.1371/journal.pone.0128777.

The fact that the more resourceful people are sharing with the poor to mitigate inequality, known as egalitarian sharing, is well documented in the behavioral science research. How inequality evolves as a result of egalitarian sharing is determined by the structure of “who gives whom.” While most prior experimental research investigates allocation of resources in dyads and groups, the paper extends the research of egalitarian sharing to networks for a more generalized structure of social interaction. An agent-based model is proposed to predict how actors, linked in networks, share their incomes with neighbors. A laboratory experiment with human subjects further shows that income distributions evolve to different states in different network topologies. Inequality is significantly reduced in networks where the very rich and the very poor are connected so that income discrepancy is salient enough to motivate the rich to share their incomes with the poor. The study suggests that social networks make a difference in how egalitarian sharing influences the evolution of inequality.

Galen, Luke W., Michael Sharp & Alison McNulty. 2015. Nonreligious group factors versus religious belief in the prediction of prosociality. *Social Indicators Research* 122(2). 411–432. doi:10.1007/s11205-014-0700-0.

Previous research has suggested that religious belief is associated with a range of prosocial behaviors such as social embeddedness and generosity. However, this literature has often conflated belief in God with group involvement and failed to control for demographic and social network effects. Rather than assessing prosociality by comparing religious group members with the unaffiliated, the present study also includes secular/nonreligious group members. Multiple regression analyses controlling for confounds diminishes many of the apparent differences between religious and nonreligious individuals. Belief in God itself accounts for approximately 1–2% of the variance in social embeddedness domains and < 1% of the variance in the domains of outside-group charity and community volunteering. Belief in God is associated with homophily and parochial behavior such as within-group charitable donations and constrained contact with different others. These findings indicate that prosocial benefits are more related to general group membership equally available to religious and secular group members alike than they are to specifically religious content. Religious beliefs are related to within-group prosociality as well as homophily and parochialism directed to those outside the group.

Guéguen, Nicolas, Christine Bougeard-Delfosse & Céline Jacob. 2015. The positive effect of the mere presence of a religious symbol on compliance with an organ donation request. *Social Marketing Quarterly* 21(2). 92–99. doi:10.1177/1524500415582070.

Identifying low-cost, effective methods to influence behavior is of keen interest to social marketers and others striving to bring about social change. Research on material primes (an object or a word present in the individual’s environment) has received little interest from scientists. This field study conducted in France examined whether the presence of a religious symbol could influence the number of individuals who accepted an organ donation card. The study, conducted with 200 males and 200 females, examined the effect of the presence versus the absence of a Christian cross worn by a solicitor on participant’s compliance to an organ donation request. The findings showed that participants exposed to a Christian cross worn by a solicitor complied more favorably with the request addressed by the solicitor. This effect was found among both male and female

participants. The presence of the Christian cross could have acted as a prime that led in turn to the activation of further concepts associated with religion such as compassion, support or solidarity, which in turn led participants to accept the organ donation solicitation more favorably.

Launay, Jacques & Robin I. M. Dunbar. 2015. Playing with Strangers: Which Shared Traits Attract Us Most to New People? *PloS One* 10(6). e0129688.
doi:10.1371/journal.pone.0129688.

Homophily, the tendency for individuals to associate with those who are most similar to them, has been well documented. However, the influence of different kinds of similarity (e.g. relating to age, music taste, ethical views) in initial preferences for a stranger have not been compared. In the current study, researchers test for a relationship between sharing a variety of traits (i.e. having different kinds of similarity) with a stranger and the perceived likeability of that stranger. In two online experiments, participants were introduced to a series of virtual partners with whom they shared traits, and subsequently carried out activities designed to measure positivity directed towards those partners. Greater numbers of shared traits led to linearly increasing ratings of partner likeability and ratings on the Inclusion of Other in Self scale. The authors identified several consistent predictors of these two measures: shared taste in music, religion and ethical views. These kinds of trait are likely to be judged as correlates of personality or social group, and may therefore be used as proxies of more in-depth information about a person who might be socially more relevant.

Lindström, Björn & Andreas Olsson. 2015. Mechanisms of social avoidance learning can explain the emergence of adaptive and arbitrary behavioral traditions in humans. *Journal of Experimental Psychology. General* 144(3). 688–703.
doi:10.1037/xge0000071.

Many nonhuman animals preferentially copy the actions of others when the environment contains predation risk or other types of danger. In humans, the role of social learning in avoidance of danger is still unknown, despite the fundamental importance of social learning for complex social behaviors. Critically, many social behaviors, such as cooperation and adherence to religious taboos, are maintained by threat of punishment. However, the psychological mechanisms allowing threat of punishment to generate such behaviors, even when actual punishment is rare or absent, are largely unknown. To address this, researchers used both computer simulations and behavioral experiments. First, they constructed a model where simulated agents interacted under threat of punishment and showed that mechanisms' (a) tendency to copy the actions of others through social learning, together with (b) the rewarding properties of avoiding a threatening punishment, could explain the emergence, maintenance, and transmission of large-scale behavioral traditions, both when punishment is common and when it is rare or nonexistent. To provide empirical support for this model, including the 2 mechanisms, the authors conducted 4 experiments, showing that humans, if threatened with punishment, are exceptionally prone to copy and transmit the behavior observed in others. The results show that humans, similar to many nonhuman animals, use social learning if the environment is perceived as dangerous. The study thus provides a novel psychological and computational basis for a range

of human behaviors characterized by the threat of punishment, such as the adherence to cultural norms and religious taboos.

1.3 SCIENTIFIC STUDY OF RELIGION: PSYCHOLOGY AND CULTURE

Abdel-Khalek, Ahmed M. & David Lester. 2015. Self-Reported Religiosity in Kuwaiti and American College Students. *Psychological Reports* 116(3). 986–989.

In previous research, Kuwaiti students obtained higher scores than American students on a religiosity scale. For the present study, the self-reported religiosity of Kuwaiti and American students was assessed using a single item. The respondents were 154 Kuwaiti students and 154 American college students. The Kuwaiti students responded in Arabic and the American students in English to the question: “What is your level of religiosity in general?” using an 11-point Likert format anchored by 0 and 10. The high score indicates high religiosity. The Kuwaiti students obtained a significantly higher mean score for religiosity than did their American counterparts (6.5 vs 4.5), indicating that religiosity is more important in the lives of the present sample of Kuwaiti students than in their American counterparts. A single-item self-rating scale may be useful in brief surveys such as epidemiological studies.

Acosta, Lealani Mae Y., John B. Williamson & Kenneth M. Heilman. 2015. Which Cheek did the Resurrected Jesus Turn? *Journal of Religion and Health* 54(3). 1091–1098.
doi:10.1007/s10943-014-9945-9.

Secular portraits are likely to show more of the left than right side of the face (hemiface). Prior research has shown that emotions are more strongly expressed by the left hemiface. In addition, the valence theory of emotion proposes that the right hemisphere is dominant for mediating negative emotions, and the left hemisphere for positive emotions. Since religious art depicting a scene such as the Resurrection of Jesus is more likely to be associated with positive emotions, the present researchers postulated that there would be a significant smaller percentage number of artistic works of the Resurrection that reveal the left side of the face of Jesus than in those art works portraying the Crucifixion. Thus, the researchers analyzed artistic portrayals of the Resurrection of Jesus and compared them to the artistic scenes of the Crucifixion. This analysis revealed that the left side of the face of Jesus is less commonly depicted in portraits of the Resurrection than the Crucifixion. In addition, both the right hemiface, and forward-facing faces were also more commonly portrayed in painting of the Resurrection than the Crucifixion. Whereas this right-left hemiface, Resurrection-Crucifixion dichotomy may be related to right-left hemispheric difference in the mediation of emotional valence, other factors such as agency, action-intention, and biblical text may have influenced these differences.

Be’ery, Gilad & Pazit Ben-Nun Bloom. 2015. God and the Welfare State: Substitutes or Complements? An Experimental Test of the Effect of Belief in God’s Control. *PloS One* 10(6). e0128858.
doi:10.1371/journal.pone.0128858.

Belief in God’s control of the world is common to many of the world’s religions, but there are conflicting predictions regarding its role in shaping attitudes toward the welfare state. While the devout are expected to support pro-social values like helping others, and thus might be supportive

of the welfare state, the possibility of taking action is undermined by the belief in God's absolute control over world affairs and in a morally perfect providence, who is responsible for the fates of individuals. As the literature provides mixed results on this question, this study examines the role of belief in God's control on welfare attitudes using three priming experiments and two priming tasks, carried out with a design that is both cross-cultural (US vs. Israel) and cross-religious tradition (Judaism vs. Catholicism). Researchers find evidence that, largely, belief in God's control increases support for income redistribution among Israeli Jews (study 1), American Jews (study 2), and American Catholics (study 3). The findings suggest that the traditional and common political gap between the economic left and the religious, based on the evaluation that religious beliefs lead to conservative economic preferences, may be overstated.

Buzdar, Muhammad Ayub, Akhtar Ali & Riaz Ul Haq Tariq. 2015. Religious orientations as a predictor of rational thinking among secondary school students. *Thinking Skills and Creativity* 16. 1–8.
doi:10.1016/j.tsc.2014.11.005.

Cognitive experiential self-theory (CEST) postulates that past experiences develop implicit beliefs in human cognitive system. These beliefs modify and generate schemas attaching meanings to self, others and relations between self and others. Allport's religious orientations are explanations of people religious beliefs focusing the reasons of their religiousness. In the current study, researchers investigated the contribution of secondary school students' religious affiliations (fellowship with Hinduism, Christianity or Islam) as well as religious orientations (intrinsic, extrinsic personal and extrinsic social) in developing their cognitive experiential thinking systems. The Hindu (n=1050), Christian (n=1073), and Muslim (n=1394) secondary school students participated in the study. Age universal I-E (intrinsic–extrinsic religiosity) scale and rational experiential inventory for adolescents (REI-A) were adapted to collect the required information. The authors conclude that the students' religious affiliations and orientations have significant impacts on their cognitive systems, specifically on rational thinking rather than on experiential thinking. The religious orientations moderately explain the variances in rational thinking of Hindu and Muslim students, while their impact on the rational choices of the Christian students is very small. In general, both an intrinsic orientation to religion and an external personal orientation are positively associated with rational thinking, while an external social orientation is negatively associated. Religious affiliations and orientations have very little effect on experiential thinking.

Cardeña, Etzel, Sophie Reijman, Cathrine Lawaetz Wimmelmann & Christian Gaden Jensen. 2015. Psychological health, trauma, dissociation, absorption, and fantasy proneness among Danish spiritual practitioners. *Psychology of Consciousness: Theory, Research, and Practice* 2(2). 170–184.
doi:10.1037/cns0000047.

Groups of spiritual practitioners (P) (n=38), long-term residents in a center offering spiritual courses (R) (n=8), and matched control groups from a general, population sample for P (CP) (n=45) and for R (CR) (n=14) were compared. P had high levels of education and tended to be in a committed relationship and belong to the Danish National Church, whereas R had a lower level of education and were unlikely to be in a committed relationship or belong to the Church, suggesting social marginality. All groups completed the Brief Symptom Inventory-53 (BSI-53), a

measure of psychological distress. P did not differ from the control groups in the Global Severity scale (GSI) or the other subscales of the BSI-53 except for scoring lower on the phobic anxiety subscale. In contrast, R scored higher in the GSI and most BSI-53 subscales than P and the control groups, and published norms for Danish and US populations. P and R did not differ in the subscales of somatization or interpersonal sensitivity. These two groups also filled out measures of dissociation, general and severe trauma, absorption, and fantasy proneness. R scored higher than P in dissociation, severe trauma, and absorption. The GSI correlated with dissociation, a history of serious trauma and (weakly) with absorption, but not with general trauma or fantasy-proneness. Overall, the results do not support the view that most spiritual practitioners have higher psychological distress or are socially marginal, although there is a subset of more troubled individuals.

- Chang, Edward C., Tina Yu, Zunaira Jilani, Mine Muyan, Jiachen Lin & Jameson K. Hirsch. 2015. The pursuit of perfection in spiritual engagements: The centrality of parental expectations as a positive and unique predictor. *Personality and Individual Differences* 79. 162–165.
doi:10.1016/j.paid.2015.02.009.

In the present study, researchers examined the relations between perfectionism and spirituality in a sample of college students. Results of correlational analyses were generally consistent with the notion that adaptive perfectionism dimensions (e.g., personal standards & organization) were positively associated with spirituality, whereas maladaptive perfectionism dimensions (e.g., concern over mistakes, parental criticism) were negatively associated with spirituality. Furthermore, results of conducting regression analyses provided support for perfectionism dimensions as unique predictors of different dimensions of spirituality. Interestingly, the authors found parental expectations to be a positive and unique predictor for all three dimensions of spirituality. Some implications on the importance of the present findings for future research on perfectionism and spirituality in adults are discussed.

- Cui, Jinhua, Hoje Jo, Haejung Na & Manuel G. Velasquez. 2015. Workforce diversity and religiosity. *Journal of Business Ethics* 128(4). 743–767.
doi:10.1007/s10551-013-1984-8.

Workforce diversity has received increasing amounts of attention from academics and practitioners alike. In this article, researchers examine the empirical association between a firm's workforce diversity (hereafter, diversity) and the degree of religiosity of the firm's management by investigating their unidirectional and endogenous effects. Employing a large and extensive U.S. sample of firms from the years 1991–2010, the researchers find a positive association between a measure of the firm's commitment to diversity and the religiosity of the firm's management after controlling for various firm characteristics. In addition, after controlling for endogeneity with the dynamic panel generalized method of moment, the researchers still find a positive association between the firm's diversity and management's religiosity. The authors interpret these results as supportive of the religious motivation explanation that views the firm as a human community and considers religion as a factor that influences managers to more positively embrace diversity. These results, however, provide no support for the resource-constraint hypothesis that views the firm as a nexus of contracts and sees managers as aiming to maximize shareholder

returns under resource constraints that force them to invest only in projects that have a positive net present value (NPV) and reject diversity initiatives since these do not have a positive NPV.

Elias, Julio J., Nicola Lacetera & Mario Macis. 2015. Markets and morals: an experimental survey study. *PloS One* 10(6). e0127069.
doi:10.1371/journal.pone.0127069.

Most societies prohibit some market transactions based on moral concerns, even when the exchanges would benefit the parties involved and would not create negative externalities. A prominent example is given by payments for human organs for transplantation, banned virtually everywhere despite long waiting lists and many deaths of patients who cannot find a donor. Recent research, however, has shown that individuals significantly increase their stated support for a regulated market for human organs when provided with information about the organ shortage and the potential beneficial effects a price mechanism. In this study researchers focused on payments for human organs and on another “repugnant” transaction, indoor prostitution, to address two questions: (A) Does providing general information on the welfare properties of prices and markets modify attitudes toward repugnant trades? (B) Does additional knowledge on the benefits of a price mechanism in a specific context affect attitudes toward price-based transactions in another context? By answering these questions, researchers can assess whether eliciting a market-oriented approach may lead to a relaxation of moral opposition to markets, and whether there is a cross-effect of information, in particular for morally controversial activities that, although different, share a reference to the “commercialization” of the human body. Relying on an online survey experiment with 5,324 U.S. residents, survey analysis found no effect of general information about market efficiency, consistent with morally controversial markets being accepted only when they are seen as a solution to a specific problem. Some cross-effects of information about a transaction on the acceptance of the other were found; however, the responses were mediated by the gender and (to a lesser extent) religiosity of the respondent—in particular, women exposed to information about legalizing prostitution reduced their stated support for regulated organ payments. The authors relate these findings to prior research and discuss implications for public policy.

Głaz, Stanisław. 2015. The Importance of Terminal Values and Religious Experience of God’s Presence and God’s Absence in the Lives of University Students with Various Levels of Empathy. *Journal of Religion and Health* 54(3). 1052–1067.
doi:10.1007/s10943-014-9884-5.

The aims of the research this author embarked on were: (a) to show the preference of terminal values in personal and in social character, as well to determine the level of religious experience—God’s presence and God’s absence—in groups of young people characterized by a high and low level of empathy and (b) to show the relation between terminal values in personal and in social character and religious experience—God’s presence and God’s absence—in groups of young people with a high and low level of empathy. In the research, the following methods were applied: The Scale of Religious Experience by Głaz (in order to define the level of religious experience), and Mehrabian and Epstein’s Questionnaire Measure of Emotional Empathy (in order to define the level of empathy). In order to show the terminal values preference amongst young people, the Rokeach Value Survey was applied. The research was carried out in Kraków amongst 200

university students. The research has shown that students with a high level of empathy reveal a higher level of experience of God's presence than the people with a low level of it. University students with a high level of empathy amongst terminal values prefer wisdom and pleasure as values that are personal in character, and family security as a value that is social in character. Students with a low level of empathy prefer pleasure and freedom for the former, and family security for the latter. In the group of people with a high level of empathy, it is value in personal character—a sense of accomplishment—that contributes more to explaining the variance of religious experience of God's presence, and in group of people with a low level of empathy, it is social value-social recognition. Whereas in the group of people with a high level of empathy it is value in social character (equality) that contributes more to explaining the variance of religious experience of God's absence, in groups of people with a low level of empathy, it is a personal value (salvation).

Heath, Oliver, Gilles Verniers & Sanjay Kumar. 2015. Do Muslim voters prefer Muslim candidates? Co-religiosity and voting behaviour in India. *Electoral Studies* 38. 10–18.
doi:10.1016/j.electstud.2015.01.005.

Does candidate religion influence vote choice? And if so, under what conditions does religion matter? In this contribution researchers provide the first systematic analysis of the impact of candidate religion on voting behavior in an ethnically divided democracy: Uttar Pradesh, North India. The results from a series of conditional logit models shows that Muslims are more likely to vote for Muslim candidates, but only when those candidates have a realistic chance of winning. There is thus a strong strategic element to their vote calculus. Moreover, there is no evidence that Hindus discriminate against Muslim candidates, or that parties face an electoral penalty for fielding a Muslim candidate.

Horvath, Michael. 2015. Predicting work outcomes from religiosity and perceived calling. *The Career Development Quarterly* 63(2). 141–155.
doi:10.1002/cdq.12010.

Research suggests that individuals who perceive their work as a calling experience a variety of positive outcomes, such as occupational identification, career decidedness, and job satisfaction. The present study examined how calling and religiosity interact to influence workplace cognition and behavior. Using a self-regulatory, multiple-goals perspective, the author proposed that individuals with greater religiosity would report lower job involvement and work fewer hours. However, this relationship would attenuate or reverse if individuals perceived a transcendent summons calling them to their jobs. In the present study, 233 employed adults reported perceptions of calling, religiosity, job involvement, and hours worked. Calling and religiosity interacted in the hypothesized manner when predicting both job involvement and hours worked, although job involvement did not mediate the relationship between calling, religiosity, and hours worked. The results suggest that career counselors and researchers pay particular attention to the role of calling among religious individuals.

James, Anthony G. & Mark A. Fine. 2015. Relations between youths' conceptions of spirituality and their developmental outcomes. *Journal of Adolescence* 43. 171–180.
doi:10.1016/j.adolescence.2015.05.014.

This study uses a positive youth development (PYD) approach to explore whether differences in youths' conceptions of spirituality were linked to patterns of difference regarding 6 domains of PYD. Using data from the 4-H Study of Positive Youth Development, findings revealed a consistent trend across 6 domains of positive development. Youth who had coherent conceptions of being spiritual generally scored highest on measures of positive development, whereas youth in the ambiguous spirituality group (i.e., less coherent) scored the lowest. However, follow-up analyses reveal that such relations did not hold over time. Implications of findings include youth development professionals aiming to nurture the spiritual growth of youth should encourage more coherent notions of spirituality among the youth they serve.

- Javid, Saideh, Hamid Reza Alavi & Masood Fazilat Pour. 2015. The relationship between religious commitment with meta-cognitive skills and philosophical mindedness of the graduate students of Kerman city universities in the academic year 2011-2012. *Journal of Religion and Health* 54(3). 943–953.
doi:10.1007/s10943-013-9808-9.

Religious commitment is one of the many factors that affect individual's characteristics, including perceptions affections, emotions, interpersonal relationships, and aspirations. The purpose of the present study was to examine for the possible relationship between religious commitment with meta-cognitive skills and philosophical mindedness among the graduate students. The target population was graduate students of Kerman universities during the academic year 2011-2012. The sample includes 394 graduate students who were selected using stratified random sampling with proportional allocation. Standardized questionnaires were employed and completed by the individuals to measure religious commitment (with subscales of religious commitment, duality, and non-commitment), meta-cognitive skills (with the Cognitive and Affective Subscales), and philosophical mindedness (with subscales of comprehensiveness, penetration, and flexibility). According to the most important findings of the study, there was a significant relationship between the subscale of religious commitment, and both the subscales and the total score of metacognition. In addition, there was significant relationship between both the subscale of religious commitment and its total score with the subscales and the total score of philosophical mindedness. Moreover, there was significant and negative relationship between the subscale of religious duality with the subscales and the total score of philosophical mindedness. Finally, multiple linear regression analysis showed that religious commitment subscale was the significant predictor of Cognitive and Affective Subscale of meta-cognitive skills and its total score. The subscale of duality was also the most important and significant predictors of the subscales and total score of philosophical mindedness.

- Krause, Neal. 2015. Assessing the relationships among race, religion, humility, and self-forgiveness: A longitudinal investigation. *Advances in Life Course Research* 24. 66–74.
doi:10.1016/j.alcr.2015.02.003.

Social and behavioral scientists have shown a growing interest in the study of virtues due, in part, to the influence of positive psychology. The underlying premise in this research is that adopting key virtues promotes a better quality of life. Consistent with this orientation, the purpose of this study is to assess the relationship between humility and self-forgiveness over time. The analyses are organized around three issues. First, it is proposed that older Blacks will be more humble than

older Whites and older Blacks will be more likely to forgive themselves than older Whites. Second, it is hypothesized that, over time, more humble older people are more likely to forgive themselves than individuals who are less humble. Third, it is proposed that greater involvement in religion is associated with greater humility and greater self-forgiveness. Data from a nationwide longitudinal survey of older adults provides support for all these hypotheses.

Lechner, Clemens M., Rainer K. Silbereisen, Martin J. Tomasik & Jacek Wasilewski. 2015. Getting going and letting go: Religiosity fosters opportunity-congruent coping with work-related uncertainties. *International Journal of Psychology* 50(3). 205–214. doi:10.1002/ijop.12093.

This study investigated how religiosity relates to goal engagement (i.e., investing time and effort; overcoming obstacles) and goal disengagement (i.e., protecting self-esteem and motivational resources against failure experiences; distancing from unattainable goals) in coping with perceived work-related uncertainties (e.g., growing risk of job loss) that arise from current social change. Researchers hypothesized that religiosity not only expands individuals' capacities for both engagement and disengagement but also fosters an opportunity-congruent pattern of engagement and disengagement, promoting engagement especially under favorable opportunities for goal-striving in the social ecology and facilitating disengagement especially under unfavorable opportunities. Multilevel analyses in a sample of 2,089 Polish adults aged 20–46 partly supported these predictions. Religiosity was associated with higher goal engagement, especially under favorable economic opportunities for goal-striving in the social ecology (as measured by the regional net migration rate). For disengagement, the results were more mixed; religiosity was related to higher self-protection independently of the economic opportunity structure and predicted higher goal-distancing only under the most unfavorable opportunities. These results suggest that religiosity can promote different coping strategies under different conditions, fostering a pattern of opportunity-congruent engagement and, to some extent, disengagement that is likely to be adaptive.

Lee, Lois. 2015. Ambivalent Atheist Identities: Power and Non-religious Culture in Contemporary Britain. *Social Analysis* 59(2). 20–39. doi:10.3167/sa.2015.590202.

In Britain, most non-theists and atheists do not identify themselves as such in explicit terms, yet non-theistic cultural threads are interwoven through everyday discourses. This article calls for more extensive ethnographic engagement with these more diffuse-and therefore less visible and less commonly researched-forms of non-religious culture. Based on exploratory fieldwork conducted in South East England, it draws attention to one set of these indistinct non-religious forms: "authentic" and "inauthentic" ambivalent atheist and non-religious self-understandings and self-representations. It demonstrates how these identities may be subjectively meaningful and culturally significant and how they may be simultaneously empowering and disempowering. Scrutiny of ambivalent atheist identities points to complicated dynamics between non-religion and power and the value of attending to poorly or unmarked non-religious cultures through ethnographic work.

- Lee, Sulim, Soyoung Choun, Carolyn M. Aldwin & Michael R. Levenson. 2015. Cross-cultural comparison of self-transcendent wisdom between the United States and Korea. *Journal of Cross-Cultural Gerontology* 30(2). 143–161.
doi:10.1007/s10823-015-9259-8.

Whether wisdom is a culturally-specific or universal construct is a matter of some debate. This study compared similarities and differences in the factor structure of a measure of wisdom focused on self-transcendence in U.S. (n=305) and Korean samples (n=838), with ages ranging from 20 to 73. The Adult Self-Transcendence Inventory (ASTI) has two factors, self-transcendence and alienation, the latter of which was included to differentiate between social withdrawals due to contemplative practices versus that due to depression. Confirmatory factor analyses found a partial scalar factorial invariance model fit the data best, indicating that the factor structure of the ASTI is largely equivalent and that the construct is comparable across the two cultures. Regression analyses showed that age and religiousness were related to self-transcendence and alienation. Education was related to self-transcendence only. The interaction between age and culture was significant on alienation; alienation was higher in mid-life Koreans but not in Americans, which may reflect either age or cohort effects. Thus, self-transcendence may be a more universal measure of wisdom than those based on pragmatics or cognitive functioning.

- Moulin, Daniel. 2015. Religious identity choices in English secondary schools. *British Educational Research Journal* 41(3). 489–504.
doi:10.1002/berj.3151.

This paper explores religious adolescents' reported experiences of secondary schools. Fifty-four qualitative interviews were conducted in places of worship in three cities in England with Christians (n=46), Jews (n=38) and Muslims (n=15). Secondary schools of a religious and non-religious character were reported as not providing a suitable environment for religious observances, nor as a place to act and behave according to participants' religious principles. Religious adolescents reported prejudice and criticism of their beliefs or religious affiliations from their peers and sometimes from teachers. They also perceived their religious traditions to be distorted, inaccurately or unfairly represented in some lessons. The focus of this paper is the identity choices religious adolescents reported in response to these challenges. Three groups of identity choices are theorized and explored: religious identity seeking, religious identity declaration and religious identity masking. The findings are discussed in view of religious identity construction theory, good practice for teachers and also the potential concerns of faith communities.

- Patton, Elizabeth W., Kelli Stidham Hall & Vanessa K. Dalton. 2015. How does religious affiliation affect women's attitudes toward reproductive health policy? Implications for the Affordable Care Act. *Contraception* 91(6). 513–519.
doi:10.1016/j.contraception.2015.02.012.

Supreme Court cases challenging the Affordable Care Act (ACA) mandate for employer-provided reproductive health care have focused on religiously based opposition to coverage. Little is known about women's perspectives on such reproductive health policies. Data were drawn from the Women's Health Care Experiences and Preferences survey, a randomly selected, nationally representative sample of 1078 US women aged 18-55 years. The researchers examined associations

between religious affiliation and attitudes toward employer-provided insurance coverage of contraception and abortion services as well as the exclusion of religious institutions from this coverage. Respondents self-identified as Baptist (18%), Protestant (Other Mainline, 17%), Catholic (17%), Other Christian (20%), Religious, Non-Christian (7%) or No Affiliation (21%). Religious affiliation was associated with proportions of agreement for contraception, abortion and religious exclusion policies. In multivariable models, differences in the odds of agreement varied across religious affiliations and frequency of service attendance. For example, compared to non-affiliated women, Baptists and Other Nondenominational Christians (but not Catholics) had lower odds of agreement with employer coverage of contraception; women who attended services weekly or more than weekly had lower odds of agreement, compared to less frequent attenders. The authors conclude that recent religiously motivated legal challenges to employer-provided reproductive health care coverage may not represent the attitudes of many religious women.

Perry, Samuel L. & Andrew L. Whitehead. 2015. Christian nationalism, racial separatism, and family formation: Attitudes toward transracial adoption as a test case. *Race and Social Problems* 7(2). 123–134.
doi:10.1007/s12552-015-9144-7.

Christian nationalism seeks the preservation or restoration of a supposed religio-national purity. The present researchers argue that, within the racialized social system of the United States, this idealized religio-national purity is inextricably linked with notions of ethno-racial purity. Focusing on interracial families as a violation of ethno-racial purity, the researchers theorize that adherents to Christian nationalism will be less supportive of family formations in which ethno-racial purity is formally transgressed. This is demonstrated by examining the impact of Christian nationalism on Americans' views toward transracial adoption (TRA). Americans' attitudes toward TRA provide an interesting test case in that, unlike attitudes toward racial exogamy, TRA implies no biological or cultural race-mixing between social peers, but only a socio-legal guardianship across races. Opposition to TRA thus taps Americans' attitudes about the "ideal" ethno-racial composition of families socially and legally, rather than their beliefs about the biological or cultural incompatibility of ethno-racial groups. Analyzing national survey data, researchers find that adherence to Christian nationalism is strongly and negatively associated with support for TRA, net of relevant controls. The results demonstrate that the influence of Christian nationalism is robust and independent of respondents' trust of other races and their religious commitment, both that are strongly and positively associated with support for TRA. Findings affirm that Christian nationalism implies ethno-racial separation and purity, and thus, the authors propose that a resurgence of Christian nationalist ideology in the public sphere may serve to reinforce racial boundaries and exclusion in other realms of American social life.

Salas-Wright, C. P., T. Tirmazi, M. Lombe & V. E. Nebbitt. 2015. Religiosity and Antisocial Behavior: Evidence from Young African American Women in Public Housing Communities. *Social Work Research* 39(2). 82–93.
doi:10.1093/swr/svv010.

A growing body of literature suggests that religious engagement may protect youths from involvement in nonviolent and violent antisocial behavior. However, despite demographic evidence suggesting that religion may be particularly important among young African American

women, research on religiosity as a candidate protective factor for this important sub-population is sparse. Using a sample of 138 young, female African Americans recruited from public housing developments in a large northeastern city, the study reported in this article examined the relationship between religiosity and antisocial behavior among this vulnerable population. Results indicate that religiosity is inversely associated with nonviolent antisocial behaviors across a wide spectrum of severity, including property damage, theft, and automobile theft. In contrast, no significant associations were identified for any of the violent manifestations of antisocial behavior examined. The findings suggest that religiosity is an important protective factor against antisocial behavior in the lives of young African American women in urban public housing communities, but that the protective effect of religiosity varies in terms of the violent or nonviolent nature of the behavior in question.

- Sumerau, J. Edward, Irene Padavic & Douglas P. Schrock. 2015. "Little girls unwilling to do what's best for them': Resurrecting patriarchy in an LGBT Christian church. *Journal of Contemporary Ethnography* 44(3). 306–334.
doi:10.1177/0891241614530160.

This paper examines how a group of lesbian, gay, bisexual, and transgender (LGBT) Christians resurrected patriarchal patterns of gender inequality in their local church. On the basis of more than 450 hours of fieldwork, the present researchers analyze how a group of lesbian and gay members collaborated with a new pastor to transform an egalitarian, inclusive, and democratic organization into one characterized by the elevation of men and the subordination of women via restricting leadership to men, instituting a gendered division of labor, and discrediting women dissidents. In so doing, the pastor and his supporters, regardless of their intentions, collaboratively reproduced patriarchal practices that facilitated the subordination of women. The authors conclude by suggesting that there is not a one-to-one correspondence between gains for LGBT organizations and gains for women, and they outline implications for understanding how retrenchment from egalitarian practice can undo gender-equality gains.

- Szekely, Raluca D., Adrian Opre & Andrei C. Miu. 2015. Religiosity enhances emotion and deontological choice in moral dilemmas. *Personality and Individual Differences* 79. 104–109.
doi:10.1016/j.paid.2015.01.036.

While early psychological theories debated the relation between religiosity and moral decision making, more recent work approached this relation on empirical grounds using multidimensional measures of religiosity and moral dilemmas. The present study investigated the influence of individual differences in religious thoughts and feelings, social desirability and mood on emotions and decisions in moral dilemmas that pit social welfare against harming another person. In order to increase emotional salience, moral dilemmas were framed as personal choices. Results indicated that the tendency to seek religious guidance in everyday life, and social desirability positively predicted deontological choices (i.e., refusing to harm one person in order to save several people). In addition, individual differences in religious feelings positively predicted negative emotion presence in these moral dilemmas. These results highlight the motivational and emotional dimensions of religiosity that influence moral choice and emotional experience in moral dilemmas.

- Vergani, Matteo & Sean Collins. 2015. Radical criminals in the grey area: A comparative study of Mexican religious drug cartels and Australian outlaw motorcycle gangs. *Studies in Conflict & Terrorism* 38(6). 414–432.
doi:10.1080/1057610X.2015.1004891.

This article defines and assesses the ideal-type of the radical criminal as the analytical framework for a comparative qualitative study of Mexican religious drug cartels and Australian outlaw motorcycle gangs, and concludes that radical criminals operate in both weak and failed states and stable democracies. The article participates in the wider discussion concerning the existence (and the features) of a grey area between criminal and political violence, through the lens of the radical criminal ideal-type.

1.4 SCIENTIFIC STUDY OF RELIGION: METHOD & THEORY

- Buttle, Heather. 2015. Measuring a Journey without Goal: Meditation, Spirituality, and Physiology. *BioMed Research International* 2015. 891671.
doi:10.1155/2015/891671.

The secular practice of meditation is associated with a range of physiological and cognitive effects, including lower blood pressure, lower cortisol, cortical thickening, and activation of areas of the brain associated with attention and emotion regulation. However, in the context of spiritual practice, these benefits are secondary gains, as the primary aim is spiritual transformation. Despite obvious difficulties in trying to measure a journey without goal, spiritual aspects involved in the practice of meditation should also be addressed by experimental study. This review starts by considering meditation in the form of the relaxation response (a counterpart to the stress response), before contrasting mindfulness research that emphasizes the role of attention and alertness in meditation. This contrast demonstrates how reference to traditional spiritual texts (in this case Buddhist) can be used to guide research questions involving meditation. Further considerations are detailed, along with the proposal that research should triangulate spiritual textual sources, first person accounts (i.e., neurophenomenology), and physiological/cognitive measures in order to aid our understanding of meditation, not only in the secular context of health benefits, but also in the context of spiritual practice.

- Kramp, Joseph M. 2015. Meaning and “Meaning It” in the psychology of religion: The absorption of an academic discipline into culture. *Pastoral Psychology* 64(3). 391–405.
doi:10.1007/s11089-014-0597-1.

The author argues that the discipline of psychology of religion has been and is largely being absorbed into popular culture, where it no longer has any institutional backing and where it becomes much more difficult (if not impossible) for any authority to guide the conversation. While this presents a threat to the training of clergy in the pastoral arts, as well as the job prospects for recent Ph.D. graduates, it also presents an opportunity for insights to be deployed to a wider audience and for the most radical and simple teachings of the discipline to be revisited and debated in a more capacious setting. This article assesses the transformation of the discipline and the reasons why the discipline is important for houses of worship and the larger society, regardless of whether or not it is fully sponsored or accepted in academic institutions or theological seminaries.

The author of the article uses some of the key insights from Erikson's (1958) Young Man Luther, specifically chapter 6, "The Meaning of 'Meaning It,'" to support the thesis.

Luehrmann, Sonja. 2015. Antagonistic Insights: Evolving Soviet Atheist Critiques of Religion and Why They Matter for Anthropology. *Social Analysis* 59(2). 97–113.
doi:10.3167/sa.2015.590206.

This article offers a critique of the common notion in contemporary anthropology that a positive attitude toward the people under study is a necessary precondition for a sophisticated understanding of their social world. The empirical sociology of religion that evolved during the last decades of the Soviet Union's existence started from the premise that religion was a harmful phenomenon slated for disappearance. Nonetheless, atheist sociologists produced increasingly complex accounts of religious life in modern socialist societies. Their ideological framework simultaneously constrained Soviet scholars and forced them to pay closer attention to religious phenomena that contradicted political expectations. Drawing on this extreme example of militant atheist scholarship, the author argues that studying "repugnant cultural others" always requires some form of affective motivation. Antagonism can be as powerful, and as problematic, a motivating force as empathetic suspension of judgment.

Mohl, Allan S. 2015. Monotheism: Its influence on patriarchy and misogyny. *The Journal of Psychohistory* 43(1). 2–20.

The author holds that monotheism as reflected in Judaism, Christianity, and Islam is essentially patriarchal and frequently misogynistic. This paper's major premise is that patriarchy and gender bias is dominant and these factors have had enormous influence in Western societies.

PART 2: ARTICLES IN SPIRITUALITY & HEALTH RESEARCH

2.1 SPIRITUALITY & HEALTH: GENERAL HEALTH & WELL-BEING

Achour, Meguellati, Fadila Grine, Mohd Roslan Mohd Nor & Mohd Yakub Zulkifli Mohd Yusoff. 2015. Measuring religiosity and its effects on personal well-being: A case study of Muslim female academicians in Malaysia. *Journal of Religion and Health* 54(3). 984–997. doi:10.1007/s10943-014-9852-0.

This study seeks to measure religiosity in an Islamic context and to assess its effects on the personal well-being of Muslims. The determinants of religiosity included under this research are prayer, beliefs, and worship. This research also attempts to examine the coping strategies Muslims use to deal with life problems and changes such as prayer, supplication, trust and reliance on God, remembrance of death, and concept of life after death. Today, many scales of religiosity are being put into use among Muslims. This study measures religiosity and its effects on the well-being of Muslim academicians. The researchers used 315 Muslim female of academic staff as respondents, working in research universities in the Klang Valley such as University of Malaya, National University and Putra University area of Kuala Lumpur, Malaysia. Their ages ranged from 30 to 60 years. The results of this study show that there exists a positive yet significant correlation between personal well-being and religiosity. The well-being also shows significant positive correlations with beliefs and worship and prayer.

Amihai, Ido & Maria Kozhevnikov. 2015. The Influence of Buddhist Meditation Traditions on the Autonomic System and Attention. *BioMed Research International* 2015. 731579. doi:10.1155/2015/731579.

Cognitive and neuroscience research from the past several years has shed new light on the influences that meditative traditions have on the meditation practice. Here researchers review new evidence that shows that types of meditation that developed out of certain traditions such as Vajrayana and Hindu Tantric lead to heightened sympathetic activation and phasic alertness, while types of meditation from other traditions such as Theravada and Mahayana elicit heightened parasympathetic activity and tonic alertness. Such findings validate Buddhist scriptural descriptions of heightened arousal during Vajrayana practices and a calm and alert state of mind during Theravada and Mahayana types of meditation and demonstrate the importance of the cultural and philosophical context out of which the meditation practices develop.

Bennett, Paul N., Trisha Parsons, Ros Ben-Moshe, Merv Neal, Melissa K. Weinberg, Karen Gilbert, Cherene Ockerby, Helen Rawson, Corinne Herbu & Alison M. Hutchinson. 2015. Intradialytic Laughter Yoga therapy for haemodialysis patients: A pre-post intervention feasibility study. *Bmc Complementary and Alternative Medicine* 15. 176. doi:10.1186/s12906-015-0705-5.

Laughter Yoga consists of physical exercise, relaxation techniques and simulated vigorous laughter. It has been associated with physical and psychological benefits for people in diverse clinical and non-clinical settings, but has not yet been tested in a hemodialysis setting. This study had three aims: 1) to examine the feasibility of conducting Laughter Yoga for patients with end

stage kidney disease in a dialysis setting; 2) to explore the psychological and physiological impact of Laughter Yoga for these patients; and, 3) to estimate the sample size required for future research. Eighteen participants were recruited into the study and Laughter Yoga therapists provided a four week intradialytic program (30-min intervention three times per week). Primary outcomes were psychological items measured at the first and last Laughter Yoga session. These items included: quality of life; subjective wellbeing; mood; optimism; control; self-esteem; and, depression, anxiety and stress. Secondary outcomes were blood pressure, intradialytic hypotensive episodes and lung function (forced expiratory volume). Dialysis nurses exposed to the intervention completed a Laughter Yoga attitudes and perceptions survey (n = 11). Following intervention, there were non-significant increases in happiness, mood, and optimism and a decrease in stress. Episodes of intradialytic hypotension decreased from 19 pre and 19 during Laughter Yoga to 4 post Laughter Yoga. There was no change in lung function or blood pressure. All nurses agreed or strongly agreed that Laughter Yoga had a positive impact on patients' mood, that it was a feasible intervention, and that they would recommend Laughter Yoga to their patients. Sample size calculations for future research indicated that a minimum of 207 participants would be required to provide sufficient power to detect change in key psychological variables.

Cash, Elizabeth, Paul Salmon, Inka Weissbecker, Whitney N. Rebholz, René Bayley-Veloso, Lauren A. Zimmaro, Andrea Floyd, Eric Dedert & Sandra E. Sephton. 2015. Mindfulness meditation alleviates fibromyalgia symptoms in women: Results of a randomized clinical trial. *Annals of Behavioral Medicine: A Publication of the Society of Behavioral Medicine* 49(3). 319–330.
doi:10.1007/s12160-014-9665-0.

Several recent reviews have evaluated evidence on the efficacy of Mindfulness-Based Stress Reduction (MBSR) among fibromyalgia sufferers, and concluded that more research should test effects on both psychological and physiological functioning. Researchers thus conducted a randomized prospective trial of MBSR among female fibromyalgia patients. Effects on perceived stress, pain, sleep quality, fatigue, symptom severity, and salivary cortisol were tested in treatment (n = 51) versus wait-list control participants (n = 40) using data at baseline, post-program, and 2-month follow-up. Analyses of results revealed that MBSR significantly reduced perceived stress, sleep disturbance, and symptom severity, with gains maintained at follow-up. Greater home practice at follow-up was associated with reduced symptom severity. MBSR did not significantly alter pain, physical functioning, or cortisol profiles.

Decker, Emmanuelle, Pierre Philippot, Marion Bourgey-Trouillet, Hubert Blain & Raphael Trouillet. 2015. Interventions based on mindfulness for the elderly chronic pain: review of the literature. *Geriatric Et Psychologie Neuropsychiatrie De Vieillesse* 13(2). 147–156.
doi:10.1684/pnv.2015.0537.

The chronic pain-bio-psycho-social phenomenon indexes a transition between a pain alarm and a pain disease by means of reshaping of the inhibitive brain areas and influencing psychological factors on the modulatory systems. The current treatment of elders' chronic pain suffers from many limits, and this article addresses this issue by discussing a new and innovative non-pharmacological intervention (mindfulness therapy) to reduce consequences of chronic pain in daily-life. Mindfulness therapy mainly targets two transdiagnostic mental processes—avoidance

and self-centered ruminations—which lead to emotional dysregulation in chronic pain patients. Although many studies documented the beneficial effect of mindfulness therapy on psychological symptoms in adults, there is still a lack of studies testing the effect of mindfulness therapy on emotional regulation and psychological symptoms in elderly population with chronic pain. It is therefore necessary to investigate therapeutic efficacy with this population. In conclusion, the authors formulate several lines of research to test the hypothesis that the effect of the mindfulness therapy on targeted processes would improve elders' ability to cope with chronic pain and would reduce disturbances associated with chronic pain.

Elumelu, Theresa N., Chioma C. Asuzu & Elizabeth O. Akin-Odanye. 2015. Impact of active coping, religion and acceptance on quality of life of patients with breast cancer in the department of radiotherapy, UCH, Ibadan. *BMJ supportive & palliative care* 5(2). 175–180. doi:10.1136/bmjspcare-2012-000409.

A breast cancer diagnosis as well as the treatment that follows has considerable consequences on women's physical functioning, psychological health and overall well-being, resulting in significant interference with patients' quality of life (QoL). The study seeks to assess the impact of active coping, religion and acceptance on the QoL of patients with breast cancer. Participants were 110 patients with breast cancer receiving treatment at the radiotherapy clinic in the University College Hospital (UCH). Data was collected using the Functional Assessment of Cancer Therapy-Breast (FACT-B) V.4 QoL questionnaire and Carver's Brief Cope questionnaire. Analysis of data showed that significant differences were found between participants who used active coping, religious coping and acceptance more than those who did not in the overall QoL as well as in some of the QoL dimensions.

Garofalo, Robert, Lisa M. Kuhns, Marco Hidalgo, Travis Gayles, Soyang Kwon, Abigail L. Muldoon & Brian Mustanski. 2015. Impact of religiosity on the sexual risk behaviors of young men who have sex with men. *Journal of Sex Research* 52(5). 590–598. doi:10.1080/00224499.2014.910290.

Young men who have sex with men (YMSM), particularly Black YMSM, bear a disproportionate burden of new human immunodeficiency virus (HIV) infections in the United States. Several studies support the positive and protective role of religion in health and the prevention of morbidity and mortality. However, little empirical research has been conducted looking at religion with the context of YMSM and HIV prevention. Researchers examined the impact of religious attendance and faithfulness on sexual risk among a community-based sample of 450 YMSM in Chicago ages 16 to 20. Participants were mostly racial/ethnic minorities, that is, Black (53.4%) and Latino (19.9%). Multivariate logistic regression indicated that faithfulness in combination with frequent formal religious attendance was associated with a decrease in reported number of unprotected anal sex acts, including unprotected receptive anal sex with male partners. These association trends were also found for the Black YMSM in our sample, suggesting that religious involvement and faithfulness is a potential protective factor for the acquisition of HIV among this high-risk population.

Grossoehme, Daniel H., Rhonda D. Szczesniak, LaCrecia L. Britton, Christopher M. Siracusa, Alexandra L. Quittner, Barbara A. Chini, Sophia M. Dimitriou & Michael Seid. 2015.

Adherence Determinants in Cystic Fibrosis: Cluster Analysis of Parental Psychosocial, Religious, and/or Spiritual Factors. *Annals of the American Thoracic Society* 12(6). 838–846. doi:10.1513/AnnalsATS.201408-379OC.

Cystic fibrosis is a progressive disease requiring a complex, time-consuming treatment regimen. Lack of adherence to treatment regimens may contribute to an acceleration of the disease process. Spirituality influences some parental healthcare behaviors and medical decision-making. Researchers hypothesized that parents of children with cystic fibrosis, when classified into groups based on adherence rates, would share certain psychosocial and religious and/or spiritual variables distinguishing them from other adherence groups. The researchers thus conducted a multisite, prospective, observational study focused on parents of children younger than 13 years old at two cystic fibrosis center sites (Site 1, n=83; Site 2, n=59). Religious and/or spiritual constructs, depression, and marital adjustment were measured by using previously validated questionnaires. Determinants of adherence included parental attitude toward treatment, perceived behavioral norms, motivation, and self-efficacy. Adherence patterns were measured with the Daily Phone Diary, a validated instrument used to collect adherence data. Cluster analysis identified discrete adherence patterns, including parents' completion of more treatments than prescribed. For airway clearance therapy, four adherence groups were identified: median adherence rates of 23%, 52%, 77%, and 120%. These four groups differed significantly for parental depression, sanctification of their child's body, and self-efficacy. Three adherence groups were identified for nebulized medications: median adherence rates of 35%, 82%, and 130%. These three groups differed significantly for sanctification of their child's body and self-efficacy. These results indicated that parents in each group shared psychosocial and religious and/or spiritual factors that differentiated them. Therefore, conversations about adherence likely should be tailored to baseline adherence patterns. Development of efficacious religious and/or spiritual interventions that promote adherence by caregivers of children with cystic fibrosis may be useful.

Kelley, George A. & Kristi S. Kelley. 2015. Meditative Movement Therapies and Health-Related Quality-of-Life in Adults: A Systematic Review of Meta-Analyses. *PloS One* 10(6). e0129181. doi:10.1371/journal.pone.0129181.

Poor health-related quality-of-life (HRQOL) is a significant public health issue, while the use of meditative movement therapies has been increasing. The purpose of this investigation was to carry out a systematic review of previous meta-analyses that examined the effects of meditative movement therapies (yoga, tai chi and qigong) on HRQOL in adults. Previous meta-analyses of randomized controlled trials published up through February, 2014 were included by searching nine electronic databases and cross-referencing. Dual-selection and data abstraction occurred. The Assessment of Multiple Systematic Reviews Instrument (AMSTAR) was used to assess methodological quality. Standardized mean differences that were pooled using random-effects models were included. In addition, 95% prediction intervals were calculated as well as the number needed-to-treat and percentile improvements. Of the 510 citations screened, 10 meta-analyses representing a median of 3 standardized mean differences in 82 to 528 participants with breast cancer, schizophrenia, low back pain, heart failure and diabetes, were included. Median methodological quality was 70%. Median length, frequency and duration of the meditative movement therapies were 12 weeks, 3 times per week, for 71 minutes per session. The majority of results (78.9%) favored statistically significant improvements. More than half of the results yielded

statistically significant heterogeneity and large or very large inconsistency. All 95% prediction intervals included zero. The number-needed-to-treat ranged from 2 to 10 while percentile improvements ranged from 9.9 to 48.9. The results of this study suggest that meditative movement therapies may improve HRQOL in adults with selected conditions.

Kumar, Shiv Basant, Rashmi Yadav, Raj Kumar Yadav, Madhuri Tolahunase & Rima Dada. 2015. Telomerase activity and cellular aging might be positively modified by a yoga-based lifestyle intervention. *Journal of Alternative and Complementary Medicine (New York, N.Y.)* 21(6). 370–372.
doi:10.1089/acm.2014.0298.

Recent studies showed that a brief yoga-based lifestyle intervention was efficacious in reducing levels of oxidative stress and cellular aging in obese men. The objective of this case report was to assess the efficacy of this intervention in reducing the levels of biochemical markers of cellular ageing, oxidative stress, and inflammation at baseline (day 0), at the end of active intervention (day 10), and follow-up at day 90. A single case report from a prospective ongoing study with pre-post design assessing the level of various markers of cellular aging is presented in this article. The setting was Integral Health Clinic, an outpatient facility conducting meditation and yoga-based lifestyle intervention programs for management of chronic diseases. The participant was a 31-year-old man with class I obesity who presented to the medicine outpatient department at All India Institute of Medical Sciences, New Delhi, India, with a history of fatigue, difficulty losing weight, and lack of motivation. He noted a marked decrease in his energy level, particularly in the afternoon. A pretested intervention program included asanas (postures), pranayama (breathing exercises), stress management, group discussions, lectures, and individualized advice. From baseline (day 0) to day 90, the activity of telomerase and levels of ~~β~~endorphins, plasma cortisol, and interleukin-6 increased, and a sustained reduction in oxidative stress markers, such as reactive oxygen species and 8-hydroxy-2-deoxy-guanosine levels. This report suggests this simple lifestyle intervention may be therapeutic for oxidative DNA damage and oxidative stress.

Leyva, Bryan, Anh B. Nguyen, Jennifer D. Allen, Stephen H. Taplin & Richard P. Moser. 2015. Is religiosity associated with cancer screening? Results from a national survey. *Journal of Religion and Health* 54(3). 998–1013.
doi:10.1007/s10943-014-9843-1.

This study examined the following: (1) relationships between religiosity-as measured by religious service attendance-and screening for breast, cervical, and colorectal cancers; (2) the potential mediating role of social support; and (3) the potential moderating effect of race/ethnicity. Statistical analyses showed that religiosity was associated with greater utilization of breast, cervical, and colorectal cancer screening. Social support fully mediated the relationship between religiosity and Pap screening, and partially mediated the relationship between religiosity and colorectal screening, but had no effect on the relationship between religiosity and mammography screening. Race/ethnicity moderated the relationship between religiosity and social support in the cervical cancer screening model, such that the positive association between religiosity and social support was stronger for non-Hispanic Blacks than it was for non-Hispanic Whites. These findings have implications for the role of social networks in health promotion and can inform cancer screening interventions in faith-based settings.

Mermelstein, Liza C. & John P. Garske. 2015. A brief mindfulness intervention for college student binge drinkers: A pilot study. *Psychology of Addictive Behaviors: Journal of the Society of Psychologists in Addictive Behaviors* 29(2). 259–269.
doi:10.1037/adb0000040.

The current study sought to evaluate the feasibility and efficacy of a brief mindfulness intervention aimed to reduce rates and consequences of binge drinking among college students. Participants were 76 undergraduate students assigned to a mindfulness/cue exposure group (MG) or a control/cue exposure only group (CG). Assessments were administered at the beginning of the initial session (i.e., baseline), the end of the initial session (i.e., posttreatment) and weekly for the subsequent 4 weeks. During the initial session, participants engaged in a cue exposure protocol that differed by group. The MG participated in a 60-min individual mindfulness intervention composed of didactic and experiential activities during the initial session. They participated in a mindfulness practice during the Week 2 follow-up assessment and were asked to engage in 1 hr of out-of-session mindfulness meditation each week during the 4-week assessment period. Treatment outcome examined changes in frequency of binge episodes, consequences of alcohol use, readiness to change alcohol use, alcohol refusal self-efficacy, and dispositional mindfulness between groups over time. Group differences in readiness to change, self-efficacy, and dispositional mindfulness were not found from baseline to posttreatment. Four weeks after the initial intervention, the MG reported significantly less binge episodes, fewer consequences of alcohol use, higher self-efficacy and higher dispositional mindfulness than the CG. Feasibility and participant acceptability of the intervention was demonstrated by consistent attendance, low attrition and high satisfaction ratings by the MG. Results provide initial support for the efficacy of a brief, mindfulness-based intervention among college students who report binge drinking.

Michaelson, Valerie, William Pickett, Peter Robinson & Linda Cameron. 2015. Participation in church or religious groups and its association with health. Part 2: a qualitative, Canadian study. *Journal of Religion and Health* 54(3). 1118–1133.
doi:10.1007/s10943-014-9961-9.

As part of a mixed-methods study, this qualitative inquiry determined how adolescent participation in church or religious groups related to their health. Researchers used grounded theory with a phenomenological approach to inquiry. Consistent with the quantitative findings, children (n=12) involved in religious groups reported lower participation in risk behaviors, higher pro-social behaviors, but poorer levels of emotional well-being and physical health. Findings raise theological and practical questions about the practices and teaching of the church with respect to children's ministry. They suggest an emphasis on teaching about behaviors and morality rather than a more integrative message involving the whole of life.

Padela, Aasim I., Sohad Murrar, Brigid Adviento, Chuanhong Liao, Zahra Hosseinian, Monica Peek & Farr Curlin. 2015. Associations between religion-related factors and breast cancer screening among American Muslims. *Journal of Immigrant and Minority Health / Center for Minority Public Health* 17(3). 660–669.
doi:10.1007/s10903-014-0014-y.

American Muslims have low rates of mammography utilization, and research suggests that religious values influence their health-seeking behaviors. Researchers assessed associations between

religion-related factors and breast cancer screening in this population. A diverse group of Muslim women were recruited from mosques and Muslim organization sites in Greater Chicago to self-administer a survey incorporating measures of fatalism, religiosity, discrimination, and Islamic modesty. 254 surveys were collected of which 240 met age inclusion criteria (40 years of age or older). Of the 240, 72 respondents were Arab, 71 South Asian, 59 African American, and 38 identified with another ethnicity. 77% of respondents had at least one mammogram in their lifetime, yet 37% had not obtained mammography within the past 2 years. In multivariate models, positive religious coping, and perceived religious discrimination in healthcare were negatively associated with having a mammogram in the past 2 years, while having a PCP was positively associated. Ever having a mammogram was positively associated with increasing age and years of US residency, and knowing someone with breast cancer. Promoting biennial mammography among American Muslims may require addressing ideas about religious coping and combating perceived religious discrimination through tailored interventions.

- Rouleau, Codie R., Sheila N. Garland & Linda E. Carlson. 2015. The impact of mindfulness-based interventions on symptom burden, positive psychological outcomes, and biomarkers in cancer patients. *Cancer Management and Research* 7. 121–131.
doi:10.2147/cmar.S64165.

Research on the use of mindfulness-based stress reduction and related mindfulness-based interventions (MBIs) in cancer care has proliferated over the past decade. MBIs have aimed to facilitate physical and emotional adjustment to life with cancer through the cultivation and practice of mindfulness (i.e., purposeful, nonjudgmental, moment-to-moment awareness). This descriptive review highlights three categories of outcomes that have been evaluated in MBI research with cancer patients: symptom reduction, positive psychological growth, and biological outcomes. Researchers also examine the clinical relevance of each targeted outcome, while describing recently published original studies to highlight novel applications of MBIs tailored to individuals with cancer. Accumulating evidence suggests that participation in a MBI contributes to reductions in psychological distress, sleep disturbance, and fatigue, and promotes personal growth in areas such as quality of life and spirituality. MBIs may also influence markers of immune function, hypothalamic-pituitary-adrenal axis regulation, and autonomic nervous system activity, though it remains unclear whether these biological changes translate to clinically important health benefits. The authors conclude by discussing methodological limitations of the extant literature, and implications of matching MBIs to the needs and preferences of cancer patients. Overall, the growing popularity of MBIs in cancer care must be balanced against scientific evidence for their impact on specific clinical outcomes.

- Shinall, Myrick C. & Oscar D. Guillaumondegui. 2015. Effect of Religion on End-of-Life Care among Trauma Patients. *Journal of Religion and Health* 54(3). 977–983.
doi:10.1007/s10943-014-9869-4.

Evidence suggests that religiousness is associated with more aggressive end-of-life (EOL) care among terminally ill patients. The effect of religion on care in more acutely life-threatening diseases is not well studied. This study examines the association of religious affiliation and request for chaplain visit with aggressive EOL care among critically injured trauma patients. The researchers conducted a retrospective review of all trauma patients surviving at least 2 days but

dying within 30 days of injury over a 3-year period at a major academic trauma center. Time until death was used as a proxy for intensity of life-prolonging therapy. Controlling for social factors, severity of injury, and medical comorbidities, religious affiliation was associated with a 43% increase in days until death. Controlling for these same variables, chaplain request was associated with a 24% decrease in time until death. These results suggest that religious patients receive more aggressive, and ultimately futile, EOL care and that pastoral care may reduce the amount of futile care consumed.

Tedrus, Glória Maria Almeida Souza, Lineu Corrêa Fonseca, Tatiane Mariani Fagundes & Gabriela Leopoldino da Silva. 2015. Religiosity aspects in patients with epilepsy. *Epilepsy & Behavior: E&B* 50. 67–70.
doi:10.1016/j.yebeh.2015.06.003.

The objectives of this study were to assess religiosity aspects in patients with epilepsy (PWEs) and controls and to determine whether such aspects were related to the samples' clinical, sociodemographic, and QOL-31 data. The Duke Religion Index was administered to 159 adult PWEs and 50 controls. The relationships between the Duke Religion Index and the study variables of the two groups were compared. Intrinsic religiosity (IR) and nonorganizational religiosity (NOR) were higher in PWEs than in controls. Logistic regression showed that being female and having mesial temporal lobe epilepsy with hippocampus sclerosis (MTLE-HS) were predictors of high organizational religiosity (OR) and that high NOR was associated with MTLE-HS and controlled seizures. Further, only MTLE-HS was predictive of high IR. The Duke Religion Index and QOLIE-31 scores were not related. Different forms of interictal religiosity are related to clinical aspects of epilepsy.

Young, Michael, George Denny, Tina Penhollow, Rebecca Palacios & Duston Morris. 2015. Hiding the word: examining the relationship between a new measure of religiosity and sexual behavior. *Journal of Religion and Health* 54(3). 922–942.
doi:10.1007/s10943-013-9777-z.

The relationship between religiosity and sexual behavior has been previously investigated, but researchers have not examined the relationship between the intellectual dimension of religiosity and sexual behavior. In this study, researchers developed an intellectual measure of religiosity, Hiding the Word (HTW), and examined whether it accounted for variation in the sexual behavior of college students, beyond that for which age and a generic measure of religiosity could account. Results showed, after accounting for age and generic religiosity, HTW made a significant contribution to distinguishing between students who had, and those who had not, engaged in various sexual behaviors. For females, this was the case in three of the five behaviors examined (all except receiving oral sex and participating in unprotected penile-vaginal intercourse at most recent sexual encounter), and for males, two of the four behaviors (sexual intercourse and anal intercourse). HTW was less of a factor in accounting for variation in the frequency of participation. For males, HTW was significant for the frequency of participation in penile-vaginal intercourse, receiving oral sex, and the number of sexual partners in the last month. For females, HTW was significant only for the number of sexual partners in the last month. Thus, religiosity, and specifically HTW, seems to play more of a role in determining whether or not a person has participated in behavior, rather than in the frequency of participation.

Young, William C., Sheeba R. Nadarajah, Perry R. Skeath & Ann M. Berger. 2015. Spirituality in the context of life-threatening illness and life-transforming change. *Palliative & Supportive Care* 13(3). 653–660.
doi:10.1017/S1478951514000340.

Individuals with life-threatening illness often engage in some form of spirituality to meet increased needs for meaning and purpose. This study aimed to identify the role of spirituality in persons who had reported positive, life-transforming change in relation to life-threatening cancer or cardiac events, and to connect these roles to palliative and supportive care. A purposive sample of 10 cardiac survivors and 9 cancer survivors was recruited. Once the participants had given informed consent and passed screening in relation to life-transforming change and distress, they engaged in a semi-structured one-hour qualitative interview on the theme of how their life-transforming change occurred in the context of their life-threatening illness. In the present article, the phenomenological analysis focuses on participants' references to purpose and meaning in their lives, with particular attention to the role and context of participants' spirituality. Results demonstrated that participants mentioned spirituality, meaning, and purpose in many contexts, including connecting with family and friends, nature, art, music, and sometimes creating a relationship with God. Participants often accessed spirituality by enhancing connections in their own lives: with a higher power, people, their work, or themselves. These enhanced connections gave participants greater meaning and purpose in their lives, and substantially helped participants to adjust to their life-threatening illnesses.

2.2 SPIRITUALITY & HEALTH: MENTAL HEALTH

Albertson, Ellen R., Kristin D. Neff & Karen E. Dill-Shackleford. 2015. Self-compassion and body dissatisfaction in women: A randomized controlled trial of a brief meditation intervention. *Mindfulness* 6(3). 444–454.
doi:10.1007/s12671-014-0277-3.

Body dissatisfaction is a major source of suffering among women of all ages. One potential factor that could mitigate body dissatisfaction is self-compassion, a construct that is garnering increasing research attention due to its strong association with psychological health. This study investigated whether a brief 3-week period of self-compassion meditation training would improve body satisfaction in a multigenerational group of women. Participants were randomized either to the meditation intervention group (n=98) or to a waitlist control group (n=130). Results suggested that compared to the control group, intervention participants experienced significantly greater reductions in body dissatisfaction, body shame, and contingent self-worth based on appearance, as well as greater gains in self-compassion and body appreciation. All improvements were maintained when assessed 3 months later.

Barkin, Samuel H., Lisa Miller & Suniya S. Luthar. 2015. Filling the void: spiritual development among adolescents of the affluent. *Journal of Religion and Health* 54(3). 844–861.
doi:10.1007/s10943-015-0048-z.

Building on both the spiritual development and affluent youth literature, the current study explores spiritual development and health outcomes in a sample of upper-middle-class youth. Exploratory analyses indicate long-term stability in religiosity and spirituality from late

adolescence (mean age 18) well into emerging adulthood (mean age 24); specifically, a strong personal relationship with a Higher Power, that carries into the broader arena of life, appears to be the primary source of spiritual life in adolescence that transitions into young adulthood. Moreover, cross-sectional associations at age 24 suggest spiritual development may have important implications for increased mental health and life satisfaction, as well as decreased antisocial behaviors.

- Barton, Yakov A. & Lisa Miller. 2015. Spirituality and positive psychology go hand in hand: An investigation of multiple empirically derived profiles and related protective benefits. *Journal of Religion and Health* 54(3). 829–843.
doi:10.1007/s10943-015-0045-2.

Researchers investigate the relationship between personal spirituality and positive psychology traits as potentially presented in multiple profiles, rather than monolithically across a full sample. A sample of 3966 adolescents and emerging adults and 2014 older adults completed a survey assessing daily spiritual experiences (relationship with a Higher Power and sense of a sacred world), forgiveness, gratitude, optimism, grit, and meaning. To assess the relative protective benefits of potential profiles, the researchers also assessed the level of depressive symptoms and frequency of substance use (tobacco, marijuana, alcohol, and heavy alcohol use). Latent class analysis (LCA) was used to examine common subgroupings of study participants across report on personal spirituality and positive psychology scales in each age cohort, with potential difference between latent classes then tested in level of depressive symptoms and degree of substance use. LCA determined a four-class and a three-class best-fitting models for the younger and older cohorts, respectively. Level of personal spirituality and level of positive psychology traits were found to coincide in 83% of adolescents and emerging adults and in 71% of older adults, suggesting personal spirituality and positive psychology traits go hand in hand. A minority subgroup of “virtuous humanists” showed high levels of positive psychology traits but low levels of personal spirituality, across both age cohorts. Whereas level of depression was found to be inversely associated with positive psychology traits and personal spirituality, uniquely personal spirituality was protective against degree of substance use across both age cohorts. Overall interpretation of the study findings suggests that personal spirituality may be foundational to positive psychology traits in the majority of people.

- Braganza, Dinesh & Ralph L. Piedmont. 2015. The impact of the Core Transformation process on spirituality, symptom experience, and psychological maturity in a mixed age sample in India: A pilot study. *Journal of Religion and Health* 54(3). 888–902.
doi:10.1007/s10943-015-0049-y.

Research indicates that spiritual and religious constructs have the potential to influence a broad range of outcomes such as health, well-being, and meaning, both positively and negatively. This study looked at the effect of an under studied psycho-spiritual approach, Core Transformation (CT), in reducing symptoms and promoting well-being. This study also examined whether the impact of CT would be moderated by age, with older participants evidencing better outcomes. Participants from an Indian convenience sample (n=189) ranging in age from 18 to 65 received group training in CT and completed a battery of measures pretest and 4 weeks post-training, which included personality, spirituality, and psychosocial outcomes scales. Repeated-measures

MANOVAs indicated significant improvements over time for both spirituality and symptom experience. Partial correlation analyses, controlling for the predictive effects of personality, reaffirmed the incremental validity of Spiritual Transcendence and religious variables in predicting symptom change and outcome ratings. CT did not appear to effect participants levels of psychological maturity. Age was not found to mediate any of these relationships, indicating the age universality of CT's therapeutic effects.

Bueno, Viviane Freire, Elisa H. Kozasa, Maria Aparecida da Silva, Tânia Maria Alves, Mario Rodrigues Louzã & Sabine Pompéia. 2015. Mindfulness Meditation Improves Mood, Quality of Life, and Attention in Adults with Attention Deficit Hyperactivity Disorder. *BioMed Research International* 2015. 962857.

doi:10.1155/2015/962857.

Adults with attention deficit hyperactivity disorder (ADHD) display affective problems and impaired attention. Mood in ADHD can be improved by mindful awareness practices (MAP), but results are mixed regarding the enhancement of attentional performance. Here, researchers evaluated MAP-induced changes in quality of life (QoL), mood, and attention in adult ADHD patients and controls using more measures of attention than prior studies. Twenty-one ADHD patients and 8 healthy controls underwent 8 weekly MAP sessions; 22 similar patients and 9 controls did not undergo the intervention. Mood and QoL were assessed using validated questionnaires, and attention was evaluated using the Attentional Network Test (ANT) and the Conners Continuous Performance Test (CPT II), before and after intervention. Following intervention, MAP enhanced sustained attention (ANT) and detectability (CPT II), and improved mood and QoL of patients and controls. The authors conclude that MAP is a complementary intervention that improves affect and attention of adults with ADHD and controls.

Burns, Jonathan K. & Andrew Tomita. 2015. Traditional and religious healers in the pathway to care for people with mental disorders in Africa: A systematic review and meta-analysis. *Social Psychiatry and Psychiatric Epidemiology* 50(6). 867–877.

doi:10.1007/s00127-014-0989-7.

In resource-limited contexts in low- and middle-income countries (LMICs), a considerable proportion of individuals seeking care for mental disorders consult traditional and religious healers in their pathway to mental health care. Reports from Africa suggest that early involvement of healers may result in delays in the care pathway, serving as a potential barrier to early identification and intervention. A systematic review was conducted to evaluate the proportion of patients attending formal health services after making first contact for treatment of mental disorders with traditional or religious healers or other informal and formal care providers within published research in Africa. Electronic databases were searched for the period from January 1990 to February 2014. Fourteen papers were identified with data on category of first care provider. Utilizing random effects modelling with inverse variance method, the pooled proportion of participants making first contact for treatment of mental disorders with two broadly categorized providers (informal and formal) was 48.1% and 49.2%, respectively. The pooled proportion of participants making first contact with specific providers was: traditional healers (17.0%); religious healers (26.2%); general health services (24.3%); and mental health services (13.0%). Substantial regional variation in patterns of first provider choice was evident.

Conclusions of this review must be qualified in the light of several limitations. Approximately half of individuals seeking formal health care for mental disorders in Africa, choose traditional and religious healers as their first care provider. Previous reports suggest that this choice is associated with delays in accessing formal mental health services. Strategies to improve pathways to mental health care in Africa must include innovative programs aimed at fostering collaboration between biomedical mental health services and these key community-based providers.

Chang, Bei-Hung, Nathan R. Stein & Lara M. Skarf. 2015. Spiritual distress of military veterans at the end of life. *Palliative & Supportive Care* 13(3). 635–639.
doi:10.1017/S1478951514000273.

Although combat experiences can have a profound impact on individuals' spirituality, there is a dearth of research in this area. A recent study indicates that one unique spiritual need of veterans who are at the end of life is to resolve distress caused by combat-related events that conflict with their personal beliefs. This study sought to gain an understanding of chaplains' perspectives on this type of spiritual need, as well as the spiritual care that chaplains provide to help veterans ease this distress. Researchers individually interviewed five chaplains who have provided spiritual care to veterans at the end of life in a Veterans Administration hospital. The interviews were recorded, transcribed, and analyzed based on "grounded theory." Chaplains reported that they frequently encounter veterans at the end of life who are still suffering from thoughts or images of events that occurred during their military career. Although some veterans are hesitant to discuss their experiences, chaplains reported that they have had some success with helping the veterans to open up. Additionally, chaplains reported using both religious (e.g., confessing sins) and nonreligious approaches (e.g., recording military experience) to help veterans to heal. This pilot study provides some insight into the spiritual distress that many military veterans may be experiencing, as well as methods that a chaplain can employ to help these veterans.

Chatters, Linda M., Robert Joseph Taylor, Amanda Toler Woodward & Emily J. Nicklett. 2015. Social Support from Church and Family Members and Depressive Symptoms Among Older African Americans. *American Journal of Geriatric Psychiatry* 23(6). 559–567.
doi:10.1016/j.jagp.2014.04.008.

This study examined the influence of church- and family-based social support on depressive symptoms and serious psychological distress among older African Americans. The analysis is based on data from 686 African Americans aged 55 years or older who attend religious services at least a few times a year. Church- and family-based informal social support correlates of depressive symptoms (CES-D) and serious psychological distress (K6) were examined. Multivariate analysis found that social support from church members was significantly and inversely associated with depressive symptoms and psychological distress. Frequency of negative interactions with church members was positively associated with depressive symptoms and psychological distress. Social support from church members remained significant but negative interaction from church members did not remain significant when controlling for indicators of family social support. Among this sample of churchgoers, emotional support from family was a protective factor and negative interaction with family was a risk factor for depressive symptoms and psychological distress. Overall, the findings indicate that social support from church networks was protective

against depressive symptoms and psychological distress. This finding remained significant when controlling for indicators of family social support.

- Cobb, Eleanor, Ariel Kor & Lisa Miller. 2015. Support for adolescent spirituality: contributions of religious practice and trait mindfulness. *Journal of Religion and Health* 54(3). 862–870. doi:10.1007/s10943-015-0046-1.

Spirituality and the surge of its development in adolescence have been established in the research. To date, however, these studies look at tendencies across full samples of adolescence rather than investigating multiple subgroups or multiple pathways of spiritual development. The current study uses latent class analysis to identify subgroup portraits of spiritual life in adolescence, based upon a range of dimensions of spiritual experience, religious practice, and mindfulness. Mindfulness, as a dispositional trait, is examined alongside the impact of religious practice on the level of spiritual experience (relationship with the Higher Power, spiritual values, and spiritual self). The findings suggest there is a complementary contribution to spiritual life in adolescence from religious practice and mindfulness, with both serving as supportive pathways for spiritual development. Adolescents with the highest level of spiritual experience benefit from both religious practice and trait mindfulness, suggesting that, taken together, there is an additive and augmenting contribution.

- Cook, Christopher Ch. 2015. Religious psychopathology: The prevalence of religious content of delusions and hallucinations in mental disorder. *The International Journal of Social Psychiatry* 61(4). 404–425. doi:10.1177/0020764015573089.

Religious themes are commonly encountered in delusions and hallucinations associated with major mental disorders, and the form and content of presentation are significant in relation to both diagnosis and management. This study aimed to establish what is known about the frequency of occurrence of religious delusions (RD) and religious hallucinations (RH) and their inter-relationship. A review was undertaken of the quantitative empirical English literature on RD and RH. A total of 55 relevant publications were identified. The lack of critical criteria for defining and classifying RD and RH makes comparisons between studies difficult, but prevalence clearly varies with time and place, and probably also according to personal religiosity. In particular, little is known about the content and frequency of RH and the relationship between RH and RD.

- Eisendrath, Stuart J., Erin Gillung, Kevin Delucchi, Daniel H. Mathalon, Tony T. Yang, Derek D. Satre, Rebecca Rosser, Walter E. B. Sipe & Owen M. Wolkowitz. 2015. A Preliminary Study: Efficacy of Mindfulness-Based Cognitive Therapy versus Sertraline as First-line Treatments for Major Depressive Disorder. *Mindfulness* 6(3). 475–482. doi:10.1007/s12671-014-0280-8.

Major depressive disorder (MDD) is the leading cause of disability in the developed world, yet broadly effective treatments remain elusive. The primary aim of this pilot study was to investigate the efficacy of Mindfulness-Based Cognitive Therapy (MBCT) monotherapy, compared to sertraline monotherapy, for patients with acute MDD. This open-label, nonrandomized controlled trial examined a MBCT cohort (n=23) recruited to match the gender, age, and

depression severity of a depressed control group (n=20) that completed 8 weeks of monotherapy with the antidepressant sertraline. The 17-item clinician-rated Hamilton Depression Severity Rating Scale (HAM-D-17) was the primary outcome measure of depression to assess overall change after 8 weeks and rates of response and remission. The 16-item Quick Inventory of Depressive Symptomatology-Self-Report (QIDS-SR16) was the secondary outcome measure to further assess depression severity. Both cohorts were demographically similar and showed significant improvement in depression ratings. No difference was found in the degree of change in HAM-D-17 scores between groups. Secondary analysis showed statistically significant differences in mean scores of the QIDS-SR16, with the MCBT group showing greater mean improvement. This study was limited by the small sample size and non-randomized, non-blinded design. Preliminary findings suggest that an 8-week course of MBCT monotherapy may be effective in treating MDD and a viable alternative to antidepressant medication. Greater changes in the self-rated QIDS-SR16 for the MBCT cohort raise the possibility that patients derive additional subjective benefit from enhanced self-efficacy skills.

Hawley, Anna R., Annette Mahoney, Kenneth I. Pargament & Anne K. Gordon. 2015. Sexuality and spirituality as predictors of distress over a romantic breakup: Mediated and moderated pathways. *Spirituality in Clinical Practice* 2(2). 145–159. doi:10.1037/scp0000034.

This quantitative study examined the intersecting roles of sexual activity and religion/spirituality in college students' adjustment to nonmarital romantic breakups. Four hundred forty-five undergraduate students (72% female) who had experienced the dissolution of an exclusive romantic relationship participated. As predicted, greater pre-breakup sexual activity with their former partner and sacred loss/desecration appraisals of the breakup were each directly related to greater current anger and subjective distress over the breakup. Moreover, sacred loss/desecration appraisals of the breakup fully mediated links between greater pre-breakup sexual activity and greater anger and subjective distress. This mediation model was particularly strong among participants who reported moderate to high religious involvement and biblical conservatism. These results may have important implications for improving the quality of clinical and pastoral care for individuals who have experienced a nonmarital breakup, particularly those arising from biblically conservative faith traditions.

Henderson, Andrea K. & Christopher G. Ellison. 2015. My Body is a Temple: Eating Disturbances, Religious Involvement, and Mental Health Among Young Adult Women. *Journal of Religion and Health* 54(3). 954–976. doi:10.1007/s10943-014-9838-y.

A growing body of the literature outlines the undesirable mental health consequences of eating disturbances. However, little attention has been given to the possible mitigating effects of cultural institutions, such as religion, in the lives of women suffering from such pathologies. The present work contributes to the literature by (a) outlining a series of arguments linking eating disturbances, religion, and mental health; (b) specifying two conceptual models of these relationships; and, (c) testing relevant hypotheses using data on a large nationwide sample of young women. Results indicate that religious involvement-organizational, non-organizational, and subjective religiousness-moderates the effects of eating disturbances on mental health,

particularly for self-esteem. Study limitations are identified and several promising directions for future research are discussed.

- Ho, Nerissa S. P., Delin Sun, Kin-Hung Ting, Chetwyn C. H. Chan & Tatia M. C. Lee. 2015. Mindfulness Trait Predicts Neurophysiological Reactivity Associated with Negativity Bias: An ERP Study. *Evidence-Based Complementary and Alternative Medicine: eCAM* 2015. 212368.
doi:10.1155/2015/212368.

This study explored the relationship of mindfulness trait with the early and late stages of affective processing, by examining the two corresponding ERP components, P2 and LPP, collected from twenty-two male Chinese participants with a wide range of meditation experiences. Multiple regression analyses was performed on the mindfulness scores, as measured by CAMS-R, with the subjective affective ratings and ERP data collected during an emotion processing task. The results showed that increased mindfulness scores predicted increased valence ratings of negative stimuli (less negative), as well as increased P2 amplitudes at the frontocentral location for positive compared to negative stimuli. Based on these findings, a plausible mechanism of mindfulness in reducing negativity bias was discussed. Moreover, these results replicated previous findings on the age-related increase of P2 amplitudes at the frontal sites for positive compared to neutral stimuli. Since the locations at which P2 amplitudes were found as associated with age and mindfulness differed, as did the emotional contents of the stimuli being compared, indicating that the effect of age did not confound our findings on mindfulness and the two factors might operate on early affective processing from distinct sources and mechanisms.

- Khoury, Bassam, Manoj Sharma, Sarah E. Rush & Claude Fournier. 2015. Mindfulness-based stress reduction: A meta-analysis. *Journal of Psychosomatic Research* 78(6). 519–528.
doi:10.1016/j.jpsychores.2015.03.009.

An increasing number of mindfulness-based stress reduction (MBSR) studies are being conducted with nonclinical populations, but very little is known about their effectiveness. To evaluate the efficacy, mechanisms of actions, and moderators of MBSR for nonclinical populations. Data was taken from systematic review of studies published in English journals in Medline, CINAHL or Alt HealthWatch from the first available date until September 19, 2014. Any quantitative study that used MBSR as an intervention, that was conducted with healthy adults, and that investigated stress or anxiety was selected. A total of 29 studies (n=2668) were included. Effect-size estimates suggested that MBSR is moderately effective in pre-post analyses (n=26) and in between group analyses (n=18). The obtained results were maintained at an average of 19 weeks of follow-up. Results suggested large effects on stress, moderate effects on anxiety, depression, distress, and quality of life, and small effects on burnout. When combined, changes in mindfulness and compassion measures correlated with changes in clinical measures at post-treatment and at follow-up. However, heterogeneity was high, probably due to differences in the study design, the implemented protocol, and the assessed outcomes. The authors conclude that MBSR is moderately effective in reducing stress, depression, anxiety and distress and in ameliorating the quality of life of healthy individuals; however, more research is warranted to identify the most effective elements of MBSR.

- Lee, Daniel B., Enrique W. Jr. Neblett & Veronica Jackson. 2015. The role of optimism and religious involvement in the association between race-related stress and anxiety symptomatology. *Journal of Black Psychology* 41(3). 221–246.
doi:10.1177/0095798414522297.

This study examined the associations between individual, institutional, and cultural race-related stress and somatic and cognitive anxiety. Researchers adopted a risk and resilience framework to investigate the protective role of optimism and religious involvement in the race-related stress-anxiety link. A total of 171 African American young adults completed measures of race-related stress, optimism, religious involvement, and anxiety symptomatology. Institutional race-related stress was positively associated with cognitive and somatic anxiety. Optimism moderated the association between individual race-related stress and cognitive anxiety. Religious involvement enhanced the protective function of optimism in the association between individual and cultural race-related stress and cognitive anxiety. These results illustrate the utility of a multidimensional framework for understanding the impact of race-related stress on anxiety symptomatology. Moreover, the pattern of findings suggests that high religious involvement and high optimism may produce the most advantageous outcomes with respect to the association between race-related stress and anxiety in African American young adults.

- Lee, Kun-Hua & Sarah Bowen. 2015. Relation Between Personality Traits and Mindfulness Following Mindfulness-Based Training: A Study of Incarcerated Individuals with Drug Abuse Disorders in Taiwan. *International Journal of Mental Health and Addiction* 13(3). 413–421.
doi:10.1007/s11469-014-9533-y.

Researchers examined the relationship between the “Big-Five” personality factors and levels of mindfulness at baseline, and the predictive value of these personality factors on changes in mindfulness after eight weeks of mindfulness-based training. All participants were followed-up for eight weeks. Sixty-three incarcerated adult males with drug abuse disorders completed self-report assessments of mindfulness, depression, and personality. Four of the five personality factors (Conscientiousness, Extraversion, Agreeableness, and Neuroticism) were significantly associated with Decentering of mindfulness at baseline. Neuroticism and Openness to Experience were significantly related to Curiosity. There was a significant baseline-to-post-course difference on the Decentering subscale; however, the results unexpectedly contradicted our hypothesis. There were no significant baseline-to-post-course differences on the Curiosity subscale. After controlling for post-course depression, none of the Big-Five personality factor traits significantly predicted post-course Curiosity and Decentering. The effects of the Big-Five personality factors on outcomes of mindfulness-based intervention for drug abusers were preliminarily confirmed, but a randomized longitudinal study is required to reconfirm our findings.

- Lytle, Megan C., Susan M. De Luca, John R. Blosnich & Chris Brownson. 2015. Associations of racial/ethnic identities and religious affiliation with suicidal ideation among lesbian, gay, bisexual, and questioning individuals. *Journal of Affective Disorders* 178. 39–45.
doi:10.1016/j.jad.2014.07.039.

The aim of this study was to examine the associations of racial/ethnic identity and religious affiliation with suicidal ideation among lesbian, gay, bisexual, and questioning (LGBQ) and

heterosexual college students. An additional aim was to determine the prevalence of passive suicidal ideation (i.e., death ideation) and active suicidal ideation among culturally diverse LGBQ individuals. Data from the National Research Consortium probability-based sample of college students from 70 postsecondary institutions (n=24,626) were used to examine active and passive suicidal ideation in the past 12-months and lifetime active suicidal ideation among students by sexual orientation, racial/ethnic identity, and religious affiliation. Across most racial/ethnic groups and religious affiliations, LGBQ students were more likely to report active suicidal ideation than non-LGBQ individuals. Among LGBQ students, Latino individuals had lower odds of reporting both past 12-month passive and active suicidal ideation than their non-Hispanic white LGBQ counterparts. Compared to Christian LGBQ students, Agnostic/Atheist LGBQ individuals had greater odds of reporting past 12-month passive suicidal ideation, and Jewish LGBQ students were less likely to endorse past 12-month passive and active suicidal ideation. Results corroborate previous research showing elevated prevalence of suicidal ideation among LGBQ individuals in comparison to their heterosexual counterparts. These findings are among the first to document prevalence differences within the LGBQ population based on intersectional identities (race/ethnicity and religious affiliation).

Medina, Johnna, Lindsey Hopkins, Mark Powers, Scarlett O. Baird & Jasper Smits. 2015. The Effects of a Hatha Yoga Intervention on Facets of Distress Tolerance. *Cognitive Behaviour Therapy* 44(4). 288–300.
doi:10.1080/16506073.2015.1028433.

Individuals with low distress tolerance (DT) experience negative emotion as particularly threatening and are highly motivated to reduce or avoid such affective experiences. Consequently, these individuals have difficulty regulating emotions and tend to engage in maladaptive strategies, such as overeating, as a means to reduce or avoid distress. Hatha yoga encourages one to implement present-centered awareness and non-reaction in the face of physical and psychological discomfort and, thus, emerges as a potential strategy for increasing DT. To test whether a hatha yoga intervention can enhance DT, a transdiagnostic risk and maintenance factor, this study randomly assigned females high in emotional eating in response to stress (n=52) either to an 8-week, twice-weekly hatha (Bikram) yoga intervention or to a waitlist control condition. Self-reported DT and emotional eating were measured at baseline, weekly during treatment, and 1-week post-treatment. Consistent with prediction, participants in the yoga condition reported greater increases in DT over the course of the intervention relative to waitlist participants. Also consistent with prediction, the reduction in emotional eating was greater for the yoga condition than the waitlist condition. Importantly, reductions distress absorption, a specific sub-facet of DT, accounted for 15% of the variance in emotional eating, a hallmark behavior of eating pathology and risk factor for obesity.

Mills, Paul J., Kathleen Wilson, Navaid Iqbal, Fatima Iqbal, Milagros Alvarez, Meredith A. Pung, Katherine Wachmann, et al. 2015. Depressive symptoms and spiritual wellbeing in asymptomatic heart failure patients. *Journal of Behavioral Medicine* 38(3). 407–415.
doi:10.1007/s10865-014-9615-0.

Depression adversely predicts prognosis in individuals with symptomatic heart failure. In some clinical populations, spiritual wellness is considered to be a protective factor against depressive

symptoms. This study examined associations among depressive symptoms, spiritual wellbeing, sleep, fatigue, functional capacity, and inflammatory biomarkers in 132 men and women with asymptomatic stage B heart failure. Approximately 32% of the patients scored ≥ 10 on the Beck Depression Inventory, indicating potentially clinically relevant depressive symptoms. Multiple regression analysis predicting fewer depressive symptoms included the following significant variables: a lower inflammatory score comprised of disease-relevant biomarkers, less fatigue, better sleep, and more spiritual wellbeing. Further analyses indicated that the meaning and peace subscales, but not the faith subscale, of spiritual wellbeing were independently associated with fewer depressive symptoms. Interventions aimed at increasing spiritual wellbeing in patients' lives, and specifically meaning and peace, may be a potential treatment target for depressive symptoms asymptomatic heart failure.

Miyata, Hiromitsu, Kazuo Okanoya & Nobuyuki Kawai. 2015. Mindfulness and psychological status of Japanese yoga practitioners: A cross-sectional study. *Mindfulness* 6(3). 560–571. doi:10.1007/s12671-014-0288-0.

A growing body of evidence suggests that meditation-based mental practices cause desirable changes to psychological status. Little is known about how enduring changes to multiple aspects of emotions are observed for Japanese long-term yoga practitioners. The present study using a cross-sectional design to investigate mindfulness and relevant psychological functions in a population of Japanese yoga practitioners. These participants routinely practiced classical hatha yoga, breathing techniques, as well as focused attention-based meditation. Participants completed a battery of five established Japanese versions of questionnaires, each of which concerned mindfulness, subjective well-being, depression, positive/negative affect, and empathy. Compared with age- and sex-matched control participants, yoga practitioners self-reported significantly higher scores on mindfulness, well-being, positive affect, and empathy, and lower scores on depression and negative affect. Among the practitioners, period and amount of yoga/meditation practice, regardless of ages, predicted higher scores on mindfulness and well-being and lower scores on depression, negative affect, and empathy. These data overall suggest desirable psychological status associated with continued yoga practice among Japanese contemplatives.

Murphy, Helen & Marika Lahtinen. 2015. 'To me, it's like a little box of tricks': Breaking the depressive interlock as a programme participant in mindfulness-based cognitive therapy. *Psychology and Psychotherapy* 88(2). 210–226. doi:10.1111/papt.12041.

The present researchers were interested in finding out how mindfulness-based cognitive therapy (MBCT) worked for program participants by focusing on how meditative practices changed their relationships with their thoughts. Data for the study came from six semi-structured research interviews carried out with individuals who had taken part in an 8-week MBCT program. The authors report on two superordinate themes that emerged from interview analysis: Engaging the Neutral Mind (with subordinate themes "breaking the paralysis of worry" and "choosing to think differently") and Experiencing the Neutral Mind (with subordinate themes of "reflection on previous thinking styles" and "becoming psychologically self-reliant"). Results support the assertion that mindfulness meditation helps facilitate a different mode of meta-cognitive processing with which to handle depression-related cognitions.

- Nagpal, Neha, Allison R. Heid, Steven H. Zarit & Carol J. Whitlatch. 2015. Religiosity and quality of life: A dyadic perspective of individuals with dementia and their caregivers. *Aging & Mental Health* 19(6). 500–506.
doi:10.1080/13607863.2014.952708.

Dyadic coping theory purports the benefit of joint coping strategies within a couple, or dyad, when one dyad member is faced with illness or stress. In this study, researchers examine the effect of religiosity on well-being for individuals with dementia (IWDs). In particular, the study examines the effect of both dyad members' religiosity on perceptions of IWDs' quality of life (QoL). Participants were 111 individuals with mild-to-moderate dementia and their family caregivers, who were interviewed to evaluate IWDs' everyday-care values and preferences, including religious preferences. Using an actor-partner multi-level model to account for the interdependent relationship of dyads, researchers examined how IWD and caregiver ratings of religiosity (attendance, prayer, and subjective ratings of religiosity) influence perceptions of IWDs' QoL. Results indicate that, after accounting for care-related stress, one's own religiosity is not significantly related to IWDs' or caregivers' perceptions of IWD QoL. However, when modeling both actor and partner effects of religiosity on perceptions of IWDs' QoL, caregivers' religiosity is positively related to IWDs' self-reports of QoL, and IWDs' religiosity is negatively associated with caregivers' perceptions of IWDs' QoL.

- O'Reilly, Dermot & Michael Rosato. 2015. Religion and the risk of suicide: longitudinal study of over 1 million people. *British Journal of Psychiatry* 206(6). 466–470.
doi:10.1192/bjp.bp.113.128694.

Durkheim's seminal historical study demonstrated that religious affiliation reduces suicide risk, but it is unclear whether this protective effect persists in modern, more secular societies. This article examines suicide risk according to Christian religious affiliation and by inference examines underlying mechanisms for suicide risk. If church attendance is important, risk should be lowest for Roman Catholics and highest for those with no religion; if religiosity is important, then "conservative" Christians should fare best. A 9-year study followed 1,106,104 people aged 16-74 years at the 2001 UK census. In fully adjusted models analyzing 1,119 cases of suicide, Roman Catholics, Protestants and those professing no religion recorded similar risks. The risk associated with conservative Christians was lower than that for Catholics. The authors conclude that the relationship between religious affiliation and suicide established by Durkheim may not pertain in societies where suicide rates are highest at younger ages. Risks are similar for those with and without a religious affiliation, and Catholics (who traditionally are characterized by higher levels of church attendance) do not demonstrate lower risk of suicide.

- Sanders, Peter W., G. E. Kawika Allen, Lane Fischer, P. Scott Richards, David T. Morgan & Richard W. Potts. 2015. Intrinsic religiousness and spirituality as predictors of mental health and positive psychological functioning in Latter-Day Saint adolescents and young adults. *Journal of Religion and Health* 54(3). 871–887.
doi:10.1007/s10943-015-0043-4.

Researchers investigated the relationships between religiousness and spirituality and various indicators of mental health and positive psychosocial functioning in three separate samples of college students. A total of 898 students at Brigham Young University participated in the three

studies. The students ranged in age from 17 to 26 years old, with the average age of 20.9 across all three samples. Results indicate that intrinsic religiousness, spiritual maturity, and self-transcendence were significantly predictive of better mental health and positive functioning, including lower levels of depression, anxiety, and obsessive-compulsiveness, and higher levels of global self-esteem, identity integration, moral self-approval, and meaning in life. Intrinsic religiousness was not predictive of shame, perfectionism, and eating disorder symptoms. These findings are consistent with many prior studies that have found religiousness and spirituality to be positively associated with better mental health and positive psychosocial functioning in adolescents and young adults.

- Stolovy, Tali, Rachel Lev-Wiesel & Eliezer Witztum. 2015. Dissociation: adjustment or distress? Dissociative phenomena, absorption and quality of life among Israeli women who practice channeling compared to women with similar traumatic history. *Journal of Religion and Health* 54(3). 1040–1051.
doi:10.1007/s10943-014-9885-4.

This study aimed to explore the relationship between traumatic history, dissociative phenomena, absorption, and quality of life among a population of channelers, in comparison with a population of non-channelers with similar traumatic history. The study sample included 150 women. The measures included Traumatic Experiences Scale, Dissociative Experience Scale, Absorption Scale, Brief Symptom Inventory and Quality of Life (QOL) Assessment. Channelers presented significantly higher levels of dissociation, absorption and psychological health compared to the other group. Dissociation and absorption were trauma-related only among the comparison group. Hence, dissociation has different qualities among different people, and spiritual practice contributes to QOL.

- Sugiura, Tomoko & Yoshinori Sugiura. 2015. Common factors of meditation, focusing, and cognitive behavioral therapy: Longitudinal relation of self-report measures to worry, depressive, and obsessive-compulsive symptoms among nonclinical students. *Mindfulness* 6(3). 610–623.
doi:10.1007/s12671-014-0296-0.

Meditation has a long tradition with substantial implications for many psychotherapies. It has been postulated that meditation may cultivate therapeutic processes similar to various psychotherapies. A previous study used joint factor analysis to identify five common factors of items of scales purported to capture psychological states cultivated by meditation, focusing, and cognitive behavioral therapy, namely, refraining from catastrophic thinking, logical objectivity, self-observation, acceptance, and detached coping. The present study aimed to extend previous research on these five factors by examining their longitudinal relationship to symptoms of depression, obsession and compulsion, and worrying, with two correlational surveys without intervention. Potential mediators of their effect on worrying were also explored. Longitudinal questionnaire studies from two student samples (n=157 and 232, respectively) found that (a) detached coping was inversely related to obsessive-compulsive symptoms about 5 weeks later; (b) detached coping was inversely related to depressive symptoms about 5 weeks later; (c) refraining from catastrophic thinking was inversely related to worrying, while self-observation was positively related to worrying about 2 months later; and (d) the relation of refraining from

catastrophic thinking to worrying was mediated by negative beliefs about worrying, while the relation of self-observation to worrying was mediated by negative beliefs about worrying and monitoring of one's cognitive processes. As refraining from catastrophic thinking involves being detached from one's negative thinking and detached coping involves distancing oneself from external circumstances and problems, the results suggest that distancing attitudes are useful for long-term reduction of various psychological symptoms.

Vaaler, Arne E., Daniel Kondziella, Gunnar Morken, Valentina C. Iversen & Olav M. Linaker. 2015. Religious convictions in patients with epilepsy-associated affective disorders: A controlled study from a psychiatric acute department. *Journal of Religion and Health* 54(3). 1110–1117.

doi:10.1007/s10943-014-9957-5.

Patients with epilepsy often have different mood symptoms and behavioral trait characteristics compared to the non-epileptic population. In the present prospective study, researchers aimed to assess differences in behavioral trait characteristics between acutely admitted, psychiatric in-patients with epilepsy-associated depressive symptoms and gender/age-matched patients with major depression. Patients with epilepsy-associated depression had significantly higher scores for “religious convictions,” “philosophical and intellectual interests” and “sense of personal destiny.” These behavioral trait characteristics at admission or in clinical history should alert the psychiatrist and lead to closer examination for a possible convulsive disorder.

Wang, Zhizhong, Harold G. Koenig, Yuhong Zhang, Wanrui Ma & Yueqin Huang. 2015. Religious involvement and mental disorders in mainland China. *PloS One* 10(6). e0128800. doi:10.1371/journal.pone.0128800.

The present study aims to examine the association between religious involvement and mental disorder (anxiety disorder, mood disorder, alcohol use disorder) in a general Chinese population, and explore connections between religious belief and mental disorders in the Hui and Han ethnic groups. Data were examined from a representative sample of 2,770 community-dwelling adults in the province of Ningxia located in western China. Self-reported religious attendance and the importance of religious in daily life were measured. The WHO Composite International Diagnostic Interview was used to diagnose mental disorders. In the overall sample, the importance of religious affiliation was positively associated with mental disorders (especially anxiety). No association was found between any religious characteristic and mood disorders or alcohol use disorders. With regard to analyses within different ethnic groups, religious affiliation was positively associated with mental disorder in Han ethnicity, but not in Hui ethnicity. When stratified by age and ethnic group, religious affiliation was associated positively with mental disorder in younger Han; whereas high religiosity was associated positively with mental disorder in older Hui. Among older Hui, however, religious affiliation was inversely associated with mood disorder.

Wilcox, Claire E., Matthew R. Pearson & J. Scott Tonigan. 2015. Effects of long-term AA attendance and spirituality on the course of depressive symptoms in individuals with alcohol use disorder. *Psychology of Addictive Behaviors* 29(2). 382–391.

doi:10.1037/adb0000053.

Alcohol use disorder (AUD) is associated with depression. Although attendance at Alcoholics Anonymous (AA) meetings predicts reductions in drinking, results have been mixed about the salutary effects of AA on reducing depressive symptoms. In this single-group study, early AA affiliates (n=253) were recruited, consented, and assessed at baseline, 3, 6, 9, 12, 18, and 24 months. Lagged growth models were used to investigate the predictive effect of AA attendance on depression, controlling for concurrent drinking and treatment attendance. Depression was measured using the Beck Depression Inventory (BDI) and was administered at baseline 3, 6, 12, 18, and 24 months. Additional predictors of depression tested included spiritual gains (Religious Background and Behavior questionnaire [RBB]) and completion of 12-step work (Alcoholics Anonymous Inventory [AAI]). Eighty-five percent of the original sample provided follow-up data at 24 months. Overall, depression decreased over the 24 month follow-up period. AA attendance predicted later reductions in depression even after controlling for concurrent drinking and formal treatment attendance. Finally, increased spiritual gains (RBB) also predicted later reductions in depression after controlling for concurrent drinking, treatment, and AA attendance. In summary, reductions in alcohol consumption partially explained decreases in depression in this sample of early AA affiliates, and other factors such as AA attendance and increased spiritual practices also accounted for reductions in depression beyond that explained by drinking.

Wu, Andrew, Jing-Yu Wang & Cun-Xian Jia. 2015. Religion and Completed Suicide: a Meta-Analysis. *PloS One* 10(6). e0131715.
doi:10.1371/journal.pone.0131715.

Suicide is a major public health concern and a leading cause of death around the world. How religion influences the risk of completed suicide in different settings across the world requires clarification in order to best inform suicide prevention strategies. A meta-analysis using search results from Pubmed and Web of Science databases was conducted following PRISMA protocol and using the keywords “religion” or “religious” or “religiosity” or “spiritual” or “spirituality” plus “suicide” or “suicidality” or “suicide attempt”. Nine studies that altogether evaluated 2339 suicide cases and 5252 comparison participants met all selection criteria and were included in the meta-analysis. The meta-analysis suggested an overall protective effect of religiosity from completed suicide. Sub-analyses similarly revealed significant protective effects for studies performed in western cultures, areas with religious homogeneity, and among older populations. High heterogeneity of the meta-analysis was attributed to three studies in which the methods varied from the other six.

2.3 SPIRITUALITY & HEALTH: METHOD AND THEORY

Agoramoorthy, Govindasamy. 2015. Sacred rivers: Their spiritual significance in Hindu religion. *Journal of Religion and Health* 54(3). 1080–1090.
doi:10.1007/s10943-014-9934-z.

This article discusses the sacred significance of rivers in the ancient and contemporary Indian culture with examples from popular Hindu scriptures. It also presents the ancient model of an eco-friendly check dam and its modern application with potential to mitigate future water-related problems across the drylands of India and elsewhere.

Arcari, Patricia Martin & Jane Flanagan. 2015. The development of a mind-body-spirit certification program in nursing. *Journal of Holistic Nursing: Official Journal of the American Holistic Nurses' Association* 33(2). 168–176.

doi:10.1177/0898010114547112.

Stress and anxiety experienced by patients particularly during hospitalization can be positively affected by an approach to care that emphasizes the uniqueness of the patient, the patient-provider relationship, and mind-body-spirit interventions. Although patients seek care that addresses stress and promotes relaxation within the hospital environment, there is evidence that there are lost opportunities aimed at addressing these concerns within the current health care environment. Nursing leadership at Massachusetts General Hospital and the Massachusetts General Hospital Institute of Health Professions recognized a need to address this gap in knowledge that exists in the practice setting. The purpose of this article is to describe and discuss the development and implementation of a program in mind-body-spirit nursing that was developed collaboratively between the Massachusetts General Hospital Institute of Health Professions and the Benson-Henry Institute of Mind Body Medicine at Massachusetts General Hospital.

Carey, Lindsay B. 2015. Court chaplaincy and spiritual care in Australia: An exploratory study. *Journal of Religion and Health* 54(3). 1014–1026.

doi:10.1007/s10943-014-9878-3.

This paper summarizes an exploratory study undertaken to consider the work of Australian chaplaincy personnel ministering to people proceeding through emotionally challenging judicial court proceedings. This qualitative research (a first among Australian court chaplains) was not concerned with specific court procedures per se, but predominantly about the perspectives of chaplains concerning their professional contribution and issues they experienced while trying to assist people struggling with court processes. Data from a single focus group indicated that court chaplains were striving to fulfill religious and spiritual duties according to national and international standards. Given various frustrations identified by chaplain participants, which either impeded or thwarted their professional role as chaplains, a number of improvements were subsequently identified in order to develop the efficiency and effectiveness of court chaplaincy and thus maximize the benefits of spiritual and pastoral care to people in court.

Cranney, Stephen. 2015. The Association Between Belief in God and Fertility Desires in Slovenia and the Czech Republic. *Perspectives on Sexual and Reproductive Health* 47(2). 83–89.

doi:10.1363/47e2915.

Research on the association between religiosity and fertility, particularly the effects of secularization on fertility desires and outcomes, has been concerned primarily with mechanisms that are fundamentally institutional and are embedded in formal religious structures. Supplementary explanations focused on noninstitutional dimensions of religiosity have never been tested. For this study, conventional ordinary least-squares regression was used to test the association between belief in God (i.e., a personal God or some sort of life force) and fertility desires among 2,251 women aged 18-45 in Slovenia and 951 women aged 15-44 in the Czech Republic who participated in the European Family and Fertility Survey in the mid-1990s. In both samples, substantial proportions of women either were nonbelievers or believed in God but were

not institutionally religious. Belief in God was independently associated with fertility desires even in analyses controlling for self-reported religiosity. Women who believed in a personal God wanted approximately 0.2 more children, and those who believed in a life force wanted approximately 0.1 more children, than nonbelievers. Results were similar across several alternative measures of religiosity.

Daverio-Zanetti, Svetlana, Kathryn Schultz, Miguel A. Martin del Campo, Vanessa Malcarne, Natasha Riley & Georgia Robins Sadler. 2015. Is Religiosity Related to Attitudes Toward Clinical Trials Participation? *Journal of Cancer Education* 30(2). 220–224.
doi:10.1007/s13187-014-0696-9.

Research indicates that a low percentage of cancer patients enroll in cancer clinical trials. This is especially true among minority groups such as Hispanic Americans. Considering the importance of religion in the Hispanic American community, it is important to understand its relationship to perceptions of clinical trials. Five hundred and three Latina women completed the Barriers to Clinical Trials Participation Scale and the Duke University Religion Index. For the total sample, higher organizational and intrinsic religiosity was significantly associated with a perceived lack of community support for clinical trials participation. In subgroup analysis, the relationship between organizational religiosity and lack of support was stronger among Latinas who were Spanish language preferred and Latinas who were Catholic. Intrinsic religiosity was associated with mistrust among Spanish language-preferred Latinas, and both organizational and intrinsic religiosities were associated with a lack of familiarity with clinical trials among Christian (non-Catholic) Latinas. These results indicate that religious institutions that serve Latinas may be an effective venue for disseminating clinical trial education programs to improve attitudes toward clinical trials participation.

Emanuel, Linda, George Handzo, George Grant, Kevin Massey, Angelika Zollfrank, Diana Wilke, Richard Powell, Walter Smith & Kenneth Pargament. 2015. Workings of the human spirit in palliative care situations: A consensus model from the Chaplaincy Research Consortium. *BMC palliative care* 14. 29.
doi:10.1186/s12904-015-0005-3.

Chaplaincy is a relatively new discipline in medicine that provides for care of the human spirit in healthcare contexts for people of all worldviews. Studies indicate wide appreciation for its importance, yet empirical research is limited. The purpose of the current article is to create a model of human spiritual processes and needs in palliative care situations so that researchers can locate their hypotheses in a common model which will evolve with relevant findings. The Model Building Subgroup worked with the Chaplaincy Research Consortium as part of a larger Templeton Foundation funded project to enhance research in the area. The model uses modestly adapted existing definitions and models. It describes the human experience of spirituality during serious illness in three renditions: visual, mathematical, and verbal so that researchers can use whichever is applicable. The visual rendition has four domains: spiritual, psychological, physical and social with process arrows and permeable boundaries between all areas. The mathematical rendition has the same four factors and is rendered as an integral equation, corresponding to an integrative function postulated for the human spirit. In both renditions, the model is notable in its allowance for direct spiritual experience and a domain or factor in its own right, not only

experience that is created through the others. The model does not describe anything beyond the human experience. The verbal rendition builds on existing work to describe the processes of the human spirit, relating it to the four domains or factors.

Farb, Norman, Jennifer Daubenmier, Cynthia J. Price, Tim Gard, Catherine Kerr, Barnaby D. Dunn, Anne Carolyn Klein, Martin P. Paulus & Wolf E. Mehling. 2015. Interoception, contemplative practice, and health. *Frontiers in Psychology* 6. 763.
doi:10.3389/fpsyg.2015.00763.

Interoception can be broadly defined as the sense of signals originating within the body. As such, interoception is critical for our sense of embodiment, motivation, and well-being. And yet, despite its importance, interoception remains poorly understood within modern science. This paper reviews interdisciplinary perspectives on interoception, with the goal of presenting a unified perspective from diverse fields such as neuroscience, clinical practice, and contemplative studies. It is hoped that this integrative effort will advance an understanding of how interoception determines well-being, and identify the central challenges to such understanding. To this end, researchers introduce here an expanded taxonomy of interoceptive processes, arguing that many of these processes can be understood through an emerging predictive coding model for mind-body integration. The model, which describes the tension between expected and felt body sensation, parallels contemplative theories, and implicates interoception in a variety of affective and psychosomatic disorders. Researchers conclude that maladaptive construal of bodily sensations may lie at the heart of many contemporary maladies, and that contemplative practices may attenuate these interpretative biases, restoring a person's sense of presence and agency in the world.

Frazier, Michael, Karen Schnell, Susan Baillie & Margaret L. Stuber. 2015. Chaplain rounds: a chance for medical students to reflect on spirituality in patient-centered care. *Academic Psychiatry* 39(3). 320–323.
doi:10.1007/s40596-015-0292-2.

This study assesses the perceived impact of a required half-day with a hospital chaplain for first-year medical students, using a qualitative analysis of their written reflections. Students shadowed chaplains at the UCLA hospital with the stated goal of increasing their awareness and understanding of the spiritual aspects of health care and the role of the chaplain in patient care. Participation in the rounds and a short written reflection on their experience with the chaplain were required as part of the first-year Doctoring course. The qualitative analysis of reflections from 166 students using grounded theory yielded four themes: (1) the importance of spiritual care, (2) the chaplain's role in the clinical setting, (3) personal introspection, and (4) doctors and compassion. The authors conclude that going on hospital rounds with a chaplain helps medical students understand the importance of spirituality in medicine and positively influences student perceptions of chaplains and their work.

Greenberg, Michael J., Michelle A. Pievsky & Robert E. McGrath. 2015. Navigation of ethical conflicts among religious psychotherapists treating lesbian and gay patients. *Spirituality in Clinical Practice* 2(2). 134–144.
doi:10.1037/scp0000066.

Religious psychotherapists may experience an ethical conflict between their religious beliefs and recommended psychological practice when treating lesbian or gay patients. The aim of this study was to investigate how religious psychotherapists navigate clinical situations that present a conflict between their religious and professional ethics. Sixty religious psychotherapists completed measures of belief in, and adherence to, gay affirmative practice, attitudes toward lesbians and gay men, religious fundamentalism, and methods of navigating conflicts between religious beliefs and practice with lesbian and gay individuals. Greater religious fundamentalism was found to predict more negative attitudes toward lesbian and gay orientations, which in turn was found to predict decreased adherence to gay affirmative practice. Participants used a variety of methods to navigate conflicts between professional and religious ethics; however, compartmentalization and consultation with professional leaders were more commonly used than any other method. These findings refine those from previous research showing that religious affiliation was not associated with decreased adherence to gay affirmative practice. Researchers found that although religious affiliation in general may not be associated with the use of gay affirmative practice, religious fundamentalism is, and this latter association is mediated by attitudes toward lesbian and gay orientations.

- Heidari, Tooba, Saeideh Ziaei, Fazlollah Ahmadi, Eesa Mohammadi & Jenny Hall. 2015. Maternal Experiences of Their Unborn Child's Spiritual Care: Patterns of Abstinence in Iran. *Journal of Holistic Nursing: Official Journal of the American Holistic Nurses' Association* 33(2). 146–158.
doi:10.1177/0898010114551416.

Preparing for pregnancy and childbirth has significant association with spirituality. Review of the literature shows that the spirituality of the “unborn child” has not yet attracted much critical attention. This study was conducted with the aim of exploration of maternal behaviors associated with the spiritual health of the unborn child. A qualitative approach was used to investigate the research question. Twenty-seven in-depth unstructured interviews were conducted with 22 Iranian mothers in Tehran city (Iran) who were pregnant or had experienced pregnancy in 2012-2013. Data analysis was carried out using a conventional content analysis approach. “Refusing to eat forbidden food,” “Overcoming mental adversity,” “Regulating one(s) social interactions,” “Preventing the effects of harmful environments on the senses,” “Avoidance of using insulting and abusive language,” “Keeping one(s) mind and spirit free from evil traits,” and “Refraining from damaging behaviors” were important experiences that the mothers used for “Holistic Abstinence.” The results provide new information about the subjective experiences of Iranian women on the patterns of abstinence for the midwives, research community, policy makers, and planners of maternal and child health care services in order to contribute to holistic, culturally, and religiously competent prenatal care for Muslim pregnant women throughout the world.

- Kopacz, Marek S., Claire A. Hoffmire, Sybil W. Morley & C. Garland Vance. 2015. Using a spiritual distress scale to assess suicide risk in Veterans: An exploratory study. *Pastoral Psychology* 64(3). 381–390.
doi:10.1007/s11089-014-0633-1.

This exploratory study (1) examined the ability of a spiritual distress scale used by chaplains to identify Veterans with certain suicide risk factors and (2) provided an initial assessment of the

reliability and validity of this scale to screen for Veterans at increased risk of suicide based on the presence of these risk factors. The scale consisted of five questions examining the presence or absence of guilt, sadness or grief, anger or resentment, despair or hopelessness, and feeling that life has no meaning or purpose. The five questions had a high level of internal consistency. Factor analysis suggested the presence of a common underlying factor. Those identified with a suicide risk factor had significantly higher mean composite scores on this scale. Further, scores were significantly associated with increased odds of being identified with a suicide risk factor. This scale shows promise for identifying Veterans who may be at increased risk of suicide.

- Lewinson, Lesline P., Wilfred McSherry & Peter Kevern. 2015. Spirituality in pre-registration nurse education and practice: A review of the literature. *Nurse Education Today* 35(6). 806–814.
doi:10.1016/j.nedt.2015.01.011.

Spirituality is known to be an integral part of holistic care, yet research shows that it is not well valued or represented in nurse education and practice. However, the nursing profession continues to make efforts to redress the balance by issuing statements and guidance for the inclusion of spirituality by nurses in their practice. A systematic literature review was undertaken and confirms that nurses are aware of their lack of knowledge, understanding and skills in the area of spirituality and spiritual care, and desire to be better informed and skilled in this area. Consequently, in order for nurses to support the spiritual dimension of their role, nurse education has a vital part to play in raising spiritual awareness and facilitating competence and confidence in this domain. The literature review also reveals that studies involving pre-registration are few, but those available do provide examples of innovation and various teaching methods to deliver this topic in nursing curricular.

- Lun, Man Wai Alice. 2015. A qualitative study of students' perception of spirituality and religion. *Social Work & Christianity* 42(2). 178–192.

Since spiritual beliefs have a significant effect on how people understand and deal with problems in their lives, it is important that human service and social work educators prepare professional practitioners for competent practice regarding spirituality and religion. This exploratory qualitative study utilized an open-ended questionnaire aimed at exploring students' perception of spirituality as it pertains to their Human Services studies. Results showed the importance of early spiritual experience, as well as life experience, to students' religious identity. Spiritual diversity was also found. The value of developing and implementing resources for dealing with spiritual issues into social work and human services course curricula is reinforced.

- Marotta-Walters, Sylvia A. 2015. Spiritual meaning making following clergy-perpetrated sexual abuse. *Traumatology* 21(2). 64–70.
doi:10.1037/trm0000022.

Meaning making is a psychotherapeutic healing factor that promotes adaptation following exposure to trauma, as well as a process that is closely related to psychospirituality. Meaning making is defined as a cognitive and affective change in the way an individual perceives a painful experience. Insofar as meaning making contributes to a shift in worldview, and to a renewed sense of purpose, there is both a psychological and a spiritual component to trauma-related searches

for meaning. In this paper, the author explores how psychospiritual development of an adult is shaped by exposure to clergy-perpetrated sexual abuse (CPSA) in childhood, how the trauma might be processed through current empirically informed treatment models for adults, and how treatment strategies and techniques vary depending on the stage of treatment at which meaning making might occur. Hypothetical case material illustrates developmental consequences and how these are treated within each phase of sequenced treatment models.

- Mastropieri, Biagio, Lorne Schussel, David Forbes & Lisa Miller. 2015. Inner resources for survival: Integrating interpersonal psychotherapy with spiritual visualization with homeless youth. *Journal of Religion and Health* 54(3). 903–921.
doi:10.1007/s10943-015-0044-3.

Homeless youth have particular need to develop inner resources to confront the stress, abusive environment of street life, and the paucity of external resources. Research suggests that treatment supporting spiritual awareness and growth may create a foundation for coping, relationships, and negotiating styles to mitigate distress. The current pilot study tests the feasibility, acceptability, and helpfulness of an interpersonal spiritual group psychotherapy, interpersonal psychotherapy (IPT) integrated with spiritual visualization (SV), offered through a homeless shelter, toward improving interpersonal coping and ameliorating symptoms of depression, distress, and anxiety in homeless youth. An exploratory pilot of integrative group psychotherapy (IPT + SV) for homeless young adults was conducted in a New York City on the residential floor of a shelter-based transitional living program. Thirteen young adult men participated in a weekly evening psychotherapy group. Among homeless young adults that participated in the group treatment, significant decreases in symptoms of general distress and depression were found between baseline and termination of treatment, and at the level of a trend, improvement in overall interpersonal functioning and levels of general anxiety. High utilization and treatment satisfaction showed the intervention to be both feasible and acceptable. Offered as an adjunct to the services-as-usual model at homeless shelters serving young adults, interpersonal psychotherapy with spiritual visualization (IPT + SV) in group appears to be a feasible and potentially useful treatment option for promoting improved mental health.

- Munoz, Alexis R., John M. Salsman, Kevin D. Stein & David Cella. 2015. Reference values of the Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being: A report from the American Cancer Society's studies of cancer survivors. *Cancer* 121(11). 1838–1844.
doi:10.1002/cncr.29286.

Health-related quality of life measures are common in oncology research, trials, and practice. Spiritual well-being has emerged as an important aspect of health-related quality of life and the Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being: The 12-item Spiritual Well-Being Scale (FACIT-Sp-12) is the most widely used measure of spiritual well-being among those with cancer. However, there is an absence of reference values with which to facilitate the interpretation of scores in research and clinical practice. The objective of the current study was to provide FACIT-Sp-12 reference values from a representative sample of adult cancer survivors. As part of the American Cancer Society's Study of Cancer Survivors-II, a national cross-sectional study of cancer survivors (8,864 survivors) completed questionnaires assessing demographic characteristics, clinical information, and the FACIT-Sp-12. Scores were calculated and

summarized by FACIT-Sp-12 subscale and total scores across age, sex, race/ethnicity, time after treatment, and cancer type. Analysis revealed that women reported significantly higher FACIT-Sp-12 scores. Analyses of variance found significant main effects for FACIT-Sp-12 scores by age, race/ethnicity, and cancer type. Post hoc comparisons revealed that older adults (those aged 60-69 years and 70-79 years) and black non-Hispanic individuals reported the highest FACIT-Sp-12 scores compared with those aged 18 to 39 years and white non-Hispanic individuals, respectively.

- Murray, G., N. D. Leitan, M. Berk, N. Thomas, E. Michalak, L. Berk, S. L. Johnson, et al. 2015. Online mindfulness-based intervention for late-stage bipolar disorder: Pilot evidence for feasibility and effectiveness. *Journal of Affective Disorders* 178. 46–51.
doi:10.1016/j.jad.2015.02.024.

People in the late stage of bipolar disorder (BD) experience elevated relapse rates and poorer quality of life (QoL) compared with those in the early stages. Existing psychological interventions also appear less effective in this group. To address this need, researchers developed a new online mindfulness-based intervention targeting quality of life (QoL) in late stage BD. Here, they report on an open pilot trial of ORBIT (online, recovery-focused, bipolar individual therapy). Inclusion criteria were: self-reported primary diagnosis of BD, six or more episodes of BD, under the care of a medical practitioner, access to the internet, proficient in English, 18-65 years of age. Primary outcome was change (baseline - post-treatment) on the Brief QoL.BD. Secondary outcomes were depression, anxiety, and stress measured on the DASS scales. Twenty-six people consented to participate, though ten participants were lost to follow-up. Statistically significant improvement in QoL was found for the completers and the intent-to-treat sample. A non-significant trend towards improvement was found on the DASS anxiety scale in both completer and intent-to-treat samples, but change on depression and stress did not approach significance.

- Nagai, Chikako. 2015. Responding to Southeast Asian spirituality in clinical practice. *Spirituality in Clinical Practice* 2(2). 106–119.
doi:10.1037/scp0000070.

This qualitative research explored how Southeast Asian clinicians respond to culturally based spiritual experiences expressed by their Southeast Asian clients. Five focus groups were formed consisting of 26 clinicians from Hmong, Mien, Lao, Cambodian, and Vietnamese communities in the Northwest region of the United States. Each group was interviewed using a semistructured interview guide, including questions such as how to understand and effectively treat spiritual experiences. The results of this study indicated the importance of responding to spirituality as one aspect of diversity along with other cultural factors. Various examples as well as recommendations were provided by the Southeast Asian clinicians.

- Newlin Lew, Kelley, Nancy Arbauh, Paul Banach & Gail Melkus. 2015. Diabetes: Christian worldview, medical distrust and self-management. *Journal of Religion and Health* 54(3). 1157–1172.
doi:10.1007/s10943-015-0022-9.

To inform the development of a combined diabetes prevention and self-management intervention in partnership with church communities, this study sampled African American church leaders and members (n=44) to qualitatively study religious beliefs and practices, diabetes prevention

and self-management behaviors, and related community actions. Prior to commencing the study, internal review board approval was obtained. Although not required, community consent was officially provided by the church pastors. Individual consent was subsequently obtained from eligible community members who expressed an interest in participating in the study. Following a participatory action research approach, the inquiry group method was used. Qualitative data were analyzed with content analysis. Findings revealed Christian worldview, medical distrust and self-management as prominent themes. Findings suggest that diabetes providers address religious orientation in the provision of care with attention to rebuilding trust with the African-American community to improve health outcomes.

Oh, Whachul. 2015. Transforming han: A correlational method for psychology and religion. *Journal of Religion and Health* 54(3). 1099–1109.
doi:10.1007/s10943-014-9944-x.

Han is a destructive feeling in Korea. Although Korea accomplished significant exterior growth, Korean society is still experiencing the dark aspects of transforming han as evidenced by having the highest suicide rate in Asia. Some reasons for this may be the fragmentation between North and South Korea. If society can transform han then it can become constructive. The author felt challenged to think of possibilities for transforming han internally, which brought him to the correlational method through psychological and religious interpretation. This study is to challenge and encourage many han-ridden people in Korean society. Through the psychological and religious understanding of han, people suffering can positively transform their han. They can relate to han more subjectively, and this means the han-ridden psyche has an innate sacredness of potential to transform.

Park, Crystal L., Tosca Braun & Tamar Siegel. 2015. Who practices yoga? A systematic review of demographic, health-related, and psychosocial factors associated with yoga practice. *Journal of Behavioral Medicine* 38(3). 460–471.
doi:10.1007/s10865-015-9618-5.

Yoga has become increasingly popular in the US and around the world, yet because most yoga research is conducted as clinical trials or experiments, little is known about the characteristics and correlates of people who independently choose to practice yoga. Researchers conducted a systematic review of this issue, identifying 55 studies and categorizing correlates of yoga practice into sociodemographics, psychosocial characteristics, and mental and physical well-being. Yoga use is greatest among women and those with higher socioeconomic status and appears favorably related to psychosocial factors such as coping and mindfulness. Yoga practice often relates to better subjective health and health behaviors but also with more distress and physical impairment. However, evidence is sparse and methodological limitations preclude drawing causal inferences. Nationally representative studies have minimally assessed yoga while studies with strong assessment of yoga practice (e.g., type, dose) are generally conducted with convenience samples. Almost all studies reviewed are cross-sectional and few control for potential confounding variables.

Piderman, Katherine M., Carmen Radecki Bretkopf, Sarah M. Jenkins, Laura A. Lovejoy, Yvette M. Dulohery, Dean V. Marek, Heidi L. Durland, et al. 2015. The Feasibility and Educational Value of Hear My Voice, a Chaplain-Led Spiritual Life Review Process for

Patients with Brain Cancers and Progressive Neurologic Conditions. *Journal of Cancer Education* 30(2). 209–212.

doi:10.1007/s13187-014-0686-y.

Research continues to establish the importance of spirituality for many persons with medical illnesses. This paper describes a pilot study titled, “Hear My Voice,” designed to provide an opportunity for persons with progressive neurologic illnesses, including brain tumors and other neurodegenerative diseases, to review and discuss their spirituality with a board-certified chaplain, and to prepare a spiritual legacy document (SLD). First, the authors provide background information that underscores the importance of such a project for this patient population that is particularly vulnerable to cognitive impairment and communication difficulties. Second, a detailed methodology is provided, including the semi-structured interview format used, the development of the SLD, and an overview of responses from participants and investigators. Finally, there is a description of the quantitative and qualitative approaches to analysis taken with the aim of developing scientific validation in support of the Hear My Voice project.

Rao, Angela, David Sibbritt, Jane L. Phillips & Louise D. Hickman. 2015. Prayer or spiritual healing as adjuncts to conventional care: A cross sectional analysis of prevalence and characteristics of use among women. *BMJ open* 5(6). e007345.

doi:10.1136/bmjopen-2014-007345.

This cross sectional study was conducted as a part of the Australian Longitudinal Study on Women’s Health (ALSWH), a 20-year study that examines various factors affecting women’s health and well-being. The sample used in the current study were women from the 1946-1951 cohort (n=9,965) (59-64 years) who were surveyed in 2010. It is estimated that 26% of Australian women from the 1946-1951 cohort use prayer or spiritual healing on a regular basis. Women were significantly more likely to use prayer or spiritual healing if they were non-smokers, non-drinkers or low-risk drinkers, had symptoms of severe tiredness, depression, anxiety, diagnosed cancer or other major illnesses and used other complementary therapies.

Recine, Ann C. 2015. Designing forgiveness interventions: Guidance from five meta-analyses. *Journal of Holistic Nursing* 33(2). 161–167.

doi:10.1177/0898010114560571.

The Nursing Interventions Classification system includes forgiveness facilitation as part of the research-based taxonomy of nursing interventions. Nurses need practical guidance in finding the type of intervention that works best in the nursing realm. Five meta-analyses of forgiveness interventions were reviewed to illuminate best practice. The only studies included were meta-analyses of forgiveness interventions in which the authors calculated effect size. Forgiveness interventions were shown to be helpful in addressing mental/emotional health. Components of effective interventions include recalling the offense, empathizing with the offender, committing to forgive, and overcoming feelings of unforgiveness. The meta-analyses showed that people receiving forgiveness interventions reported more forgiveness than those who had no intervention. Forgiveness interventions resulted in more hope and less depression and anxiety than no treatment. A process-based intervention is more effective than a shorter cognitive decision-based model. Limitations of the meta-analyses included inconsistency of measures and a lack of consensus on a definition of forgiveness. Notwithstanding these limitations, the meta-

analyses offer strong evidence of what contributes to the effectiveness of forgiveness interventions. The implications of the studies are useful for designing evidence-based clinical forgiveness interventions to enhance nursing practice.

- Sadati, Ahmad Kalateh, Kamran Bagheri Lankarani, Vahid Gharibi, Mahmood Exiri Fard, Najmeh Ebrahimzadeh & Sedigeh Tahmasebi. 2015. Religion as an empowerment context in the narrative of women with breast cancer. *Journal of Religion and Health* 54(3). 1068–1079.
doi:10.1007/s10943-014-9907-2.

This paper aims at exploring women's meaningful perception, semantic understanding, and their experiences of breast cancer in a religion context. Accordingly, eight women who had one of their breasts completely removed by surgery (mastectomy) were studied by narrative interviews. In this narrative interview, participants told their life stories since the beginning of disease. Findings showed that religious concepts have a heightened role in the interpretation and understanding of disease, coping strategies, and gaining new concepts for life and death. Two main themes discovered in this research were fatalism on the one hand, and the hope and empowerment on the other. Despite the intrinsic conflict between these two concepts, religion, as a specific cultural and epistemological context, reconciles them; in a way, these polar concepts form a unitary structure of meaning and activity. In this structure, semantic coherence and concrete experience leads women with breast cancer to a new meaningful system, which shapes a new path for living well.

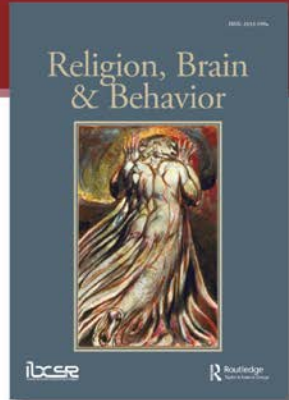
- Saeed, Fahad, Nadia Kousar, Sohaib Aleem, Owais Khawaja, Asad Javaid, Mohammad Fasih Siddiqui & Jean L. Holley. 2015. End-of-Life Care Beliefs among Muslim Physicians. *American Journal of Hospice & Palliative Medicine* 32(4). 388–392.
doi:10.1177/1049909114522687.

Physicians' religiosity affects their approach to end-of-life care (EOLC) beliefs. Studies exist about end-of-life care beliefs among physicians of various religions. However, data on Muslim physicians are lacking. This study explores the beliefs centering on aspects of end-of-life care among Muslim physicians in the US and other countries. A 25 item, online survey targeted toward Muslim physicians in the US and other countries. A total 461 Muslim physicians responded to our survey. The primary question was whether Muslim physicians thought that a "Do not resuscitate" (DNR) order is allowed in Islam. Nearly 66.8% of the respondents replied yes as compared to 7.38% of the respondents who said no. Country of origin, country of practice, and if physicians had talked about comfort care in the past had the most impact on the yes vs. no response.

- Seemann, Ann-Kathrin, Florian Dreves, Christoph Gebele & Dieter K. Tscheulin. 2015. Are religiously affiliated hospitals more than just nonprofits? A study on stereotypical patient perceptions and preferences. *Journal of Religion and Health* 54(3). 1027–1039.
doi:10.1007/s10943-014-9880-9.

Recent research on patients' perceptions of different hospitals predominantly concentrates on whether hospitals are nonprofit or for-profit. Nonprofit hospitals can be subdivided into hospitals that are affiliated with a religious denomination and those that are not. Referring to the stereotypic content model, this study analyzes patients' perceptions of religious hospitals based on the factors of warmth, competence, trustworthiness and Christianity. Using a survey of German

citizens ($n=300$) with a one-factorial between-subject design (for-profit vs. nonprofit vs. religious nonprofit), researchers found that religious affiliation increases the perceptions of hospitals' trustworthiness and attractiveness. The study indicated that patients' perceptions of nonprofit hospitals with a religious affiliation differ from patients' beliefs about nonprofit hospitals without a religious affiliation, implying that research into ownership-related differences must account for hospital subtypes. Furthermore, religious hospitals that communicate their ownership status may have competitive advantages over those with a different ownership status.



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PART 3: BOOKS

3.1 SCIENTIFIC STUDY OF RELIGION, BRAIN, AND BEHAVIOR

Raja, Rubina & Jörg Rüpke (eds.). 2015. *A Companion to the Archaeology of Religion in the Ancient World*. (Blackwell Companions to the Ancient World). Wiley-Blackwell.

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3.2 SPIRITUALITY & HEALTH RESEARCH

Hoffman, Seymour & Hannah Bar-Joseph. 2015. *Psychotherapy and the Ultra-Orthodox Community: Issues and Treatment*. New York, NY: Golden Sky.

PART 4: ARTICLES IN PRESS

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doi:10.1093/scan/nsv066.

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