



exploring the nexus of culture, mind and religion

RESEARCH REVIEW

A DIGEST OF NEW SCIENTIFIC RESEARCH
CONCERNING RELIGION, BRAIN & BEHAVIOR

AUGUST, 2015

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, medicine, 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 714 articles, 101 articles have been retained from 56 journals. There are 54 pre-publication citations from 42 journals.

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PART 1: ARTICLES IN RELIGION, BRAIN, AND BEHAVIOR

1.1 SCIENTIFIC STUDY OF RELIGION: COGNITIVE NEUROSCIENCE

Colzato, Lorenza S., Roberta Sellaro, Iliana Samara, Matthijs Baas & Bernhard Hommel. 2015. Meditation-induced states predict attentional control over time. *Consciousness and Cognition* 37. 57–62.

doi:10.1016/j.concog.2015.08.006.

Meditation is becoming an increasingly popular topic for scientific research and various effects of extensive meditation practice (ranging from weeks to several years) on cognitive processes have been demonstrated. Here researchers show that extensive practice may not be necessary to achieve those effects. Healthy adult non-meditators underwent a brief single session of either focused attention meditation (FAM), which is assumed to increase top-down control, or open monitoring meditation (OMM), which is assumed to weaken top-down control, before performing an Attentional Blink (AB) task, which assesses the efficiency of allocating attention over time. The size of the AB was considerably smaller after OMM than after FAM, which suggests that engaging in meditation immediately creates a cognitive-control state that has a specific impact on how people allocate their attention over time.

Garcia-Santibanez, Rocio & Harini Sarva. 2015. Isolated Hyperreligiosity in a Patient with Temporal Lobe Epilepsy. *Case Reports in Neurological Medicine* 2015. 235856.

doi:10.1155/2015/235856.

A 40-year-old man with history of temporal lobe epilepsy presented to the emergency department with hyperreligiosity after medication noncompliance. After medications were resumed, he

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returned to baseline. Many famous prophets are believed to have suffered epilepsy. Waxman and Geschwind described a group of traits in patients with temporal lobe epilepsy consisting of hyperreligiosity, hypergraphia, altered sexual behavior, aggressiveness, preoccupation with details, and circumstantiality. The incidence of religious experiences ranges from 0.3 to 3.1 percent in patients with epilepsy. Religious experiences can be ictal, interictal, or postictal. Treatment is aimed at the underlying seizure etiology.

Lebois, Lauren A. M., Esther K. Papiés, Kaundinya Gopinath, Romeo Cabanban, Karen S. Quigley, Venkatagiri Krishnamurthy, Lisa Feldman Barrett & Lawrence W. Barsalou. 2015. A shift in perspective: Decentering through mindful attention to imagined stressful events. *Neuropsychologia* 75. 505–524.
doi:10.1016/j.neuropsychologia.2015.05.030.

Ruminative thoughts about a stressful event can seem subjectively real, as if the imagined event were happening in the moment. One possibility is that this subjective realism results from simulating the self as engaged in the stressful event (immersion). If so, then the process of decentering (disengaging the self from the event) should reduce the subjective realism associated with immersion, and therefore perceived stressfulness. To assess this account of decentering, researchers taught non-meditators a strategy for disengaging from imagined events, simply viewing these events as transient mental states (mindful attention). In a subsequent neuroimaging session, participants imagined stressful and non-stressful events, while either immersing themselves or adopting mindful attention. In conjunction analyses, mindful attention down-regulated the processing of stressful events relative to baseline, whereas immersion up-regulated their processing. In direct contrasts between mindful attention and immersion, mindful attention showed greater activity in brain areas associated with perspective shifting and effortful attention, whereas immersion showed greater activity in areas associated with self-processing and visceral states. These results suggest that mindful attention produces decentering by disengaging embodied senses of self from imagined situations so that affect does not develop.

1.2 SCIENTIFIC STUDY OF RELIGION: EVOLUTION

Bahna, Vladimír. 2015. Explaining Vampirism: Two Divergent Attractors of Dead Human Concepts. *Journal of Cognition and Culture* 15(3-4). 285–298.
doi:10.1163/15685373-12342151.

This paper explores the cognitive foundations of vampirism beliefs. The occurrence of beliefs of the dead rising from graves and returning to harm the living across many cultures indicates that this concept has features that make it successful in the process of cultural transmission. Comparing ghost- and vampire-like beliefs, it is argued that bodiless agents and animated but dead bodies represent two divergent cognitive attractors concerning concepts of dead humans. The inferential potential of the classic idea of a bodiless ghost is based on intuitions produced by the mental system of Theory of Mind, while the traditional concepts of a vampire attribute to the dead only minimal intentionality. The inferential potential of a vampire is based on the system of disease avoidance and the emotion of disgust related to the dead body. Vampirism beliefs represent a cognitively attractive combination of a hazard and relevant actions to eliminate it: they postulate a threat of

an animated corpse and relevant behavioral reaction, namely fatal interventions on vampire's body.

Davis, Taylor. 2015. Group Selection in the Evolution of Religion: Genetic Evolution or Cultural Evolution? *Journal of Cognition and Culture* 15(3-4). 235–253.
doi:10.1163/15685373-12342149.

In the scientific literature on religious evolution, two competing theories appeal to group selection to explain the relationship between religious belief and altruism, or costly, prosocial behavior. Both theories agree that group selection plays an important role in cultural evolution, affecting psychological traits that individuals acquire through social learning. They disagree, however, about whether group selection has also played a role in genetic evolution, affecting traits that are inherited genetically. Recently, Jonathan Haidt has defended the most fully developed account based on genetic group selection, and the present author argues here that problems with this account reveal good reasons to doubt that genetic group selection has played any important role in human evolution at all. Thus, considering the role of group selection in religious evolution is important not just because of what it reveals about religious psychology and religious evolution, but also because of what it reveals about the role of group selection in human evolution more generally.

Jackson, Joshua, Jamin Halberstadt, Jonathan Jong & Hillel Felman. 2015. Perceived openness to experience accounts for religious homogamy. *Social Psychological and Personality Science* 6(6). 630–638.
doi:10.1177/1948550615574302.

Two studies tested the hypothesis that religious homogamy—assortative mating on the basis of religion—can be partly explained by inferences about religious individuals' openness to experience, rather than attitudes toward religion per se. Results of Study 1 indicated that non-religious participants perceived non-religious targets to be higher in openness and more appealing as romantic partners, with the first effect statistically accounting for the second. Study 2, which manipulated "religious" and "open" behaviors independently, showed that openness guided dating judgments for both non-religious and religious participants, albeit in opposite directions. Thus, regardless of their own religious beliefs, individuals appear to infer the same kind of behaviors from others' religiosity, behaviors that are seen positively by religious individuals, but negatively by non-religious individuals. These inferences, in turn, partially explain all individuals' preferences for partners of the same religious orientation.

Kapitány, Rohan & Mark Nielsen. 2015. Adopting the ritual stance: The role of opacity and context in ritual and everyday actions. *Cognition* 145. 13–29.
doi:10.1016/j.cognition.2015.08.002.

Rituals are a pervasive and ubiquitous aspect of human culture, but when researchers naïvely observe an opaque set of ritual actions, how do they come to understand its significance? To investigate this, across two experiments the authors manipulated the degree to which actions were ritualistic or ordinary, and whether or not they were accompanied with context. In Experiment 1, 474 adult participants were presented with videos of novel rituals (causally opaque actions) or control actions (causally transparent) performed on a set of objects accompanied with neutral-

valance written context. Experiment 2 presented the same video stimuli but with negative and aversive written context. In both experiments ritualized objects were rated as physically unchanged, but more 'special' and more 'desirable' than objects subjected to control actions, with context amplifying this effect. Results are discussed with reference to the Ritual Stance and the Social-Action hypothesis. Implications for both theories are discussed, as are methodological concerns regarding the empirical investigation of ritual cognition. The authors argue that causally opaque ritual actions guide the behavior of naïve viewers because such actions are perceived as socially normative, rather than with reference to supernatural intervention or causation.

Lunde, Linn-Heidi & Svein Skjøtskift. 2015. Combining mindfulness meditation with cognitive behavior therapy and medication taper for hypnotic-dependent insomnia in older adults: A case study. *Clinical Case Studies* 14(4). 307–320.
doi:10.1177/1534650114557566.

Sleep medication is the most common treatment for insomnia in older adults. However, prolonged use of hypnotics has several negative side-effects and can lead to a pattern of tolerance and dependence. Recent research has found promising results for interventions that included both supervised gradual medication withdrawal and cognitive behavior therapy (CBT) for the treatment of hypnotic-dependent insomnia. Furthermore, there is increasing evidence that incorporating mindfulness meditation can result in a more potent CBT intervention for insomnia. In this article, the authors describe and discuss the effects of a broadly focused intervention for treating hypnotic-dependent insomnia in an older adult. The treatment simultaneously targets insomnia symptoms, comorbid symptoms such as pain, dependency issues, and the discontinuation of hypnotic medication.

Lynn, Christopher Dana, Jason Joseph Paris, Cheryl Anne Frye & Lawrence M. Schell. 2015. Religious-Commitment Signaling and Impression Management amongst Pentecostals: Relationships to Salivary Cortisol and Alpha-Amylase. *Journal of Cognition and Culture* 15(3-4). 299–319.
doi:10.1163/15685373-12342152.

Religious-commitment signaling is thought to indicate willingness to cooperate with a religious group. It follows that a desire to signal affiliation and reap concomitant benefits would lend itself to acting in socially desirable ways. Success or failure in such areas, especially where there is conscious intent, should correspond to proximal indicators of well-being, such as psychosocial or biological stress. To test this model, researchers assessed religious-commitment signaling and socially desirable responding among a sample of Pentecostals with respect to salivary biomarkers of stress and arousal. Results indicate that cortisol levels on worship and non-worship days were significantly influenced by religious-commitment signaling when moderated by impression management, a conscious form of socially desirable responding. No significant influences on salivary alpha-amylase were detected. These findings are important for understanding how religious-commitment signaling mechanisms may influence stress response when moderated by socially desirable responding and the role of communal orientation to psychosocial health.

Ma-Kellams, Christine. 2015. When Perceiving the Supernatural Changes the Natural: Religion and Agency Detection. *Journal of Cognition and Culture* 15(3-4). 337–343.
doi:10.1163/15685373-12342154.

How does perceiving supernatural agents shape perceptions of natural agents? Despite the ongoing debate on whether supernatural attributions are functionless spillover from a hyperactive agency detector versus more evolved mechanisms that served key adaptive functions for ancestral humans, both accounts concede that one critical, defining quality of religion is that it superimposes intentional agency on natural events. Across two studies, the relationship between religious beliefs and perceptions of both agency and experience for a diverse array of agents were assessed, including ordinary individuals, supernatural beings, villains, martyrs, and celebrities. Across studies, naturalistically-occurring and experimentally-primed religious beliefs facilitated heightened perceptions of agency, but not experience, across both supernatural and natural agents. Thus, religious beliefs promote greater sensitivity to agency more generally. Implications for how this link reconciles the opposing notions of religion as an accidental by-product of agency detection vs. evolved adaptation are discussed.

Nichols, Ryan. 2015. Civilizing Humans with Shame: How Early Confucians Altered Inherited Evolutionary Norms through Cultural Programming to Increase Social Harmony. *Journal of Cognition and Culture* 15(3-4). 254–284.
doi:10.1163/15685373-12342150.

To say Early Confucians advocated the possession of a sense of shame as a means to moral virtue underestimates the tact and forethought they used successfully to mold natural dispositions to experience shame into a system of self, familial, and social governance. Shame represents an adaptive system of emotion, cognition, perception, and behavior in social primates for measurement of social rank. Early Confucians understood the utility of the shame system for promotion of cooperation, and they built and deployed cultural modules (e.g., rituals, titles, punishments) with this in mind. These policies result in subtle alterations to components of the evolved shame system that are detectable in data from contemporary cross-cultural psychology that show that populations in the Confucian diaspora have a unique shame profile compared to Western and non-Western populations. The status of Confucian diaspora populations as outliers in the context of shame is partially explained by appeal to the cultural transmission and historical endurance of relevant Early Confucian cultural modules.

Rossano, Matt J. 2015. The Evolutionary Emergence of Costly Rituals. *PaleoAnthropology* 2015. 78–100.
doi:10.4207/PA.2015.ART97.

*This paper reviews four archaeological indicators of ritual behavior guided by two broad hypotheses: (1) that evidence of costly ritual behavior will emerge at around 150,000 ybp as a result of increasing ecological and social stress, and, (2) this evidence will be more pronounced among *H. sapiens* than Neanderthals consistent with the proposition that *H. sapiens* used ritual more frequently and successfully in creating greater social complexity than Neanderthals. General support for both hypotheses was found. Additionally, there was evidence that *H. sapiens* adopted costly ritual behavior earlier than Neanderthals and intensified it to higher levels. Two factors are discussed in accounting for these findings: (1) inter-group interactions and competition, often resulting from migrations in pursuit of scarce resources, and (2) the need for reliable pair-bonding as described in the Female Cosmetics Coalition model.*

White, Claire. 2015. Establishing Personal Identity in Reincarnation: Minds and Bodies Reconsidered. *Journal of Cognition and Culture* 15(3-4). 402–429.
doi:10.1163/15685373-12342158.

Little is known about how the minds and bodies of reincarnated agents are represented. In three studies, participants decided which individual, out of multiple contenders, was most likely to be the reincarnation of a deceased person, based upon a single matching feature between the deceased and each of the candidates. While most participants endorsed reincarnation as entailing a new body, they reasoned that candidates with a similar physical mark (e.g., a mole) or a similar episodic autobiographical memory to the deceased, when alive, were more likely than candidates with other physical or psychological based similarities to be the reincarnation of the deceased. As predicted, by increasing the distinctiveness of a matching physical mark and an episodic autobiographical memory, while holding others constant, likelihood judgments for the candidate with the similar distinctive physical mark were significantly higher than candidates with non-distinctive physical marks, but differences between the distinct and general episodic autobiographical memory condition did not reach statistical significance. These findings support the claim that human beings intuitively represent reincarnated agents as psychologically determined but physically embodied, and that different assumptions underpin the use of physical and psychological features to establish identity in reincarnation contexts.

1.3 SCIENTIFIC STUDY OF RELIGION: PSYCHOLOGY AND CULTURE

Abreu, Madalena Eça, Raul M. S. Laureano, Rui Vinhas Silva & Pedro Dionísio. 2015. Volunteerism, compassion and religiosity as drivers of donations practices. *International Journal of Nonprofit and Voluntary Sector Marketing* 20(3). 256–276.
doi:10.1002/nvsm.1526.

This study looks into the role of religiosity as a predictor of donations practices. Also volunteerism and compassion, two acts of pro-social behavior are analyzed as predictors of donations practices. Using data collected from a survey of 612 charity donors in Portugal, the results show unequivocally that religiosity does influence donations practices, and so being a predictor of donations practices. Moreover, pro-social behavior is a predictor of donations practices when in the case of volunteerism, but not in the form of compassion. Finally, it can be stated that the understanding of religiosity sheds light on knowledge about donations practices, and that this study also makes an important contribution to academia, as it is the first study conducted in Portugal that assesses the drivers of donations practices.

Bastian, Brock, Paul Bain, Michael D. Buhrmester, Ángel Gómez, Alexandra Vázquez, Clinton G. Knight & William B. Swann. 2015. Moral Vitalism: Seeing Good and Evil as Real, Agentic Forces. *Personality & Social Psychology Bulletin* 41(8). 1069–1081.
doi:10.1177/0146167215589819.

Moral vitalism refers to a tendency to view good and evil as actual forces that can influence people and events. In this paper, the authors introduce a scale designed to assess the belief in moral vitalism. High scorers on the scale endorse items such as “There are underlying forces of good and evil in this world.” After establishing the reliability and criterion validity of the scale (Studies 1, 2a, and 2b), researchers examined the predictive validity of the moral vitalism scale, showing that

“moral vitalists” worry about being possessed by evil (Study 3), being contaminated through contact with evil people (Study 4), and forfeiting their own mental purity (Study 5). The nature of moral vitalism and the implications of the construct for understanding the role of metaphysical lay theories about the nature of good and evil in moral reasoning is also discussed.

- Beebe, James, Runya Qiaoan, Tomasz Wysocki & Miguel A. Endara. 2015. Moral Objectivism in Cross-Cultural Perspective. *Journal of Cognition and Culture* 15(3-4). 386–401. doi:10.1163/15685373-12342157.

Moral psychologists have recently turned their attention to the study of folk metaethical beliefs. Researchers report the results of a cross-cultural study using Chinese, Polish and Ecuadorian participants that seeks to advance this line of investigation. Individuals in all three demographic groups were observed to attribute objectivity to ethical statements in very similar patterns. Differences in participants’ strength of opinion about an issue, the level of societal agreement or disagreement about an issue, and participants’ age were found to significantly affect their inclination to view the truth of an ethical statement as a matter of objective fact. Implications for theorizing about folk morality are discussed.

- Chan, Melissa, Kim M. Tsai & Andrew J. Fuligni. 2015. Changes in Religiosity Across the Transition to Young Adulthood. *Journal of Youth and Adolescence* 44(8). 1555–1566. doi:10.1007/s10964-014-0157-0.

Social identities, as those pertaining to religion, may change over time as adolescents make the important transition into young adulthood. This 4-year longitudinal study examined developmental changes in religious affiliation, identity, and participation across the transition from adolescence to young adulthood among 584 individuals (from M age=17.9 years to M age=22.1 years; 55 % female). Researchers also investigated whether changes varied as a function of individual (i.e., gender and ethnicity) and contextual (i.e., college type and residential status) factors, as well as the association between religiosity and well-being (e.g., meaning and purpose in life, depressive symptoms). The results indicated a significant decline in reported affiliation with a particular religious group or faith for all youth. The change in a psychological sense of religious identity varied by gender, and the change in religious participation differed by ethnicity, but other individual-difference factors generally played minor roles in the changes in religiosity across time. Religiosity was more consistently linked with a greater sense of meaning and purpose than with fewer depressive symptoms across the transition to adulthood, suggesting that it may be particularly important for eudaimonic well-being. Overall, the findings suggest that youth generally experience a decrease in religiosity as they transition to young adulthood, but this rate of change may vary between individuals. The results have important implications for the way in which religion is viewed and lived out by young adults in the United States.

- Doebler, Stefanie. 2015. Relationships between Religion and Two Forms of Homonegativity in Europe: A Multilevel Analysis of Effects of Believing, Belonging and Religious Practice. *PLoS One* 10(8). e0133538. doi:10.1371/journal.pone.0133538.

This paper examines relationships between religion and two forms of homonegativity across 43 European countries using a bivariate response binary logistic multilevel model. The model analyzes effects of religious believing, belonging and practice on two response variables: a) a moral

rejection of homosexuality as a practice and b) intolerance toward homosexuals as a group. The findings indicate that both forms of homonegativity are prevalent in Europe. Traditional doctrinal religious believing (belief in a personal God) is positively related to a moral rejection of homosexuality but to a much lesser extent associated with intolerance toward homosexuals as a group. Members of religious denominations are more likely than non-members to reject homosexuality as morally wrong and to reject homosexuals as neighbors. The analysis found significant differences between denominations that are likely context-dependent. Attendance at religious services is positively related to homonegativity in a majority of countries. The findings vary considerably across countries: Religion is more strongly related to homonegativity in Western than in Eastern Europe. In the post-soviet countries homonegativity appears to be largely a secular phenomenon. National contexts of high religiosity, high perceived government corruption, high income inequality and shortcomings in the implementation of gay rights in the countries' legislations are statistically related to higher levels of both moralistic homonegativity and intolerance toward homosexuals as a group.

Harbaugh, Evan & Eric W. Lindsey. 2015. Attitudes toward homosexuality among young adults: Connections to gender role identity, gender-typed activities, and religiosity. *Journal of Homosexuality* 62(8). 1098–1125.
doi:10.1080/00918369.2015.1021635.

Individual differences in attitudes toward homosexuality have been linked to numerous personality and demographic variables. This study investigated the influence that gender role identity, involvement in gender-typed activities, and religiosity plays in this relationship. The sample included 194 undergraduate students from a Northeastern university. Analyses revealed that both males and females who held a more masculine gender role identity and individual commitment to religion scored higher on measures of homophobia and heteronormativity, whereas there was no association between spiritual meaning in life and attitudes toward homosexuality. Among males, but not females, more masculine gender identity and less spiritual meaning in life was associated with greater homophobia. The importance of the findings for research on the origins of attitudes toward individuals with a homosexual orientation are discussed, as well as the potential directions for future research on connections between gender role identity, religious affiliation, and attitudes toward gays and lesbians.

Hui, C. Harry, Esther Y. Y. Lau, Jasmine Lam, Shu-Fai Cheung & Wilfred W. F. Lau. 2015. Psychological predictors of Chinese Christians' church attendance and religious steadfastness: A three-wave prospective study. *Psychology of Religion and Spirituality* 7(3). 250–264.
doi:10.1037/a0039216.

In this project researchers addressed 3 questions: (a) In what ways are Christians who do not attend church different from Christians who do? (b) Can it be predicted which church-attending Christians will later stop going to church? (c) Can it be predicted which Christians will eventually leave their faith altogether? Large-sample longitudinal research on psychological predictors of religious transition is rare. To fill this gap, a 3-wave prospective study was conducted on 932 Chinese Christians. Compared with church-attending Christians, unchurched Christians scored lower on extroversion and agreeableness. They tended to believe that people's destiny was

determined by fate. On the second research question, longitudinal analysis indicated that the church-attending Christians who would later exit the church were less extroverted, less conscientious, and higher on intellect (openness to experience). They endorsed fatalistic beliefs, and placed higher value on power (i.e., social status and dominance over people). Moreover, the churches that they had attended were usually smaller in size than those of the ones who remained in church. On the third research question, researchers found that a person who had not been attending church, who was a full-time university student, and who scored low on extroversion, and high on the values of self-direction, stimulation, and power was more likely to leave their faith. This study extends previous cross-sectional findings on the relationship of religiosity to personality and personal values, and demonstrates temporal precedence of certain personality and value constructs over church attendance and steadfastness in faith.

Krause, Neal & R. David Hayward. 2015. Humility, compassion, and gratitude to God: Assessing the relationships among key religious virtues. *Psychology of Religion and Spirituality* 7(3). 192–204.
doi:10.1037/rel0000028.

The purpose of this study is to examine the relationship between religion and gratitude to God. A special emphasis is placed on key virtues that are promoted in the church. A conceptual model is developed that contains the following core hypotheses: (a) more frequent attendance at religious services will bolster feelings of religious commitment, (b) people who are more committed to their faith will be more likely to adopt religious teachings that extol the virtue of humility, (c) people who are more humble will be more compassionate, (d) individuals who are more compassionate are more likely to provide support to others, (e) providing support to others helps people derive a deeper sense of religious meaning in life, and (f) individuals who have found a deeper sense of meaning through their faith will feel more grateful to God. Data from a recent nationwide survey provide support for each of these relationships.

Kraus, Rachel, Scott A. Desmond & Zachary D. Palmer. 2015. Being Thankful: Examining the Relationship between Young Adult Religiosity and Gratitude. *Journal of Religion and Health* 54(4). 1331–1344. doi:10.1007/s10943-014-9923-2.

Studies show that religious people tend to be more grateful, yet existing research tends to rely on small, non-representative samples and limited measures of religiosity. Therefore, researchers use a national sample (the National Study of Youth and Religion) and multiple measures of religiosity to examine the extent to which religion is associated with feelings of gratitude. It was found that religious efficacy and having religious friends positively predict the extent to which young adults feel grateful. In contrast, religious affiliation, participation in organized religion, private devotion, religious salience, otherworldly beliefs, and being spiritual but not religious are unrelated to experiencing feelings of gratitude.

Liboro, Renato M. Jr. 2015. Community-level interventions for reconciling conflicting religious and sexual domains in identity incongruity. *Journal of Religion and Health* 54(4). 1206–1220. doi:10.1007/s10943-014-9845-z.

Two of the most unstable domains involved in identity formation, the religious and sexual domains, come into conflict when vulnerable populations of the lesbian, gay, bisexual and

transgender community experience oppression from the indoctrination of religious beliefs that persecute their sexual orientation. This conflict, aptly termed identity incongruity in this article's discourse, results in a schism that adversely affects these vulnerable populations. This paper investigates the roles of religion, spirituality and available institutional solutions to propose customized, culturally adapted, contextually based and collaborative community-level interventions that would facilitate the reconciliation of the conflicting identity domains.

Logie, Kyle & Paul Frewen. 2015. Self/other referential processing following mindfulness and loving-kindness meditation. *Mindfulness* 6(4). 778–787. doi:10.1007/s12671-014-0317-z.

The immediate outcomes of mindfulness meditation (MM) and loving-kindness meditation (LKM) on experimental measures of explicit and implicit self- and other-referential processing (SRP-ORP) have not been investigated previously. In this study, undergraduate students (n = 104) were randomized to a single-session practice of MM, LKM, or reading control and completed self-report measures of decentering and positive affect directed toward self and other. Participants also completed an experimental measure of valenced SRP-ORP. Practice of both meditations was associated with increased decentering and positive affect relative to reading control, although self-reported response to MM and LKM did not significantly differ. Following the meditation, whereas participants randomized to MM evidenced an expected self-positivity bias in positive affective response and reaction time during an experimental SRP-ORP task, participants randomized to LKM did not. LKM, as uniquely involving the intentional cultivation of positive emotion toward both self and other, may be associated with a relative normalization of the self-positivity bias. Individual differences in response to SRP-ORP were also examined as a function of traits related to mindfulness and loving-kindness, in addition to as a function of variability in experiential response to MM and LKM. Study limitations and future research directions are also discussed.

Luquis, Raffy R., Gina M. Brelsford & Miguel A. Pérez. 2015. Exploring Latino College Students' Sexual Behaviors in Relation to Their Sexual Attitudes, Religiousness, and Spirituality. *Journal of Religion and Health* 54(4). 1345–1357. doi:10.1007/s10943-014-9929-9.

The purpose of this study was to examine the relationship between religiosity, spirituality, sexual attitudes, and sexual behaviors among Latino and non-Latino college students. The sample included 230 undergraduate college students enrolled at a mid-sized University in the western USA. Sexual behaviors among Latinos were significantly correlated with sexual attitudes and spiritual disclosure in close relationships. However, sexual behaviors for non-Latino respondents were only significantly related to sexual attitudes, not indices of religiousness or spirituality. Sexual educators, health educators, college-level instructors, and counselors can use these results to help Latino and non-Latino students alike understand the relationship between their religious and spiritual beliefs, sexual attitudes, and sexual behaviors.

Menezes, Carolina B., Natalia R. Dalpiaz, Nalu T. Rossi & Alcyr A. De Oliveira. 2015. Yoga and the interplay between attentional load and emotion interference. *Psychological Reports* 117(1). 271–289. doi:10.2466/28.02.PR0.117c16z1.

This study compared 45 yoga practitioners and 45 matched controls on the performance of a behavioral task that assessed negative emotion interference during a high- and a low-attentional demand condition, as well as on state and trait anxiety scores. Outcomes were also compared between beginner and advanced practitioners. For the behavioral task, the final sample comprised 36 yoga and 38 control participants. The yoga group presented lower emotion interference in the high attentional condition, compared to the low attentional condition; rated emotional images as less unpleasant, compared to controls; and reported lower state and trait anxiety scores relative to controls. Also, emotion interference in the low attentional condition was lower among advanced practitioners and state anxiety was lower among practitioners attending more than two weekly yoga classes. The results suggested that yoga may help improve self-regulatory skills and lower anxiety. The psychological mechanisms underlying the relationship between yoga and emotion regulation should be further investigated in longitudinal studies

Morrison, Mark, Roderick Duncan & Kevin Parton. 2015. Religion Does Matter for Climate Change Attitudes and Behavior. *PLoS One* 10(8). e0134868.
doi:10.1371/journal.pone.0134868.

Little research has focused on the relationship between religion and climate change attitudes and behavior. Further, while there have been some studies examining the relationship between environmental attitudes and religion, most are focused on Christian denominations and secularism, and few have examined other religions such as Buddhism. Using an online survey of 1,927 Australians, researchers examined links between membership of four religious groupings (Buddhists, Christian literalists and non-literalists, and Secularists) and climate change attitudes and behaviors. Differences were found across religious groups in terms of their belief in: (a) human induced climate change, (b) the level of consensus among scientists, (c) their own efficacy, and (d) the need for policy responses. The results indicate that religion explains these differences even after taking into account socio-demographic factors, knowledge and environmental attitude, including belief in man's dominion over nature. Differences in attitude and behavior between these religious groups suggest the importance of engaging denominations to encourage change in attitudes and behavior among their members.

Otten, Simone, Eva Schötz, Marc Wittmann, Niko Kohls, Stefan Schmidt & Karin Meissner. 2015. Psychophysiology of duration estimation in experienced mindfulness meditators and matched controls. *Frontiers in Psychology* 6. 1215.
doi:10.3389/fpsyg.2015.01215.

Recent research suggests that bodily signals and interoception are strongly related to our sense of time. Mindfulness meditators train to be aware of their body states and therefore could be more accurate at interval timing. In this study, n=22 experienced mindfulness meditators and n=22 matched controls performed both, an acoustic and a visual duration reproduction task of 8, 14, and 20 second intervals, while heart rate and skin conductance were continuously assessed. In addition, participants accomplished a heartbeat perception task and two selective attention tasks. Results revealed no differences between meditators and controls with respect to performance in duration reproduction or attentional capacities. Additionally no group difference in heart beat perception scores was found. Across all subjects, correlational analyses revealed several associations between performance in the duration reproduction tasks and psychophysiological

changes, the latter being also related to heart beat perception scores. Furthermore, former findings of linearly increasing cardiac periods and decreasing skin conductance levels during the auditory duration estimation task could be replicated, and these changes could also be observed during a visual duration reproduction task. In contrast to our earlier findings, the heart beat perception test was not related with timing performance. Overall, although experienced meditators did not differ from matched controls with respect to duration reproduction and interoceptive awareness, this study adds significantly to the emerging view that time perception is related to autonomic regulation and awareness of body states.

Perry, Samuel L. 2015. A match made in heaven? Religion-based marriage decisions, marital quality, and the moderating effects of spouse's religious commitment. *Social Indicators Research* 123(1). 203–225. doi:10.1007/s11205-014-0730-7.

Studies examining the persistent link between religion and marital quality have focused exclusively on religion's within-marriage influence on spousal attitudes and behaviors. The current study shifts the focus to examine how religion's influence on pre-marital choices holds potential returns to marital quality, and under what conditions of spousal religiosity. Utilizing data from the 2006 Portraits of American Life Study, the author examines how several key measures of marriage quality are affected by religious influences on the marriage decision; the religious commitment of one's spouse; and interactions between these two factors. Multivariate analyses reveal that religion's influence on the marriage decision does not directly predict respondents' relationship-satisfaction or their spouse's loving or hurtful behaviors, while the importance of religion to one's spouse is strongly associated with all these marital outcomes. Interaction effects reveal that spouse's religiosity does not greatly influence marital quality among persons whose marriage decision was uninfluenced by religion. However, among persons for whom religion figured prominently in their marriage decision, those with less-religious spouses experienced negative marital outcomes, while those with more-religious spouses reported positive marital outcomes. Pre-marriage religious influences thus predict higher marital quality under the conditions that persons for whom religion greatly influenced their marriage-decision are able to marry religiously-committed spouses.

Perry, Samuel L. & Andrew L. Whitehead. 2015. Christian nationalism and white racial boundaries: Examining whites' opposition to interracial marriage. *Ethnic and Racial Studies* 38(10). 1671–1689. doi:10.1080/01419870.2015.1015584.

How does the convergence of national and religious identities potentially fortify white racial boundaries in the USA? Focusing on openness to racial exogamy as an indicator of racial boundaries, the authors examine the link between Christian nationalism and white Americans' views towards their hypothetical daughter marrying an African American, Latino, or Asian. Drawing on insights from social identity complexity theory, the researchers argue that the convergence of religious and national identities serves to reinforce in-group boundaries, thereby fortifying notions of white purity, and consequently, strengthening whites' discomfort with potential race-mixing in marriage. Multivariate analyses of national survey data demonstrate that Christian nationalism is strongly associated with an increase in white Americans' discomfort with a daughter marrying any racial minority, and particularly African Americans. These results indicate how the convergence of religious and national identities in Christian nationalism

influences whites' regulating of racial boundaries (evidenced in intermarriage attitudes) above and beyond the independent effects of political conservatism or religious exclusivism.

- Abu-Ras, Wahiba & Shareda Hosein. 2015. Understanding resiliency through vulnerability: Cultural meaning and religious practice among Muslim military personnel. *Psychology of Religion and Spirituality* 7(3). 179–191.
doi:10.1037/rel0000017.

Most existing literature on religion/spirituality (R/S) and resiliency focuses on mainstream populations, where R/S appears to be a search for positive meaning, protective factors, and a predictor of successful adaptation in coping with adversity. The role of R/S in fostering resilience among Muslim Military Personnel (MMP) and other minority faith groups is understudied, and it remains unclear how religious coping strategies apply to minority religious groups when faced with faith-related stressors. This study explores situations in which R/S is perceived as both a protective and a risk factor for MMP and describes the effects that faith-related stressors have on their psychological wellbeing. The study used in-depth individual interviews with 20 U.S. MMP, active, reserves/national guards, and retired, from different backgrounds. Grounded thematic analysis guided the processing of qualitative interview data, using the software package NVivo9. The results demonstrate the central role of R/S and practice in the life of MMP, support the approach of understanding resiliency through vulnerability, as well as the importance of the cultural meaning MMP attach to their experiences with adversity and how these meanings contribute to their resiliency.

- Rauer, Amy & Brenda Volling. 2015. The role of relational spirituality in happily-married couples' observed problem-solving. *Psychology of Religion and Spirituality* 7(3). 239–249.
doi:10.1037/rel0000022.

Family scholars have argued that the role of religion in the marital relationship cannot be overlooked because it represents an integral part of many couples' daily lives. To address how couples actually integrate both their own and their partner's religious beliefs and practices into their interactions as spouses, the current study examined the combined and interactive influences of husbands' and wives' relational spirituality beliefs and practices on their observed problem-solving behaviors in a sample of 58 happily married couples. Using Actor–Partner Interdependence Models (APIM), researchers found both spouses' relational spirituality beliefs and practices were linked to how they handled conflict. Further, it was found that the manner in which spouses' relational spirituality beliefs and practices interacted had important and unique implications for how they behaved toward each other. Findings suggest that simultaneous consideration of both spouses' religious beliefs and practices and how these might interact is critical when explicating marital functioning.

- Semplonius, Thalia, Marie Good & Teena Willoughby. 2015. Religious and Non-religious Activity Engagement as Assets in Promoting Social Ties Throughout University: The Role of Emotion Regulation. *Journal of Youth and Adolescence* 44(8). 1592–1606.
doi:10.1007/s10964-014-0200-1.

Emerging adulthood is a time of many changes. For example, one change that occurs for a subset of emerging adults is leaving home and starting university. Importantly, the creation of social

ties can aid in promoting positive adjustment during university. This study investigated whether involvement in religious activities promotes social ties among university students directly and/or indirectly through emotion regulation. Importantly, involvement in religious activities may promote self-regulatory skills, and the ability to effectively regulate emotions can aid in navigating social interactions. To rule out potentially important confounding variables, spirituality and involvement in non-religious clubs were statistically controlled in all analyses. The participants included 1,132 university students (70.5 % female) from a university in Ontario, Canada who were surveyed each year over a period of 3 years. The results indicated that involvement in religious activities indirectly predicted more social ties over time through emotion regulation. Spirituality did not predict social ties or emotion regulation. Furthermore, non-religious clubs directly predicted more social ties over time. Thus, although involvement in religious and non-religious activities both predicted more social ties in a university setting over time, the mechanism by which these activities promote social ties differed.

Yonay, Yuval P., Meir Yaish & Vered Kraus. 2015. Religious heterogeneity and cultural diffusion: The impact of Christian neighbors on Muslim and Druze women's participation in the labor force in Israel. *Sociology* 49(4). 660–678.
doi:10.1177/0038038514547898.

This study exploits the unique demographic structure of the Arab-Palestinian minority in Israel and their geographical immobility in order to help resolve the riddle why women in the Middle East and North Africa are less likely to participate in the labor force than women elsewhere in the world. Researchers show that, controlling for economic variables, Muslim and Druze Arab women are more likely to enter the labor force if they live in a locality where Christian Arabs live as well. A possible explanation of this finding is the impact of social interaction among people who have different cultural schemas. Female labor force participation is rising throughout the Middle East, including among Arab-Palestinians in Israel, but the tempo of this transformation depends on various local variables, and in this article The present authors identify one such factor, namely, the ethno-religious composition of a community.

1.4 SCIENTIFIC STUDY OF RELIGION: METHOD & THEORY

Johnson, Kathryn A., Morris A. Okun & Adam B. Cohen. 2015. The mind of the Lord: Measuring authoritarian and benevolent God representations. *Psychology of Religion and Spirituality* 7(3). 227–238.
doi:10.1037/rel0000011.

Many religious individuals use ordinary social cognitions when thinking about God's characteristics. In the absence of a generally accepted measure, the present researchers developed a measure assessing God representations as authoritarian (A-God) and benevolent (B-God) using 4 community samples of Christians. Using exploratory and confirmatory factor analysis (Studies 1 and 2), support was found for a 2-factor model. The 2-week test-retest reliability estimates were .78 and .81 (Study 3). In Study 4, a new measure was validated. B-God was associated with a secure attachment style, whereas A-God was not associated with attachment style. B-God was positively associated with agreeableness and conscientiousness, whereas A-God was negatively associated with agreeableness. Controlling for personality and other God representation measures,

the A-God subscale predicted the value of power, and the B-God subscale predicted the value of benevolence. The usefulness of the measure for future research is discussed.

- Ludeke, Steven G. & Bridget Carey. 2015. Two mechanisms of biased responding account for the association between religiousness and misrepresentation in Big Five self-reports. *Journal of Research in Personality* 57. 43–47.
doi:10.1016/j.jrp.2015.03.003.

Religious individuals in a large community sample were found to exaggerate their level of Agreeableness whereas spiritual individuals exaggerated their degree of Openness. The association between religiousness and overclaiming Agreeableness was mediated not only by socially desirable responding (SDR) but also by personal views of the desirability of Agreeableness: religious individuals saw particular value in Agreeableness, and overclaimed it accordingly. The overclaiming of Openness by spiritual individuals could not be accounted for by SDR, but was partially mediated by spiritual individuals' views of Openness as a particularly desirable trait. Independent ability to explain the association between misrepresentation in self report and both religiousness and spirituality were thus indicated by both SDR and by an approach which expects an individual's overclaiming behavior to match their personal values.

- Zhang, Yanyan & Sisi Li. 2015. Two Measures for Cross-Cultural Research on Morality: Comparison and Revision. *Psychological Reports* 117(1). 144–166.
doi:10.2466/08.07.PR0.117c15z5.

The current research assessed the reliability and validity of two Western measures of morality in a Chinese sample, namely the Community, Autonomy, and Divinity Scale (CADS) and the Moral Foundations Questionnaire (MFQ). Questionnaires were administered to 274 Chinese participants in Northern China (M age=25.4 yr., 86% women). Confirmatory factor analysis using a structural equation model was conducted to evaluate the construct validity of the two scales. The results indicated a reasonable model fit of both the CADS and the MFQ after certain modifications. The revised versions of both measures had good internal consistency reliabilities. Correlation analysis indicated moderate correlations between the dimensions of the two scales. Regarding the content of morality, Chinese people endorsed more of the traditional ethics and foundations than people from Western cultures in other studies. In addition, participants who reported a religious affiliation scored higher on the Divinity subscale compared to those who claimed to be atheists.

A CALL FOR HILBERT QUESTIONS IN THE STUDY OF RELIGION

What are the Hilbert Questions?

RBB takes its inspiration for this endeavor from the eminent mathematician David Hilbert (1862-1943). At the 1900 International Congress of Mathematicians in Paris, Hilbert listed 10 discipline-defining questions. His goal was to focus the attention of mathematicians on clearly stated questions central to the discipline of mathematics. These questions were never intended to remain static; in fact, the revision of Big Questions and previous intellectual positions in a discipline is a marker of its health. In this spirit, we similarly hope to accumulate a list of clearly formulated, fundamental Big Questions in order to focus a community of inquirers on the most pressing puzzles in the biological, evolutionary, and cognitive sciences of religion.

Requirements for submission:

- 1) The question must be stated clearly.
- 2) The question must really be fundamental and its theoretical implications capable of reconfiguring how scholars understand religion.
- 3) The question must be relevant to actual religion, rather than abstractions of religion. To sharpen one's questions, it might behoove one to talk to those who have not embraced the bio-cultural study of religion—these can be fruitful conversations.
- 4) The question must include some proposed method to answer it. Collaborative efforts are anticipated. Please detail how collaboration on the question would have to work.
- 5) The question must be stated in one thousand words or fewer.
- 6) Submissions are due by February 15th, 2016 to rbbsubmit@ibcsr.org.

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PART 2: ARTICLES IN SPIRITUALITY & HEALTH RESEARCH

2.1 SPIRITUALITY & HEALTH: GENERAL HEALTH & WELL-BEING

Abolghasemi, Reyhaneh & Mojtaba Sedaghat. 2015. The Patient's Attitude Toward Type 2 Diabetes Mellitus, a Qualitative Study. *Journal of Religion and Health* 54(4). 1191–1205. doi:10.1007/s10943-014-9848-9.

Diabetes is an important health problem through the world. In comprehensive diabetes care, therapists must understand not just the observable behavior but the underlying attitudes that drive that behavior. Health, then sickness, has many aspects, and one of the famous descriptions is guided by WHO. This study aimed to explore dimensions of attitudes in diabetic patients about their disease, attending two medical centers in Tehran (capital of Iran). For this study, researchers conducted the open semi-structured face-to-face interviews with 27 patients. They used new methods for collecting data, reliability, validity, analyzing and ethical approval. The researchers identified eighteen themes in four aspects of attitude: physical, mental, social and spiritual. Based on health promotion idea, themes can be divided into two broad categories: progressive attitude toward the higher level of health care and inhibitors attitude for this. The result of this research can be used in evidence-based education and management programs in comprehensive care of type 2 diabetes mellitus.

Akrawi, Daniel, Roger Bartrop, Ursula Potter & Stephen Touyz. 2015. Religiosity, spirituality in relation to disordered eating and body image concerns: A systematic review. *Journal of Eating Disorders* 3. 29. doi:10.1186/s40337-015-0064-0.

This systematic review aims to critically examine the existing literature that has reported on the links between aspects of religiosity, spirituality and disordered eating, psychopathology and body image concerns. A systematic search of online databases (PsycINFO, Medline, Embase and Web of Science) was conducted in December 2014. A search protocol was designed to identify relevant articles that quantitatively explored the relationship between various aspects of religiosity and/or spirituality and disordered eating, psychopathology and/or body image concerns in non-clinical samples of women and men. Twenty-two studies were identified to have matched the inclusion criteria. Overall, the main findings to emerge were that strong and internalized religious beliefs coupled with having a secure and satisfying relationship with God were associated with lower levels of disordered eating, psychopathology and body image concern. Conversely, a superficial faith coupled with a doubtful and anxious relationship with God were associated with greater levels of disordered eating, psychopathology and body image concern.

Bailey, Zinzi D., Natalie Slopen, Michelle Albert & David R. Williams. 2015. Multidimensional religious involvement and tobacco smoking patterns over 9–10 years: A prospective study of middle-aged adults in the United States. *Social Science & Medicine* 138. 128–135. doi:10.1016/j.socscimed.2015.06.006.

This study examined the relationship between multiple dimensions of religious involvement and transitions of tobacco smoking abstinence, persistence, cessation and relapse over 9–10 years of follow-up in a national sample of adults in the United States. Using data provided at baseline

and follow-up, participants were categorized as non-smokers, persistent smokers, ex-smokers, and relapsed smokers. Religious involvement over the two time points were categorized into combinations of “high” and “low” involvement within the domains of (a) religious attendance, (b) religious importance, (c) spiritual importance, (d) religious/spiritual comfort seeking, and (e) religious/spiritual decision-making. High levels of religious involvement across five dimensions (religious attendance, religious importance, spiritual importance, religious/spiritual comfort-seeking, and religious/spiritual decision-making) were associated with lower odds of being a persistent smoker or ex-smoker. Religious involvement was not associated with smoking cessation among smokers at baseline. Interventions to increase smoking abstinence may be more effective if they draw on ties to religious and spiritual organizations and beliefs. Meanwhile, religious involvement is unlikely to affect smoking cessation effectiveness.

- Bai, Mei, Mark Lazenby, Sangchoon Jeon, Jane Dixon & Ruth McCorkle. 2015. Exploring the relationship between spiritual well-being and quality of life among patients newly diagnosed with advanced cancer. *Palliative & Supportive Care* 13(4). 927–935.
doi:10.1017/S1478951514000820.

Existential plight refers to heightened concerns about life and death when people are diagnosed with cancer. Although the duration of existential plight has been proposed to be approximately 100 days, evidence from longitudinal studies raises questions about whether the impact of a diagnosis of advanced cancer may require a longer period of adjustment. The purpose of our study was to examine spiritual well-being (SpWB) and quality of life (QoL) as well as their interrelationship in 52 patients with advanced cancer after 100 days since the diagnosis at one and three months post-baseline. The study was designed as a secondary data analysis of a cluster randomized clinical trial involving patients with stage 3 or 4 cancer undergoing treatment. SpWB was measured using the 12-item Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being Scale (FACIT-Sp-12); common factor analyses revealed a three-factor pattern on the FACIT-Sp-12. Quality of life was measured with the Functional Assessment of Cancer Therapy-General (FACT-G). The sample was limited to participants assigned to the control condition (n=52). Following intervention, SpWB and QoL remained stable between one and three months post-baseline, which were a median of 112 and 183 days after diagnosis, respectively. SpWB was found to be associated with QoL more strongly than physical and emotional well-being. Peace and Meaning each contributed unique variance to QoL, and their relative importance shifted over time. Faith was positively related to QoL initially. This association became insignificant at three months post-baseline.

- Brownley, Julie R., Roger D. Fallot, Rebecca Wolfson Berley & Seth S. Himelhoch. 2015. Trauma history in African-American women living with HIV: Effects on psychiatric symptom severity and religious coping. *AIDS Care* 27(8). 964–971.
doi:10.1080/09540121.2015.1017441.

Women living with HIV (WLHIV) have rates of post-traumatic stress disorder (PTSD) up to 5 times higher than the general population. Individuals living with HIV and a concurrent diagnosis of PTSD have poorer HIV-related outcomes; however, the prevalence and impact of PTSD on African-American WLHIV seeking mental health treatment is unknown. The aim of this study is to examine the associations between PTSD symptoms with psychiatric symptom

severity and psychological/religious coping strategies in African-American WLHIV who are seeking mental health treatment. This is a cross-sectional study of 235 African-American WLHIV attending an urban community mental health clinic. Bivariate analyses were conducted to evaluate associations between a PTSD symptoms scale (PSS \geq 21 versus PSS < 21) and (1) psychiatric severity, (2) coping strategies, and (3) religious coping strategies. Thirty-six percent reported symptoms consistent with PTSD (PSS \geq 21). These women were significantly more likely to have worse mental health symptoms and were more likely to employ negative psychological and religious coping strategies. On the contrary, women with a PSS < 21 reported relatively low levels of mental health symptoms and were more likely to rely on positive psychological and religious coping strategies. Over one-third of African-American WLHIV attending an outpatient mental health clinic had symptoms associated with PTSD. These symptoms were associated with worse mental health symptoms and utilization of dysfunctional religious and nonreligious coping strategies. Untreated PTSD in WLHIV predicts poorer HIV-related health outcomes and may negatively impact comorbid mental health outcomes. Screening for PTSD in WLHIV could identify a subset that would benefit from evidence-based PTSD-specific therapies in addition to mental health interventions already in place. PTSD-specific interventions for WLHIV with PTSD may improve outcomes, improve coping strategies, and allow for more effective treatment of comorbid mental health disorders.

- Burns, Debra S., Susan M. Perkins, Yan Tong, Russell E. Hilliard & Larry D. Cripe. 2015. Music Therapy Is Associated With Family Perception of More Spiritual Support and Decreased Breathing Problems in Cancer Patients Receiving Hospice Care. *Journal of Pain and Symptom Management* 50(2). 225–231.
doi:10.1016/j.jpainsymman.2015.02.022.

The purpose of this study was to examine whether music therapy affected family perception of patients' symptoms and family satisfaction with hospice care. This was a retrospective, cross-sectional analysis of electronic medical records from 10,534 cancer patients cared for between 2006 and 2010 by a large national hospice. Overall, those receiving music therapy had higher odds of being female, having longer lengths of stay, and receiving more services other than music therapy, and lower odds of being married/partnered or receiving home care. Family satisfaction data were available for 1495 (14%) and were more likely available if the patient received music therapy (16% vs. 12%). There were no differences in patient pain, anxiety, or overall satisfaction with care between those receiving music therapy vs. those not. Patients who received music therapy were more likely to report discussions about spirituality, had marginally less trouble breathing, and were marginally more likely to receive the right amount of spiritual support.

- Combs, Martha A. & Beverly E. Thorn. 2015. Yoga attitudes in chronic low back pain: Roles of catastrophizing and fear of movement. *Complementary Therapies in Clinical Practice* 21(3). 160–165.
doi:10.1016/j.ctcp.2015.06.006.

Chronic low back pain is a significant public health problem and, although underused, yoga may be an effective complementary treatment. The current study examined associations of pain catastrophizing and fear of movement with attitudes toward yoga in adults with chronic low back pain. Participants completed three quantitative questionnaires assessing specific constructs:

beliefs about yoga, fear of movement, and pain catastrophizing. A semi-structured in-person interview was then conducted to obtain specific pain-related information. Hierarchical regression and mediational analyses were used to test hypotheses. Consistent with the fear-avoidance model of chronic pain, catastrophizing and fear of movement were negatively associated with yoga attitudes. Specifically, fear of movement was a mediator between catastrophizing and attitudes toward yoga. Individuals with higher levels of catastrophizing and fear of movement may be less likely to consider a pain treatment involving physical movement.

Derry, Heather M., Lisa M. Jaremka, Jeanette M. Bennett, Juan Peng, Rebecca Andridge, Charles Shapiro, William B. Malarkey, et al. 2015. Yoga and self-reported cognitive problems in breast cancer survivors: A randomized controlled trial. *Psycho-Oncology* 24(8). 958–966.
doi:10.1002/pon.3707.

Cancer survivors often report cognitive problems. Furthermore, decreases in physical activity typically occur over the course of cancer treatment. Although physical activity benefits cognitive function in noncancer populations, evidence linking physical activity to cognitive function in cancer survivors is limited. In a recent randomized controlled trial, breast cancer survivors who received a yoga intervention had lower fatigue and inflammation following the trial compared with a wait list control group. This secondary analysis of the parent trial addressed yoga's impact on cognitive complaints. Participants were posttreatment stage 0–IIIA breast cancer survivors (n=200), who were randomized to a 12-week, twice-weekly Hatha yoga intervention or a wait list control group. Participants reported cognitive complaints using the Breast Cancer Prevention Trial Cognitive Problems Scale at baseline, immediately postintervention, and 3-month follow-up. Cognitive complaints did not differ significantly between groups immediately postintervention. However, at 3-month follow-up, yoga participants' Breast Cancer Prevention Trial Cognitive Problems Scale scores were an average of 23% lower than wait list participants' scores. These group differences in cognitive complaints remained after controlling for psychological distress, fatigue, and sleep quality. Consistent with the primary results, those who practiced yoga more frequently reported significantly fewer cognitive problems at 3-month follow-up than those who practiced less frequently. These findings suggest that yoga can effectively reduce breast cancer survivors' cognitive complaints and prompt further research on mind–body and physical activity interventions for improving cancer-related cognitive problems.

Feuille, Margaret & Ken Pargament. 2015. Pain, mindfulness, and spirituality: A randomized controlled trial comparing effects of mindfulness and relaxation on pain-related outcomes in migraineurs. *Journal of Health Psychology* 20(8). 1090–1106.
doi:10.1177/1359105313508459.

In order to examine mindfulness as an intervention for pain, 107 migraineurs, predominantly college students, were randomly assigned to brief training in standardized mindfulness, spiritualized mindfulness, and simple relaxation instructions. After 2 weeks of daily practice, participants completed the cold-pressor task while practicing their assigned technique, and their experience of the task was assessed. Among the 74 study-completers, standardized mindfulness led to significantly reduced pain-related stress relative to simple relaxation, providing modest support for the utility of mindfulness in pain management. Pain-related outcomes in the spiritualized

mindfulness condition were similar to those of standardized mindfulness, though spirituality did appear to enhance mindful awareness.

- Gao, Yu & Lu Shi. 2015. Mindfulness, Physical Activity and Avoidance of Secondhand Smoke: A Study of College Students in Shanghai. *International Journal of Environmental Research and Public Health* 12(8). 10106–10116.
doi:10.3390/ijerph120810106.

To better understand the documented link between mindfulness and longevity, the authors examine the association between mindfulness and conscious avoidance of secondhand smoke (SHS), as well as the association between mindfulness and physical activity. In Shanghai University of Finance and Economics (SUFU) researchers surveyed a convenience sample of 1516 college freshmen. They measured mindfulness, weekly physical activity, and conscious avoidance of secondhand smoke, along with demographic and behavioral covariates. Researchers used a multilevel logistic regression to test the association between mindfulness and conscious avoidance of secondhand smoke, and used a Tobit regression model to test the association between mindfulness and metabolic equivalent hours per week. In both models the home province of the student respondent was used as the cluster variable, and demographic and behavioral covariates, such as age, gender, smoking history, household registration status (urban vs. rural), the perceived smog frequency in their home towns, and the asthma diagnosis. The logistic regression of consciously avoiding SHS shows that a higher level of mindfulness was associated with an increase in the odds ratio of conscious SHS avoidance. The Tobit regression shows that a higher level of mindfulness was associated with more metabolic equivalent hours per week. This study is an innovative attempt to study the behavioral issue of secondhand smoke from the perspective of the potential victim, rather than the active smoker. The observed associational patterns here are consistent with previous findings that mindfulness is associated with healthier behaviors in obesity prevention and substance use. Research designs with interventions are needed to test the causal link between mindfulness and these healthy behaviors.

- Garssen, Bert, Nicoline F. Umland-Sikkema & Anja Visser. 2015. How Spirituality Helps Cancer Patients with the Adjustment to their Disease. *Journal of Religion and Health* 54(4). 1249–1265.
doi:10.1007/s10943-014-9864-9.

It has been suggested that spirituality is associated with higher well-being, because it offers social support, improves the relationship with the partner, provides meaning, and reduces self-focus and worry. Researchers performed a qualitative study among ten people with cancer, using the Consensual Qualitative Research method for the analysis of semi-structured interviews. Support was found for the mechanisms of meaning provision and of reduction of self-focus and worries. Participants also mentioned emotion-focused roles of spirituality: Feeling supported by a transcendental confidant, the expression of negative emotions (in prayer), acceptance, allowing feelings of misery, and viewing problems from a distance. There was no mention of a contribution of spirituality to adjustment through improved social support per se or a higher quality of the relationship with the partner. The results of the present study indicate that the role of spirituality in emotion regulation deserves attention in understanding how spirituality helps cancer patients to adjust to their disease.

Gunda, Sampath, Arun Kanmanthareddy, Donita Atkins, Sudharani Bommana, Rhea Pimentel, Jeanne Drisko, Luigi Dibiasse, et al. 2015. Role of yoga as an adjunctive therapy in patients with neurocardiogenic syncope: a pilot study. *Journal of Interventional Cardiac Electrophysiology* 43(2). 105–110.
doi:10.1007/s10840-015-9996-1.

Neurocardiogenic syncope (NCS) is a common clinical condition characterized by abrupt cardiovascular autonomic changes resulting in syncope. This is a recurring condition with mixed results from current strategies of treatment. Subjects with a diagnosis of NCS were screened and enrolled. All the participants were given a DVD containing yoga videos and were instructed to practice yoga therapy for 60 min, three times a week for 3 consecutive months. Syncope functional status questionnaire score (SFSQS) was administered at the beginning and the end of the study. The subjects were followed for 3 months and underwent repeat tilt table testing at the end of the study. Of the 60 patients screened, 44 subjects were enrolled, 21 in the intervention group and 23 in the control group. Most of the participants were females, and the mean age was 21 years. In the intervention group, who finished the yoga regimen, there was a statistically significant improvement from control phase to the intervention phase, in number of episodes of syncope and presyncope. The mean SFSQS also decreased. All subjects had positive head up tilt table (HUTT) study at the time of enrollment compared to only six patients at the completion of intervention phase.

Hassan, Siti Hasnah. 2015. Effects of Religious Behavior on Health-Related Lifestyles of Muslims in Malaysia. *Journal of Religion and Health* 54(4). 1238–1248.
doi:10.1007/s10943-014-9861-z.

Religion has become more prominent in shaping attitudes and behavior, but little empirical information is available on the impact of religious behavior in shaping individual Muslims' health-related lifestyle behaviors in developing countries. The present study explores the relationship between religious behavior and the health-related practices of Malaysian Muslims. A convenience sample of 176 Malaysian Muslims was collected through a self-administered questionnaire. Structural equation modeling was used to develop the model. Result shows that health-related actions are strongly influenced, both directly and indirectly, by the health-related lifestyle choices consumers engaging in on a daily basis in accordance with Islamic teachings.

Johns, Shelley A., Linda F. Brown, Kathleen Beck-Coon, Patrick O. Monahan, Yan Tong & Kurt Kroenke. 2015. Randomized controlled pilot study of mindfulness-based stress reduction for persistently fatigued cancer survivors. *Psycho-Oncology* 24(8). 885–893.
doi:10.1002/pon.3648.

Cancer-related fatigue (CRF) is one of the most common, persistent, and disabling symptoms associated with cancer and its treatment. Evidence-based treatments that are acceptable to patients are critically needed. This study examined the efficacy of mindfulness-based stress reduction (MBSR) for CRF and related symptoms. As sample of 35 cancer survivors with clinically significant CRF was randomly assigned to a 7-week MBSR-based intervention or wait-list control group. The intervention group received training in mindfulness meditation, yoga, and self-regulatory responses to stress. Fatigue interference (primary outcome) and a variety of secondary outcomes (e.g., fatigue severity, vitality, disability, depression, anxiety, and sleep disturbance)

were assessed at baseline, post-intervention, and 1-month follow-up. Bonferroni correction was employed to account for multiple comparisons. Controls received the intervention after the 1-month follow-up. Participants in both groups were followed for 6 months after completing their respective MBSR courses to assess maintenance of effects. Following intervention, compared to controls, the MBSR group reported large post-intervention reductions as assessed by effect sizes (d) in the primary outcome, fatigue interference, along with fatigue severity, vitality, depression, and sleep disturbance. Results were maintained or strengthened at 1-month follow-up, the point at which significant improvements in disability and anxiety occurred. Improvements in all outcomes were maintained 6 months after completing the course. MBSR adherence was high, with 90% attendance across groups and high rates of participant-reported home practice of mindfulness.

Krause, Neal, Robert A. Emmons & Gail Ironson. 2015. Benevolent Images of God, Gratitude, and Physical Health Status. *Journal of Religion and Health* 54(4). 1503–1519.
doi:10.1007/s10943-015-0063-0.

This study has two goals. The first is to assess whether a benevolent image of God is associated with better physical health. The second goal is to examine the aspects of congregational life that is associated with a benevolent image of God. Data from a new nationwide survey ($n = 1,774$) are used to test the following core hypotheses: (1) people who attend worship services more often and individuals who receive more spiritual support from fellow church members (i.e., informal assistance that is intended to increase the religious beliefs and behaviors of the recipient) will have more benevolent images of God, (2) individuals who believe that God is benevolent will feel more grateful to God, (3) study participants who are more grateful to God will be more hopeful about the future, and (4) greater hope will be associated with better health. The data provide support for each of these relationships.

Mantzios, Michail & Janet Clare Wilson. 2015. Exploring mindfulness and mindfulness with self-compassion-centered interventions to assist weight loss: Theoretical considerations and preliminary results of a randomized pilot study. *Mindfulness* 6(4). 824–835.
doi:10.1007/s12671-014-0325-z.

This research explored whether developing mindfulness and self-compassion through meditation supports weight loss. The research addressed if (a) mindfulness meditation and (b) mindfulness with self-compassion Meditation (through loving kindness meditation and psycho-educational material to develop self-compassion) aid weight loss and maintenance. Sixty-three soldiers followed independent diet plans and were randomly assigned to a control group, or, one of the two meditation interventions for 5 weeks. Participants lost weight in both experimental groups, while the control group gained weight during the initial 5 weeks. Six months of subsequent, self-motivated and unguided meditative practice, revealed that only the mindfulness with self-compassion meditation group continued losing weight, while the mindfulness meditation group showed no significant weight differences. At a 1-year follow-up, both experimental groups regained some weight, while the control group paradoxically lost weight. Overall, however, the mindfulness with self-compassion meditation group lost significantly more weight than either of the two remaining groups (which did not significantly differ). The findings suggest that developing both mindfulness and self-compassion appears more promising for weight loss than developing

mindfulness alone or simply dieting; nevertheless, weight maintenance requires more attention in future research.

- Al-Omari, Hasan, Razan Hamed & Hashem Abu Tariah. 2015. The Role of Religion in the Recovery from Alcohol and Substance Abuse Among Jordanian Adults. *Journal of Religion and Health* 54(4). 1268–1277.
doi:10.1007/s10943-014-9868-5.

The purpose of this study is to understand religious factors role during recovery period among Jordanian receiving treatment for alcohol and substances abuse. Participants were asked to answer open-ended questions related to role of religion on their recovery from alcohol and substances abuse. Content analysis was used to explore the role of religion on their recovery process. One hundred and forty-six clients from two treatment centers participated with two main themes that emerged from the analysis: role of religion and role of religious men. Religion not only helps during the recovery process, but also is considered as a protector from drug and alcohol abuse in the future.

- Abu-Raiya, Hisham, Liat Hamama & Fatima Fokra. 2015. Contribution of religious coping and social support to the subjective well-being of Israeli Muslim parents of children with cancer: A preliminary study. *Health & Social Work* 40(3). e83–e91.
doi:10.1093/hsw/hlv031.

No single study has examined the subjective well-being (SWB) among Israeli Muslim parents of children treated for cancer. To fill this gap in the literature, this preliminary study espouses a positive psychology orientation and examines the contribution of social support and religious coping to the SWB among this population. The study's sample consisted of 70 Israeli Muslim parents of children who were receiving active treatment for their cancer. Participants were asked to provide demographic information on themselves and their ill child and to complete measures of SWB (that is, positive affect, negative affect, satisfaction with life), social support, and religious coping (that is, positive religious coping, punishing God reappraisal). The authors found that higher scores on social support were correlated with higher scores on satisfaction with life and lower scores on negative affect. Higher scores on positive religious coping were correlated with higher scores on satisfaction with life. Punishing God reappraisal did not correlate with any of the SWB indices. Social support emerged as a partial mediator between positive religious coping and satisfaction with life. Social support and some methods of religious coping seem to enhance the SWB of Israeli Muslim parents of children treated for cancer.

- Ruiz, Andrea L. & Gabriel A. Acevedo. 2015. True Believers? Religion, Physiology, and Perceived Body Weight in Texas. *Journal of Religion and Health* 54(4). 1221–1237.
doi:10.1007/s10943-014-9859-6.

This paper examines relationships between body weight, religion, and gender while controlling for relevant covariates and body mass index (BMI), a measure of physical/biological body type. Using data from the 2004 Survey of Texas Adults (n = 1,504), the authors present results of ordered logistic regression models which indicate that religious factors work distinctly for men and women when controlling for BMI. While church attendance is associated with lower odds of overweight perceptions among women, it is religious salience that is associated with lower odds

of self-reported excess weight in men. Implications for research which associates religious and physiological factors are discussed.

- Steffen, Patrick R. & Michael J. Larson. 2015. A brief mindfulness exercise reduces cardiovascular reactivity during a laboratory stressor paradigm. *Mindfulness* 6(4). 803–811. doi:10.1007/s12671-014-0320-4.

Mindfulness meditation is increasingly used in health interventions and may reduce stress and blood pressure. The authors aimed to investigate the effectiveness of brief mindfulness meditation in reducing cardiovascular reactivity and recovery during a laboratory stressor. Researchers randomly assigned 62 meditation-naïve participants to a mindfulness meditation group or a matched non-mindful listening exercise control group. There were no differences between groups in blood pressure, demographic, or mood variables at baseline. Mindfulness participants showed lower systolic blood pressure following the mindfulness exercise and decreased systolic and diastolic blood pressure reactivity during a speeded math stressor. Specifically, as the stressor progressed, blood pressure in the mindfulness group began to decrease, whereas in the control group, it continued to increase. There were no group differences during recovery. Overall, brief mindfulness meditation reduced cardiovascular reactivity to stress and may be an effective intervention for reducing stress-related blood pressure reactivity.

- Taylor, Elizabeth Johnston, Cheryl Petersen, Oladele Oyedele & Joan Haase. 2015. Spirituality and Spiritual Care of Adolescents and Young Adults with Cancer. *Seminars in Oncology Nursing* 31(3). 227–241. doi:10.1016/j.soncn.2015.06.002.

Researchers reviewed research on spiritual perspectives and spiritual care of adolescents and young adults (AYA) living with cancer. Following a literature review of peer-reviewed publications, book chapters, and websites of professional organizations, the authors found that there is a paucity of research specifically investigating AYA spirituality and lack of AYA-sensitive instruments to measure spirituality. Research that applies robust scientific methods to the study of AYA spirituality is needed. Research that provides evidence on which to base best practices for spiritual care that supports AYA spiritual well-being is likewise necessary.

- Wolff, Moa, Ashfaq A. Memon, John P. Chalmers, Kristina Sundquist & Patrik Midlov. 2015. Yoga's effect on inflammatory biomarkers and metabolic risk factors in a high risk population - a controlled trial in primary care. *BMC Cardiovascular Disorders* 15. 91. doi:10.1186/s12872-015-0086-1.

Yoga can reduce blood pressure and has also been suggested to reduce inflammatory biomarkers and metabolic risk factors for cardiovascular diseases (CVDs). Researchers thus aimed to assess the benefit of two yoga interventions on inflammatory biomarkers and metabolic risk factors in a high risk population in primary care. Adult patients from a health care center in Sweden with diagnosed hypertension, were invited to undergo a baseline check at the health care center. Baseline check included standardized blood pressure measurement, BMI and weight circumference measurements, blood sampling and a questionnaire on self-rated quality of life (WHOQOL-BREF). There were three groups: 1) yoga class with yoga instructor; 2) yoga at home; and 3) a control group. In total, 83 patients were included and matched at the group level for systolic blood

pressure. A majority of the patients (92%) were on antihypertensive medication, which they were requested not to change during the study. After 12 weeks of intervention, the assessments were performed again. Following intervention, the researchers recorded no evidence that yoga altered inflammatory biomarkers or metabolic risk factors in the study population. A total of 49 participants (59 %) met the criteria for metabolic syndrome. The authors conclude that the yoga interventions performed in the study did not affect inflammatory biomarkers or metabolic risk factors associated with CVD in the study population of primary care patients with hypertension.

2.2 SPIRITUALITY & HEALTH: MENTAL HEALTH

Amutio, Alberto, Cristina Martinez-Taboada, Daniel Hermsilla & Luis Carlos Delgado. 2015. Enhancing relaxation states and positive emotions in physicians through a mindfulness training program: A one-year study. *Psychology Health & Medicine* 20(6). 720–731. doi:10.1080/13548506.2014.986143.

Previous research on mindfulness has focused mainly on stress-related negative symptoms and short-term effects. In contrast, the present article focuses on the impact of a mindfulness-based stress reduction (MBSR) program on improving well-being (i.e. relaxation states and related positive emotions) in a longitudinal study for a period of one year. A randomized controlled trial in a sample of 42 physicians was used. The intervention group participated in an 8-week MBSR program, with an additional 10-month maintenance period and completed measures of mindfulness and relaxation at pre-intervention, post-intervention and after 10 months. Heart rate measures were also obtained. Significant improvements in favor of the experimental group compared with the control group on the levels of mindfulness and relaxation (including positive emotional states, such as at ease/peace, renewal, energy, optimism, happiness, acceptance, and even transcendence) were obtained after eight weeks. Remarkably, change magnitudes (effect size) significantly increased at the end of the maintenance period after a year, especially for mindfulness and positive energy. Additionally, heart rate significantly decreased for the intervention group and maintained a year after the beginning of the treatment.

Cope, Heidi, Melanie E. Garrett, Simon Gregory & Allison Ashley-Koch. 2015. Pregnancy continuation and organizational religious activity following prenatal diagnosis of a lethal fetal defect are associated with improved psychological outcome. *Prenatal Diagnosis* 35(8). 761–768. doi:10.1002/pd.4603.

The aim of the article is to examine the psychological impact, specifically symptoms of grief, post-traumatic stress and depression, in women and men who either terminated or continued a pregnancy following prenatal diagnosis of a lethal fetal defect. This project investigated a diagnostically homogeneous group composed of 158 women and 109 men who lost a pregnancy to anencephaly, a lethal neural tube defect. Participants completed the Perinatal Grief Scale, Impact of Event Scale - Revised, and Beck Depression Inventory-II, which measure symptoms of grief, post-traumatic stress and depression, respectively. Demographics, religiosity and pregnancy choices were also collected. Gender-specific analysis of variance was performed for instrument total scores and subscales. Women who terminated reported significantly more despair, avoidance, and depression than women who continued the pregnancy. Organizational religious

activity was associated with a reduction in grief (Perinatal Grief Scale subscales) in both women and men.

- Davis, Kyle, Sherryl H. Goodman, Jenn Leiferman, Mary Taylor & Sona Dimidjian. 2015. A randomized controlled trial of yoga for pregnant women with symptoms of depression and anxiety. *Complementary Therapies in Clinical Practice* 21(3). 166–172.
doi:10.1016/j.ctcp.2015.06.005.

Researchers randomly assigned 46 pregnant women with symptoms of depression and anxiety to an 8-week yoga intervention or treatment-as-usual (TAU) in order to examine feasibility and preliminary outcomes. Following intervention, yoga was associated with high levels of credibility and satisfaction as an intervention for depression and anxiety during pregnancy. Participants in both conditions reported significant improvement in symptoms of depression and anxiety over time; and yoga was associated with significantly greater reduction in negative affect as compared to TAU.

- Doolittle, Benjamin R. & Donna M. Windish. 2015. Correlation of burnout syndrome with specific coping strategies, behaviors, and spiritual attitudes among interns at Yale University, New Haven, USA. *Journal of Educational Evaluation for Health Professions* 12. 41.
doi:10.3352/jeehp.2015.12.41.

This study aimed to determine the correlation of burnout syndrome with specific coping strategies, behaviors, and spiritual attitudes among interns in internal medicine, primary care, and internal medicine/pediatrics residency programs at two institutions. Intern physicians completed anonymous voluntary surveys prior to starting the internship in June 2009 and in the middle of the internship in February 2010. Three validated survey instruments were used to explore burnout, coping, and spiritual attitudes: the Maslach Burnout Inventory, the COPE Inventory, and the Hatch Spiritual Involvement and Beliefs Scale. The interns were in programs at the Yale University School of Medicine and a Yale-affiliated community hospital, New Haven, Connecticut, USA. The prevalence of self-identified burnout prior to starting the internship was 1/66 in June 2009, increasing to 10/53 in February 2010. From June 2009 to February 2010, the prevalence of high emotional exhaustion increased from 30/66 (45.5%) to 45/53 (84.9%), and that of high depersonalization increased from 42/66 (63.6%) to 45/53 (84.9%). Interns who employed the strategies of acceptance and active coping were less likely to experience emotional exhaustion and depersonalization. Perceptions of high personal accomplishment was 75.5% and was positively correlated with total scores on the Hatch Spiritual Involvement and Beliefs Scale, as well as the internal/fluid and existential/meditative domains of that instrument. Specific behaviors did not impact burnout.

- Fattori, Lucia & Cesare Secchi. 2015. Existential crises in two religious patients: Vicissitudes of faith and the emergence of the true self. *The International Journal of Psycho-Analysis* 96(4). 993–1011.
doi:10.1111/1745-8315.12266.

The authors present two clinical cases involving an existential crisis which led the patients to lose what had been the foundation in their lives, their faith. Although the therapeutic settings differ—

the first patient had a few psychotherapy sessions following a psychotic episode with a mystical background, while the second was in the final stage of analytic treatment—the authors highlight how in both clinical cases a loss of faith becomes a total and urgent crisis of the Self. The fracture which ensues seems to generate an intense engagement of the body which, paradoxically during a loss of faith, induces an experience of ecstasy of the kind that has traditionally been reported. In the first case the experience of ecstasy was lived first-hand by the patient who thereafter redefined the psychotic breakdown as a “moment of truth”; whereas the second patient, through a deep projective identification, induces an eerie countertransferential feeling of ‘metaphysical’ shortfall in the agnostic psychoanalyst, triggering bewilderment, physical discomfort and awe in him. In both cases the authors believe that the notable somatic involvement may be correlated to a potentially profound and unprecedented contact with the True Self.

- Galeba, Anna & Beata Bajurna. 2015. The Influence of God and Providence on Happiness and the Quality of Life of Patients Benefiting from Aesthetic Medicine Treatments in Poland. *Journal of Religion and Health* 54(4). 1481–1488. doi:10.1007/s10943-015-0036-3.

This research reveals the impact of a belief in God and God’s providence on the happiness and quality of life of patients benefiting from aesthetic medicine treatments in Poland, a country where over 90% of society declares themselves to be deeply devout. The work also examines age and sex of the patients benefiting from beauty treatments (botulinum toxin, fillers, medical peels and needle mesotherapy), their quality of life and also the impact of various factors, including God and Divine Providence on their happiness. The research shows the analysis of factors influencing the successes or failures in the past year and presents the comparison of patients who have benefited from the aesthetic medicine treatments (cosmetic medicine) to the common average Polish citizens.

- Hasanović, Mevludin & Izet Pajević. 2015. Religious Moral Beliefs Inversely Related to Trauma Experiences Severity and Presented Posttraumatic Stress Disorder Among Bosnia and Herzegovina War Veterans. *Journal of Religion and Health* 54(4). 1403–1415. doi:10.1007/s10943-014-9954-8.

The aim of this study was to determine the correlation of the level of religious moral beliefs (RMB) with trauma experiences and posttraumatic stress disorder (PTSD) severity in war veterans of Bosnia and Herzegovina. The sample consists of 120 Bosnian war veterans divided into two equal groups—one with and one without PTSD. Researchers used the Harvard Trauma Questionnaire and the RMB belief scale. They then correlated the severity of trauma experiences and PTSD symptoms with veterans’ scores on the RMB scale. The score on the RMB scale was negatively correlated to severity of trauma experiences and PTSD symptoms. The RMB may have a protective role in the mental health stability of severely traumatized war veterans.

- Henslee, Amber M., Scott F. Coffey, Julie A. Schumacher, Melissa Tracy, Fran H. Norris & Sandro Galea. 2015. Religious coping and psychological and behavioral adjustment after Hurricane Katrina. *The Journal of Psychology: Interdisciplinary and Applied* 149(6). 630–642. doi:10.1080/00223980.2014.953441.

Positive and negative religious coping are related to positive and negative psychological adjustment, respectively. The current study examined the relation between religious coping and

PTSD, major depression, quality of life, and substance use among residents residing in Mississippi at the time of Hurricane Katrina. Results indicated that negative religious coping was positively associated with major depression and poorer quality of life and positive religious coping was negatively associated with PTSD, depression, poorer quality of life, and increased alcohol use. These results suggest that mental health providers should be mindful of the role of religious coping after traumatic events such as natural disasters.

- Khalaf, Dany R., Ludger F. Hebborn, Sylvain J. Dal & Wadih J. Naja. 2015. A critical comprehensive review of religiosity and anxiety disorders in adults. *Journal of Religion and Health* 54(4). 1438–1450.
doi:10.1007/s10943-014-9981-5.

Over the past three decades, there has been increasing research with respect to the relation of religion and mental health disorders. Consequently, the current article aims to first provide a comprehensive literature review of the interplay between different domains of religiosity and a wide variety of categorical anxiety disorders in adults, and secondly, to uncover the major methodological flaws often yielding mixed, contradictory and unreliable results. The search was conducted using the PubMed/Medline database and included papers published between 1970 and 2012, under a rigorous set of inclusion/exclusion criteria. A total of ten publications were retained as part of the current study, and three main outcomes were identified: (1) certain aspects of religiosity and specific religious interventions have mostly had a protective impact on generalized anxiety disorder (40% of the studies); (2) other domains of religiosity demonstrated no association with post-traumatic stress disorder (30% of the studies); and (3) mixed results were seen for panic and phobic disorders.

- Kim, Hee Jun, Michelle Pearce & Smi Choi-Kwon. 2015. Religious Attendance, Health-Promoting Lifestyle Behaviors, and Depressive Symptoms among Koreans in the United Arab Emirates (UAE). *Journal of Immigrant and Minority Health* 17(4). 1098–1104.
doi:10.1007/s10903-014-0057-0.

Migrants, who comprise 80% of the population in the United Arab Emirates, are at risk of developing mental health disorders. To test associations among religious attendance, health-promoting lifestyle behaviors (HPLB), and depressive symptoms, researchers conducted a cross-sectional survey in Dubai. Measures included frequency of religious attendance, the Health-Promoting Lifestyle Profile, and the Depression, Anxiety, and Stress Scale. Multiple regression analyses were used to explore relationships among religious attendance, HPLB, and depressive symptoms. Religious attendance was significantly associated with self-actualization, stress management, and depressive symptoms. Self-actualization and stress management mediated the relationships between religious attendance and depressive symptoms for both males and females, and interpersonal support mediated the relationship for females, controlling for age and education. The facilitation of positive internal and external resources generated by participating in religious activities may have increased the likelihood that the Korean migrants would engage in psychosocial healthy lifestyle behaviors, and may have decreased depressive symptoms.

- Kim, Youngmee, Charles S. Carver & Rachel S. Cannady. 2015. Caregiving Motivation Predicts Long-Term Spirituality and Quality of Life of the Caregivers. *Annals of Behavioral Medicine: A Publication of the Society of Behavioral Medicine* 49(4). 500–509.

doi:10.1007/s12160-014-9674-z.

Studies have shown that caregivers report impaired quality of life (QOL). This study investigated how caregiving motives predict long-term spirituality and QOL among cancer caregivers and the role of gender in these associations. The caregiving motives of family members (n=369) were measured 2 years after their relative's cancer diagnosis (T1), and both spirituality and QOL (mental and physical health) were measured at 5 years postdiagnosis (T2). Structural equation modeling was used to test spirituality dimensions as potential mediators of links from caregiving motives to QOL. Among male caregivers, autonomous caregiving motives at T1 related to better mental health at T2, apparently because these motives led caregivers to find greater peace and meaning in life at T2. Findings suggest that caregivers may benefit from interventions that facilitate their ability to be autonomously motivated and find contentment in their caregiving experience, which may improve spiritual adjustment and QOL years later.

- Lin, Shu-Ling, Ching-Ya Huang, Shau-Ping Shiu & Shu-Hui Yeh. 2015. Effects of yoga on stress, stress adaption, and heart rate variability among mental health professionals: A randomized controlled trial. *Worldviews on Evidence-Based Nursing* 12(4). 236–245.
doi:10.1111/wvn.12097.

The aim of this study was to examine the effects of yoga classes on work-related stress, stress adaptation, and autonomic nerve activity among mental health professionals. A randomized controlled trial was used, which compared the outcomes between the experimental (e.g., yoga program) and the control groups (e.g., no yoga exercise) for 12 weeks. Work-related stress and stress adaptation were assessed before and after the program. Heart rate variability (HRV) was measured at baseline, midpoint through the weekly yoga classes (6 weeks), and postintervention (after 12 weeks of yoga classes). Following intervention, the results showed that the mental health professionals in the yoga group experienced a significant reduction in work-related stress, and a significant enhancement of stress adaptation. Participants in the control group revealed no significant changes. Comparing the mean differences in pre- and posttest scores between yoga and control groups, researchers found the yoga group significantly decreased work-related stress, but there was no significant change in stress adaptation. While controlling for the pretest scores of work-related stress, participants in yoga, but not the control group, revealed a significant increase in autonomic nerve activity at midpoint (6 weeks) test, and at posttest (12 weeks).

- Liu, Xinghua, Wei Xu, Yuzheng Wang, J. Mark G. Williams, Yan Geng, Qian Zhang & Xin Liu. 2015. Can Inner Peace be improved by Mindfulness Training? A Randomized Controlled Trial. *Stress and Health* 31(3). 245–254.
doi:10.1002/smi.2551.

This article reports a randomized controlled trial to investigate whether mindfulness training can successfully improve inner peace in participants with no known mental disorder. Fifty-seven participants were randomized to either mindfulness training (n=29) or wait-list control (n=28). The experience sampling method was used to measure the fleeting momentary experience of inner peace in participants. In addition, researchers used an experimental approach to assessing ability to focus attention: the Meditation Breath Attention Score, as well as the self-report Five-Facet Mindfulness Questionnaire (FFMQ). Compared with the wait-list control group, mindfulness training led to an increase in scores of inner peace, Meditation Breath Attention Score and FFMQ,

using analysis of repeated measures analysis of variance. Change in inner peace was not, however, mediated by changes in self-rated mindfulness (FFMQ) nor by increased attentional focus. The findings provide first evidence suggesting that using mindfulness training improves the participants' inner peace. The focus here was on the immediate effects and future studies need to use follow-up.

Lukachko, Alicia, Ilan Myer & Sidney Hankerson. 2015. Religiosity and Mental Health Service Utilization Among African-Americans. *Journal of Nervous and Mental Disease* 203(8). 578–582.

doi:10.1097/NMD.0000000000000334.

African-Americans are approximately half as likely as their white counterparts to use professional mental health services. High levels of religiosity among African-Americans may lend to a greater reliance on religious counseling and coping when facing a mental health problem. This study investigates the relationship between three dimensions of religiosity and professional mental health service utilization among a large (n=3570), nationally representative sample of African-American adults. African-American adults who reported high levels of organizational and subjective religiosity were less likely than those with lower levels of religiosity to use professional mental health services. This inverse relationship was generally consistent across individuals with and without a diagnosable Diagnostic and Statistical Manual of Mental Disorders, fourth edition, anxiety, mood, or substance use disorder. No association was found between nonorganizational religiosity and professional mental health service use.

Polusny, Melissa A., Christopher R. Erbes, Paul Thuras, Amy Moran, Greg J. Lamberty, Rose C. Collins, John L. Rodman & Kelvin O. Lim. 2015. Mindfulness-Based Stress Reduction for Posttraumatic Stress Disorder Among Veterans: A Randomized Clinical Trial. *JAMA* 314(5). 456–465.

doi:10.1001/jama.2015.8361.

Mindfulness-based interventions may be acceptable to veterans who have poor adherence to existing evidence-based treatments for posttraumatic stress disorder (PTSD). The objective of this research project was to compare mindfulness-based stress reduction with present-centered group therapy for treatment of PTSD. The study was a randomized clinical trial of 116 veterans with PTSD recruited at the Minneapolis Veterans Affairs Medical Center from March 2012 to December 2013. Outcomes were assessed before, during, and after treatment and at 2-month follow-up. Data collection was completed on April 22, 2014. Participants were randomly assigned to receive mindfulness-based stress reduction therapy (n=58), consisting of 9 sessions (8 weekly 2.5-hour group sessions and a daylong retreat) focused on teaching patients to attend to the present moment in a nonjudgmental, accepting manner; or present-centered group therapy (n=58), an active-control condition consisting of 9 weekly 1.5-hour group sessions focused on current life problems. The primary outcome, change in PTSD symptom severity over time, was assessed using the PTSD Checklist (range, 17-85; higher scores indicate greater severity; reduction of 10 or more considered a minimal clinically important difference) at baseline and weeks 3, 6, 9, and 17. Secondary outcomes included PTSD diagnosis and symptom severity assessed by independent evaluators using the Clinician-Administered PTSD Scale along with improvements in depressive symptoms, quality of life, and mindfulness. Following intervention, participants in the

mindfulness-based stress reduction group demonstrated greater improvement in self-reported PTSD symptom severity during treatment and at 2-month follow-up. Although participants in the mindfulness-based stress reduction group were more likely to show clinically significant improvement in self-reported PTSD symptom severity at 2-month follow-up, they were no more likely to have loss of PTSD diagnosis.

Roh, Soonhee, Yeon-Shim Lee, Youseung Kim, So-Young Park & Anoshua Chaudhuri. 2015. Gender differences in the roles of religious support and social network support in reducing depressive symptoms among older Korean Americans. *Journal of Social Service Research* 41(4). 484–497.
doi:10.1080/01488376.2015.1037041.

This study examined gender differences in the interaction effects of religious support and social network support on depressive symptoms among older Korean Americans. Data were derived from a cross-sectional survey of 85 Korean American women and 115 Korean American men aged 65 years or older living in New York City. A 2-step hierarchical multiple regression analysis revealed that the associations between religious support, social network support, and depressive symptoms were different for older Korean men and women. Among men, social network support was identified as a strong predictor for depressive symptoms. Conversely, religious support was identified as a predictor for depressive symptoms among women. The interaction between social network support and religious support was found to be statistically significant only for women. Additionally, the association of social networks with fewer depressive symptoms was stronger for women with high religious support. These findings highlight the importance of gender differences in understanding psychological effects of social network support within a religious-cultural context and the need for geriatric practitioners to assess carefully the quality and types of social support systems. Further studies are needed to identify common and gender-specific risk/protective factors among older Korean Americans to develop gender-targeted preventions and interventions to improve their psychological well-being.

Winter, Laraine, Helene J. Moriarty, Faith Atte & Laura N. Gitlin. 2015. Depressed Affect and Dimensions of Religiosity in Family Caregivers of Individuals with Dementia. *Journal of Religion and Health* 54(4). 1490–1502.
doi:10.1007/s10943-015-0033-6.

Religiosity and mood have long been recognized as associated, but some patterns of associations suggest complex relationships. Using a multidimensional measure of religiosity, the authors explored the possibility that dimensions of religiosity may have (1) different strengths of association and (2) directions of association with depressed mood. Researchers measured five dimensions of religiosity in 1,227 family caregivers of persons with dementia, testing associations of each dimension to caregivers' depressive symptoms. In zero-order associations, higher scores on each religiosity dimension were associated with lower depression. Yet in hierarchical multiple regressions models, adjusting for other religiosity dimensions, different dimensions showed either no independent association, an independent association, or an inverse association with depressed mood. Frequency of prayer reversed directions of association-showing higher depression in caregivers who prayed more. Findings underscore the complex and sometimes bidirectional

association between depressed mood and religiosity and argue for recognition of distinct dimensions of religiosity.

- Yoshimura, Mitsunobu, Etsuko Kurokawa, Takayuki Noda, Koji Hineno, Yasuo Tanaka, Yuji Kawai & Michael C. Dillbeck. 2015. Disaster relief for the Japanese earthquake–tsunami of 2011: Stress reduction through the Transcendental Meditation® technique. *Psychological Reports* 117(1). 206–216.
doi:10.2466/02.13.PR0.117c11z6.

This study examined changes in self-reported stress symptoms after instruction in the Transcendental Meditation technique among 171 residents of two cities (Sendai and Ishinomaki) directly affected by the 2011 Japan earthquake and tsunami disaster, compared with 326 non-disaster Tokyo participants previously tested before and after learning the technique and a no-treatment control group (n=68). The participants completed a rating checklist of mental and physical symptoms. Disaster area participants who learned the Transcendental Meditation technique in contrast to controls showed a significant drop in total symptom score from pre-test to post-test. Results were comparable for an ordinal measure of symptom intensity. The findings suggest the potential value of this procedure for relief from disaster trauma.

2.3 SPIRITUALITY & HEALTH: METHOD AND THEORY

- Ahmadi, Fereshteh & Nader Ahmadi. 2015. Nature as the Most Important Coping Strategy among Cancer Patients: A Swedish Survey. *Journal of Religion and Health* 54(4). 1177–1190.
doi:10.1007/s10943-013-9810-2.

The authors have conducted a quantitative survey to examine the extent to which the results obtained in a qualitative study among cancer patients in Sweden are applicable to a wider population of cancer patients in this country. In addition to questions relating to the former qualitative study, this survey also references the RCOPE questionnaire (designed by Kenneth I. Pargament) in the design of the new quantitative study. In this study, questionnaires were distributed among persons diagnosed with cancer; 2,355 people responded. The results show that nature has been the most important coping method among cancer patients in Sweden. The highest mean value (2.9) is the factor ‘nature has been an important resource to you so that you could deal with your illnesses.’ Two out of three respondents (68%) affirm that this method helped them feel significantly better during or after illness. The second highest average (2.8) is the factor ‘listening to ‘natural music’ (birdsong and the wind)’. Two out of three respondents (66 %) answered that this coping method significantly helped them feel better during illness. The third highest average (2.7) is the factor ‘to walk or engage in any activity outdoors gives you a spiritual sense’. This survey concerning the role of nature as the most important coping method for cancer patients confirms the result obtained from the previous qualitative studies.

- Black, Stephanie Winkeljohn, Patrick Pössel, Benjamin D. Jeppsen, Afia Tariq & David H. Rosmarin. 2015. Poloma and Pendleton’s (1989) Prayer Types Scale in Christian, Jewish, and Muslim praying adults: One scale or a family of scales? *Psychology of Religion and Spirituality* 7(3). 205–216.
doi:10.1037/rel0000018.

The psychological relevance of private prayer is an important area of inquiry, with researchers examining prayer typologies and prayer's associations to mental health. However, many of the field's measures are limited by the use of predominately Christian samples for scale construction. The utility of Poloma and Pendleton's (1989) Prayer Types Scale, proposing a 4-factor prayer typology, has not been validated in non-Christian samples. This cross-sectional, online study sought to determine whether the Prayer Types Scale's 4-factor structure and associations to mental health variables would be upheld across Christians (n = 274), Jews (n = 156), and Muslims (n = 140). Multigroup analysis in AMOS was used to determine whether the factor structure of the Prayer Types Scale was equivalent across groups; results demonstrated that there was partial nonequivalence across groups. Revised prayer subscales were calculated for each religious group independently to account for this nonequivalence. The subscales had adequate internal consistencies across the subsamples, with the exception of Ritual prayer in the Muslim subsample. Finally, correlations were calculated to determine whether all subsamples had similar associations between prayer types and mental health variables. Results indicated differences among these associations for the 3 groups. The overall generalizability of the measure, as well as the implications and limitations, are discussed.

- Carey, Lindsay B. & Bruce Rumbold. 2015. Good Practice Chaplaincy: An Exploratory Study Identifying the Appropriate Skills, Attitudes and Practices for the Selection, Training and Utilisation of Chaplains. *Journal of Religion and Health* 54(4). 1416–1437.
doi:10.1007/s10943-014-9968-2.

This article presents an overview of exploratory research regarding the skills, knowledge, attitudes and practices considered necessary for chaplains to be highly competent in providing holistic care to clients and staff. Utilizing a qualitative methodology, two focus groups comprising Salvation Army chaplains and their managers provided data about their expectations of chaplaincy personnel and about the pastoral care interventions undertaken by chaplains. The results indicated that while there were some differences in opinion, nevertheless, in overall terms, there was general agreement between chaplains and their managers about particular personal and professional qualities necessary for chaplains to be considered appropriate and proficient. Evidence was also obtained indicating a need for change with regard to the organizational attitude and culture of The Salvation Army towards chaplaincy. Recommendations are presented concerning (1) the selection criteria for chaplaincy, (2) training and utilization of chaplains plus (3) issues relating to organizational cultural change necessary to develop a future-ready chaplaincy more suitable for the twenty-first century.

- Clobert, Magali, Vassilis Saroglou & Matthieu Van Pachterbeke. 2015. Who Turns to Acupuncture? The Role of Mistrust of Rationality and Individualist Success. *Journal of Alternative and Complementary Medicine (New York, N.Y.)* 21(8). 466–471.
doi:10.1089/acm.2014.0229.

In this postmodern society, people tend to abandon conventional medicine for alternative medical systems, such as acupuncture. What are the reasons for this defiance regarding modern rationality and individualist success? Who turns to acupuncture? This study (n = 89) examined whether world views opposed to the predominance of rationality (i.e., mistrust of science, spirituality, paranormal beliefs) and individualist success or consumerism (i.e., power, achievement, and

materialism), typically associated with the postmodern era, might explain this attraction toward acupuncture. Participants were recruited through Internet forums interested in complementary and alternative medicine and completed the questionnaire voluntarily. Attraction to acupuncture related negatively with materialism and achievement as well as positively with spirituality, paranormal beliefs, and mistrust in science. Spirituality, paranormal beliefs, and low achievement were the main predictors of attraction to acupuncture and explained 44% of the variance. The mistrust in science mediated the relationship between spiritual and paranormal beliefs and the attraction toward acupuncture. Low achievement explained the link between low materialism and positive attitudes toward acupuncture.

Fung, Kenneth. 2015. Acceptance and Commitment Therapy: Western adoption of Buddhist tenets? *Transcultural Psychiatry* 52(4). 561–576.
doi:10.1177/1363461514537544.

Acceptance and Commitment Therapy (ACT) is a psychological intervention that has wide clinical applications with emerging empirical support. It is based on Functional Contextualism and is derived as a clinical application of the Relational Frame Theory, a behavioral account of the development of human thought and cognition. The six core ACT therapeutic processes include: Acceptance, Defusion, Present Moment, Self-as-Context, Values, and Committed Action. In addition to its explicit use of the concept of mindfulness, the therapeutic techniques of ACT implicitly incorporate other aspects of Buddhism. This article describes the basic principles and processes of ACT, explores the similarities and differences between ACT processes and some of the common tenets in Buddhism such as the Four Noble Truths and No-Self, and reports on the experience of running a pilot intervention ACT group for the Cambodian community in Toronto in partnership with the community's Buddhist Holy Monk. Based on this preliminary exploration in theory and the reflections of the group experience, ACT appears to be consistent with some of the core tenets of Buddhism in the approach towards alleviating suffering, with notable differences in scope reflecting their different aims and objectives. Further development of integrative therapies that can incorporate psychological and spiritual as well as diverse cultural perspectives may help the continued advancement and evolution of more effective psychotherapies that can benefit diverse populations.

Ghani, Faizah Abd, Adibah Abdul Latif, Azian Abd Aziz & Aqeel Khan. 2015. Validity and Reliability Analysis of the “SayangKU” (MyLove) in Intervention for Addressing Adolescents Involved in Free Sex. *Journal of Religion and Health* 54(4). 1375–1386.
doi:10.1007/s10943-014-9935-y.

A module entitled ‘SayangKU’ (MyLove), based on the Islamic perspective, was developed as an instrument to assist adolescents that involved in premarital sexual activity. The module comprises four phases: Love of God (Allah), Love of the Prophet, Love of Oneself, and Love of the Ummah (world). From analysis of Rasch, the value of item reliability was .80 and an individual reliability was .95. Dimensionality value was more than 40 % variance explained by measures, and level of agreement among experts was 86.88 %. The posttest shows the better result from pretest and proves the effectiveness of the module.

Gill, Meghan, Jennifer Waltz, Patrick Suhrbier & Leela Robert. 2015. Non-duality and the integration of mindfulness into psychotherapy: Qualitative research with meditating therapists. *Mindfulness* 6(4). 708–722.
doi:10.1007/s12671-014-0310-6.

As behavioral and cognitive psychotherapy traditions increasingly incorporate mindfulness concepts and practices, it is important to notice changes occurring in the cross-cultural translation of the ideas and practices from their Buddhist origins. The current study explored this issue utilizing a qualitative research method to collect data from seven “information-rich” participants. These participants were psychotherapists with long-term mindfulness practices; all integrating mindfulness into their psychotherapy work. They had, on average, 31 years of mindfulness meditation practice as a component of a larger spiritual practice. Participants were interviewed about their mindfulness practices, their therapeutic work, and their perspectives on how mindfulness in their spirituality-based meditation practices differs from and informs their psychotherapy work. A review of findings is presented as well as in-depth exploration of a selected meta-theme; participants all, at times, demonstrated a non-dualistic worldview and discussed the ideas of relative and ultimate reality. These views affected their use of language and contributed to the presence of dialectical and paradoxical responses. These concepts are important to consider as the development of therapist training in mindfulness-based treatment delivery evolves.

Hindman, Robert K., Carol R. Glass, Diane B. Arnkoff & David D. Maron. 2015. A comparison of formal and informal mindfulness programs for stress reduction in university students. *Mindfulness* 6(4). 873–884.
doi:10.1007/s12671-014-0331-1.

Undergraduate and graduate students show elevated levels of stress and could thus benefit from mindfulness interventions, but the best way to teach mindfulness has not been established. The present study compared a stress management program that used formal meditations and informal practice (Mindful Stress Management; MSM) to one that used brief mindfulness exercises and informal practice (Mindful Stress Management-Informal; MSM-I), and a wait-list control. MSM participants exhibited significant within-group changes on all measures, and when compared to the wait-list control, greater levels of mindfulness, decentering, and self-compassion, as well as lower stress. Students in MSM-I had significant within-group changes on a subset of measures, and greater mindfulness and self-compassion compared to the wait-list. MSM participants showed more improvement in self-compassion, psychological inflexibility, and stress than did those in MSM-I. Mediation analyses found increases in one facet of mindfulness and self-compassion, and decreases in worry mediated reductions in stress for MSM participants, while no mediator reached significance for MSM-I. Finally, no significant relation between amount of formal meditation and informal practice and reductions in psychological distress or increases in mindfulness was found. Results suggest that a program with formal meditations and informal practice may be a more promising intervention for university student stress than one with brief mindfulness exercises and informal practice.

Irvine, Zoe. 2015. Evangelical Doctors Belief and Practice: A Case Study of the Wellington Christian Medical Fellowship, New Zealand 1971-1980. *Journal of Religion and Health* 54(4). 1320–1330.

doi:10.1007/s10943-014-9920-5.

This paper presents a critical analysis of the proceedings of the Wellington Christian Medical Fellowship (CMF) during the 1970s. Formation of the CMF, contemporaneous and historical influences, new traditions, and key events are discussed as they arise in the narrative of the case study. Interaction between cultural and religious influences on medical practice is a recurring theme relevant to other bicultural or multicultural nations with significant health inequalities.

Koch, Anne. 2015. Alternative Healing as Magical Self-Care in Alternative Modernity. *Numen* 62(4). 431–459.

doi:10.1163/15685276-12341380.

Alternative healing, including spiritual healing, unconventional, traditional/folk, and complementary medical treatments, is an increasingly relevant health-care resource in contemporary health-care systems, and a broad, constantly changing, and heterogeneous field of medical pluralism. Some suggestions for classifying spiritual healing as presented in the academic and gray literature are summarized and discussed. The findings are interpreted in terms of the paradigm of alternative modernities. In the direction of, but also in addition to, this paradigm, magic is introduced as a concept to denote certain highly ambiguous occurrences in the alternative modern. Magic is still very much alive and not easy to identify merely as a counterpart of rational, knowledge-generating, disembodied modernity. In this setting, spiritual healing might be seen as a form of magical self-care. Magic is neither modern nor traditional nor irrational per se, but has to be contextualized and described in terms of characteristics like holistic diagnosis, interpersonal congruence, the imaginations of agency, and efficacy.

Lomas, Tim, Tina Cartwright, Trudi Edginton & Damien Ridge. 2015. A qualitative analysis of experiential challenges associated with meditation practice. *Mindfulness* 6(4). 848–860.

doi:10.1007/s12671-014-0329-8.

Although empirical interest in meditation has flourished in recent years, few studies have addressed possible downsides of meditation practice, particularly in community populations. In-depth interviews were conducted with 30 male meditators in London, UK, recruited using principles of maximum variation sampling, and analyzed using a modified constant comparison approach. Having originally set out simply to inquire about the impact of various meditation practices (including but not limited to mindfulness) on men's wellbeing, researchers uncovered psychological challenges associated with its practice. While meditation was generally reported to be conducive to wellbeing, substantial difficulties accounted for approximately one quarter of the interview data. Our paper focuses specifically on these issues in order to alert health professionals to potential challenges associated with meditation. Four main problems of increasing severity were uncovered: Meditation was a difficult skill to learn and practice; participants encountered troubling thoughts and feelings which were hard to manage; meditation reportedly exacerbated mental health issues, such as depression and anxiety; and in a few cases, meditation was associated with psychotic episodes. Our paper raises important issues around safeguarding those who practice meditation, both within therapeutic settings and in the community.

Lord, Benjamin D., Elizabeth A. Collison, Sandra E. Gramling, Rachel Weiskittle & Rachel Weisskittle. 2015. Development of a Short-Form of the RCOPE for Use with Bereaved College Students. *Journal of Religion and Health* 54(4). 1302–1318.
doi:10.1007/s10943-014-9891-6.

Bereavement is being increasingly recognized as a key issue in college populations. However, there is currently a dearth of research on the impact that the loss of a loved one has on college students and the ways that college students cope during the grieving process. This lack of research, particularly among younger groups, is problematic as researchers have shown that emerging adults experience a surprisingly high number of losses and are an at-risk group for poor post-loss outcomes. Religion is a common way that individuals cope with bereavement and may also be commonly used by college students to manage everyday stress. The RCOPE is a frequently used measure of religious coping that has recently been evaluated for use with a bereaved undergraduate population. Lord and Gramling (2014) examined the factor structure of the RCOPE and concluded that overlap between the positive and negative religious coping subscales when used with a bereaved undergraduate sample detracted from the predictive utility of the instrument. The researchers provided evidence for the use of a new 2-factor, 39-item version of the RCOPE with the bereaved college student population. The current study replicated Lord and Gramling (2014) with a large follow-up sample of bereaved undergraduates. Participants (n=677) consisted of individuals who had lost a loved one within the past 2 years, had a mean age of 19.1, and were predominantly female (62%) underclassmen (84% freshman or sophomore status). A majority of participants (68%) were identified as Christian. Exploratory factor analyses closely mimicked the results of the previous study, and the number of items was further reduced in order to provide a briefer version of the scale for use in future research. Hierarchical regression models demonstrated discriminate, convergent, and predictive validity of the instrument.

Lord, Susan A. 2015. Meditative dialogue: Tuning in to the music of family therapy. *Journal of Family Therapy* 37(3). 267–285.
doi:10.1111/j.1467-6427.2012.00594.x.

Meditative dialogue is a mindfulness method through which families and their therapists are able to access the present moment and develop acceptance, non-judgmental attitudes and attunement with one another and with the music that is always present in their lives. This process can be used to deepen empathic connections, tap into creative forces and loosen and encourage embodied and flexible interactions that alter patterns and cultivate openness to possibility and to change.

Mani, Madhavan, David J. Kavanagh, Leanne Hides & Stoyan R. Stoyanov. 2015. Review and Evaluation of Mindfulness-Based iPhone Apps. *JMIR mHealth and uHealth* 3(3). e82.
doi:10.2196/mhealth.4328.

There is growing evidence for the positive impact of mindfulness on wellbeing. Mindfulness-based mobile apps may have potential as an alternative delivery medium for training. While there are hundreds of such apps, there is little information on their quality. This study aimed to conduct a systematic review of mindfulness-based iPhone mobile apps and to evaluate their quality using a recently-developed expert rating scale, the Mobile Application Rating Scale (MARS). It also aimed to describe features of selected high-quality mindfulness apps. A search for “mindfulness” was conducted in iTunes and Google Apps Marketplace. Apps that provided mindfulness training and

education were included. Those containing only reminders, timers or guided meditation tracks were excluded. An expert rater reviewed and rated app quality using the MARS engagement, functionality, visual aesthetics, information quality and subjective quality subscales. A second rater provided MARS ratings on 30% of the apps for inter-rater reliability purposes. The “mindfulness” search identified 700 apps. However, 94 were duplicates, 6 were not accessible and 40 were not in English. Of the remaining 560, 23 apps met inclusion criteria and were reviewed. The median MARS score was 3.2 (out of 5.0), which exceeded the minimum acceptable score (3.0). The Headspace app had the highest average score (4.0), followed by Smiling Mind (3.7), iMindfulness (3.5) and Mindfulness Daily (3.5). There was a high level of inter-rater reliability between the two MARS raters.

- Martis, Lawrence & Anne Westhues. 2015. Religion, spirituality, or existentiality in bad news interactions: The perspectives and practices of physicians in India. *Journal of Religion and Health* 54(4). 1387–1402.
doi:10.1007/s10943-014-9959-3.

A qualitative study was conducted to identify the role of religion, spirituality, or existentiality in clinical interactions. Grounded theory design was used to generate narrative data from 27 physicians working in four teaching hospitals in Karnataka, India, using a semi-structured interview schedule. Physicians reported that they explored religious, spiritual, and existential beliefs and practices of patients, along with other psychosocial and disease aspects, to assess their tolerance to bad news, to make decisions about delivering it, and to address the distress that might emerge from receiving bad news. They also reported taking recourse to religious or spiritual practices to cope with their own stress and feelings of failure.

- Ocampo Hoogasian, Rachel & Alberta M. Gloria. 2015. The healing powers of a patrón espiritual: Latina/o clinicians’ understanding and use of spirituality and ceremony in psychotherapy. *Journal of Latina/o Psychology* 3(3). 177–192.
doi:10.1037/lat0000045.

The narratives of 10 Latina/o descent clinicians’ spiritual beliefs and manifestations within their clinical work were assessed using Interpretive Phenomenological Analysis. Results emerged surrounding how clinicians use spirituality and ceremony with their clients and in what ways clinicians integrate personal, psycho-spiritual-cultural, understandings in their work with clients. Analyses yielded 3 domains, including: Clinicians’ psycho-spiritual-cultural experiences and their impact on therapy, Clinicians’ views and practices surrounding spirituality and therapy, and Navigating challenges in therapy and interfacing the Western mental health system. The study’s findings have direct implications for training and highlight the need for self-awareness about one’s own spiritual processes to provide effective client services.

- Ozawa-de Silva, Chikako. 2015. Mindfulness of the kindness of others: The contemplative practice of Naikan in cultural context. *Transcultural Psychiatry* 52(4). 524–542.
doi:10.1177/1363461514562922.

Mindfulness in the Buddhist tradition involves a variety of practices, and contemporary secular forms of mindfulness practices, therapies, and interventions can similarly be broadened to include more of these forms. The Japanese practice of Naikan takes one mindfulness practice from the

Buddhist tradition-that of recollecting the kindness of others-and asks clients to engage in this practice for 1 solid week, 15 hours per day. Difficult interpersonal relationships and a perceived lack of social support are chief sources of stress, and Japanese selfhood in particular has been described as interdependent and highly social in nature. It is unsurprising therefore that Japanese would be drawn to relational forms of practice like Naikan, and that they would find particular benefit from such practices. Recent ethnographic and survey work conducted at 2 Naikan centers suggests that Naikan significantly improves positive mental health, perceived connection with others, and perceived meaning in life, even up to 6 months later, thereby potentially undercutting factors contributing to depression and suicide. Naikan practice is not entirely limited to Japan, however, and its use in Europe and North America prompts us to ask about the culturally specific and universal aspects of mindfulness practices, and how it may be possible to construct mindfulness interventions that are best suited for addressing the mental health problems that face our communities.

Ribeiro Paiva, Bianca Sakamoto, Andre Lopes Carvalho, Giancarlo Lucchetti, Eliane Marcon Barroso & Carlos Eduardo Paiva. 2015. "Oh, yeah, I'm getting closer to God": Spirituality and religiousness of family caregivers of cancer patients undergoing palliative care. *Supportive Care in Cancer* 23(8). 2383–2389. doi:10.1007/s00520-015-2604-1.

Within the cancer palliative care setting, where both patients and family caregivers (FCs) undergo a transition from the end of curative treatment to palliative therapy, spirituality and religiousness (S/R) may be a strategy to help the patients and FCs better cope with the disease, in addition to exerting a positive impact on symptoms, particularly emotional symptoms. The present study aimed to understand how S/R influence FCs of cancer patients undergoing palliative care. This study was an exploratory and descriptive qualitative study. The qualitative approach to the data was based on Bardin's content analysis technique. The consolidated criteria for reporting qualitative research (COREQ-32) was used in the description of the results. Thirty FCs of individuals with advanced cancer undergoing palliative care were included. Analysis of the FCs' narratives indicated that the FCs considered that religiousness and faith in God or a Supreme Being provide them with the strength to cope with the suffering associated with the care of relatives with advanced cancer. Many FCs emphasized that talking about God was somehow comforting and made them feel at peace with themselves. Four categories were identified in the FCs' narratives: (1) increase in faith and closeness to God becomes stronger, (2) rethink life issues, (3) negative interference in the extrinsic religiosity, and (4) quest for religiousness to gain strength or support. A conceptual framework was developed. The results of the present study indicated that S/R are a coping strategy frequently used by FCs of individuals with advanced cancer. The perceptions of the FCs interviewed in the present study corresponded to the four distinct categories related to spirituality and religiousness.

Saad, Marcelo, Giancarlo Lucchetti, Mario Fernando Prieto Peres & Roberta de Medeiros. 2015. Toward the Concept of "Spiritist Chaplaincy." *Journal of Religion and Health* 54(4). 1460–1469. doi:10.1007/s10943-015-0011-z.

In Brazil, Spiritism is the third most common religious affiliation. Notwithstanding, there are few religious assistance programs dedicated to Spiritist patients in Brazilian general hospitals and, after searching for the term 'Spiritist Chaplaincy' on lay and medical databases, it returns zero results. This article describes the future development of a 'Spiritist Chaplaincy,' exploring its concept, design, precepts, and challenges, based upon the first results of a Spiritist religious assistance program for hospitalized patients. This proposed model seems feasible to be replicated, aiming to develop in the near future a structure compatible with a proper 'Spiritist Chaplaincy' instead of religious hospital visits.

Samuel, Geoffrey. 2015. The contemporary mindfulness movement and the question of nonself. *Transcultural Psychiatry* 52(4). 485–500.
doi:10.1177/1363461514562061.

Mindfulness-based stress reduction (MBSR), mindfulness-based cognitive therapy (MBCT), and other "mindfulness"-based techniques have rapidly gained a significant presence within contemporary society. Clearly these techniques, which derive or are claimed to derive from Buddhist meditational practices, meet genuine human needs. However, questions are increasingly raised regarding what these techniques meant in their original context(s), how they have been transformed in relation to their new Western and global field of activity, what might have been lost (or gained) on the way, and how the entire contemporary mindfulness phenomenon might be understood. The article points out that first-generation mindfulness practices, such as MBSR and MBCT, derive from modernist versions of Buddhism, and omit or minimize key aspects of the Buddhist tradition, including the central Buddhist philosophical emphasis on the deconstruction of the self. Nonself (or no self) fits poorly into the contemporary therapeutic context, but is at the core of the Buddhist enterprise from which contemporary "mindfulness" has been abstracted. Instead of focusing narrowly on the practical efficacy of the first generation of mindfulness techniques, practitioners might see them as an invitation to explore the much wider range of practices available in the traditions from which they originate. Rather, too, than simplifying and reducing these practices to fit current Western conceptions of knowledge, one might seek to incorporate more of their philosophical basis into Western adaptations. This might lead to a genuine and productive expansion of both scientific knowledge and therapeutic possibilities.

Sharf, Robert H. 2015. Is mindfulness Buddhist? (and why it matters). *Transcultural Psychiatry* 52(4). 470–484.
doi:10.1177/1363461514557561.

Modern exponents of mindfulness meditation promote the therapeutic effects of "bare attention," a sort of non-judgmental, non-discursive attending to the moment-to-moment flow of consciousness. This approach to Buddhist meditation can be traced to Burmese Buddhist reform movements of the first half of the 20th century, and is arguably at odds with more traditional Theravāda Buddhist doctrine and meditative practices. But the cultivation of present-centered awareness is not without precedent in Buddhist history; similar innovations arose in medieval Chinese Zen (Chan) and Tibetan Dzogchen. These movements have several things in common. In each case the reforms were, in part, attempts to render Buddhist practice and insight accessible to laypersons unfamiliar with Buddhist philosophy and/or unwilling to adopt a renunciatory lifestyle. In addition, these movements all promised astonishingly quick results. And finally, the

innovations in practice were met with suspicion and criticism from traditional Buddhist quarters. Those interested in the therapeutic effects of mindfulness and bare attention are often not aware of the existence, much less the content, of the controversies surrounding these practices in Asian Buddhist history.

Sherman, Michelle D., J. Irene Harris & Christopher Erbes. 2015. Clinical approaches to addressing spiritual struggle in veterans with PTSD. *Professional Psychology: Research and Practice* 46(4). 203–212.
doi:10.1037/pro0000020.

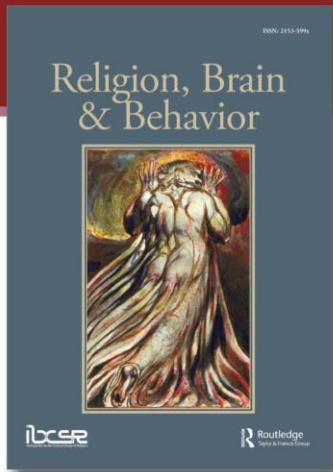
Trauma survivors often face difficult spiritual challenges as they attempt to reconcile the experience of trauma with their spiritual/religious beliefs. Spirituality has been found to be associated with a range of indices of well-being, and it is a component of many clients' coping skills and treatment strategies. However, many clinicians do not routinely assess or incorporate this domain of functioning in psychological services. This article describes a model for conceptualizing how trauma can impact spirituality by reviewing the possible consequences of each posttraumatic stress disorder (PTSD) symptom cluster on clients' belief systems and spiritual practices. Specific implications for treatment are described for each symptom cluster. A case study highlights many of the spirituality issues and intervention options described in this model. Ethical issues surrounding addressing spiritual factors in trauma survivors are considered, and clinicians are encouraged to further explore this domain with their clients.

Shonin, Edo & William Van Gordon. 2015. Managers' experiences of meditation awareness training. *Mindfulness* 6(4). 899–909.
doi:10.1007/s12671-014-0334-y.

Due to its potential to improve work-related stress and job performance, there is growing interest into the applications of mindfulness in the workplace setting. To date, mindfulness research within occupational psychology has mostly involved First Generation Mindfulness-Based Interventions (FG-MBIs). However, a growing number of researchers, clinicians, and Buddhist teachers/scholars have suggested that FG-MBIs may only partially embody the full potency of mindfulness when compared with its utilization in traditional Buddhist practice settings. Consequently, recent years have witnessed the early stage evaluation of a number of Second Generation Mindfulness-Based Interventions (SG-MBIs). Although still secular, SG-MBIs are overtly spiritual in aspect and teach mindfulness within a practice infrastructure that integrates what would traditionally be deemed as prerequisites for effective spiritual and meditative development. The purpose of this study was to conduct the first qualitative investigation to analyse the experiences of employed participants receiving training in a SG-MBI. Ten participants were randomly selected from the intervention arm of a randomized controlled trial assessing the effects of meditation awareness training (MAT) on work-related wellbeing and job performance. Interpretative phenomenological analysis was used to analyze participant experiences of MAT, and six themes emerged from the data-set: (1) changing attitudes towards work, (2) improved job performance, (3) letting go of self, (4) phenomena feed-back effect, (5) wellbeing at work and (6) taking responsibility for one's spiritual growth. Findings have important implications for the development of authentic mindfulness training programs and suggest that, compared with FG-MBIs, the SG-MBI approach may be tapping into different metacognitive resources.

Stöckigt, Barbara Mh, Florian Besch, Florian Jeserich, Christine Holmberg, Claudia M. Witt & Michael Teut. 2015. Biographical similarities between spiritual healers and their clients in Germany: A qualitative study. *Anthropology & Medicine* 22(2). 177–190.
doi:10.1080/13648470.2015.1050578.

Spiritual healers in contemporary Germany comprise a heterogeneous and growing group, yet little data exists about them. Therefore, one aim of this study was to learn about which biographical aspects and events were important to the process of becoming a healer and which biographical aspects drove clients to consult a healer. The study was based on semi-structured interviews combined with participant observations. All data were recorded digitally, transcribed, entered into the software program MAXQDA and analyzed subjected to Content Analysis. In total, 15 healers (nine male, six female) and 16 clients (13 female, three male) were included. According to the healers, a talent for healing can be inborn, inherited or developed through life experiences. Most of the healers experienced a crisis, which prompted their transformation to healers (the wounded healer type). A smaller group became healers mainly out of interest without going through crisis and by focusing on the spiritual attitude itself (the healer by interest type). The basis of healing is seen as a connection to a transcendent reality, which enables an open, loving and empathetic attitude. The experience of crises and illnesses and the importance of spirituality are major biographical similarities between healers and clients. Near-death experiences as an extreme form of crisis were reported from a few healers and clients. The connections between healing talents and crises, including a deepened exploration of near-death experiences and questions regarding inclining towards spirituality could be of interest in further studies.



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PART 3: BOOKS

3.1 SCIENTIFIC STUDY OF RELIGION, BRAIN, AND BEHAVIOR

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