

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 948 articles, 146 articles have been retained from 81 journals. There are 69 pre-publication citations from 48 journals.

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PART 1: ARTICLES IN RELIGION, BRAIN, AND BEHAVIOR

1.1 SCIENTIFIC STUDY OF RELIGION: COGNITIVE NEUROSCIENCE

Isbel, Ben & Doug Mahar. 2015. Cognitive mechanisms of mindfulness: A test of current models. *Consciousness and Cognition* 38. 50–59. doi:10.1016/j.concog.2015.10.005.

Existing models of mindfulness describe the self-regulation of attention as primary, leading to enhanced decentering and ability to access and override automatic cognitive processes. This study compared 23 experienced and 21 non-meditators on tests of mindfulness, attention, decentering, and ability to override automatic cognitive processes to test the cognitive mechanisms proposed to underlie mindfulness practice. Experienced meditators had significantly higher mindfulness and decentering than non-meditators. No significant difference between groups was found on measures of attention or ability to override automatic processes. These findings support the prediction that mindfulness leads to enhanced decentering, but do not support the cognitive mechanisms proposed to underlie such enhancement. Since mindfulness practice primarily involves internally directed attention, it may be the case that cognitive tests requiring externally directed attention and timed responses do not accurately assess mindfulness-induced cognitive changes. Implications for the models of mindfulness and future research are discussed.

Kometer, Michael, Thomas Pokorny, Erich Seifritz & Franz X. Volleinweider. 2015. Psilocybin-induced spiritual experiences and insightfulness are associated with synchronization of neuronal oscillations. *Psychopharmacology* 232(19). 3663–3676. doi:10.1007/s00213-015-4026-7.

During the last years, considerable progress has been made toward understanding the neuronal basis of consciousness by using sophisticated behavioral tasks, brain-imaging techniques, and various psychoactive drugs. Nevertheless, the neuronal mechanisms underlying some of the most intriguing states of consciousness, including spiritual experiences, remain unknown. To elucidate state of consciousness-related neuronal mechanisms, human subjects were given psilocybin, a naturally occurring serotonergic agonist and hallucinogen that has been used for centuries to induce spiritual experiences in religious and medical rituals. In this double-blind, placebo-controlled study, 50 healthy

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human volunteers received a moderate dose of psilocybin, while high-density electroencephalogram (EEG) recordings were taken during eyes-open and eyes-closed resting states. The current source density and the lagged phase synchronization of neuronal oscillations across distributed brain regions were computed and correlated with psilocybin-induced altered states of consciousness. Psilocybin decreased the current source density of neuronal oscillations at 1.5-20 Hz within a neural network comprising the anterior and posterior cingulate cortices and the parahippocampal regions. Most intriguingly, the intensity levels of psilocybin-induced spiritual experience and insightfulness correlated with the lagged phase synchronization of delta oscillations (1.5-4 Hz) between the retrosplenial cortex, the parahippocampus, and the lateral orbitofrontal area. These results provide systematic evidence for the direct association of a specific spatiotemporal neuronal mechanism with spiritual experiences and enhanced insight into life and existence. The identified mechanism may constitute a pathway for modulating mental health, as spiritual experiences can promote sustained well-being and psychological resilience.

Lomas, Tim, Itai Ivztan & Cynthia H. Y. Fu. 2015. A systematic review of the neurophysiology of mindfulness on EEG oscillations. *Neuroscience and Biobehavioral Reviews* 57. 401–410. doi:10.1016/j.neubiorev.2015.09.018.

Mindfulness meditation has been purported to be a beneficial practice for wellbeing. It would therefore be expected that the neurophysiology of mindfulness would reflect this impact on wellbeing. However, investigations of the effects of mindfulness have generated mixed reports of increases, decreases, as well as no differences in EEG oscillations in comparison with a resting state and a variety of tasks. Researchers performed a systematic review of EEG studies of mindfulness meditation in order to determine any common effects and to identify factors which may impact on the effects. Databases were reviewed from 1966 to August 2015. Eligibility criteria included empirical quantitative analyses of mindfulness meditation practice and EEG measurements acquired in relation to practice. A total of 56 papers met the eligibility criteria and were included in the systematic review, consisting of a total 1715 subjects: 1358 healthy individuals and 357 individuals with psychiatric diagnoses. Studies were principally examined for power outcomes in each bandwidth, in particular the power differentials between mindfulness and a control state, as well as outcomes relating to hemispheric asymmetry and event-related potentials. The systematic review revealed that mindfulness was most commonly associated with enhanced alpha and theta power as compared to an eyes closed resting state, although such outcomes were not uniformly reported. No consistent patterns were observed with respect to beta, delta and gamma bandwidths. In summary, mindfulness is associated with increased alpha and theta power in both healthy individuals and in patient groups. This co-presence of elevated alpha and theta may signify a state of relaxed alertness which is conducive to mental health.

Prätzlich, Martin, Joe Kossowsky, Jens Gaab & Peter Krummenacher. 2015. Impact of short-term meditation and expectation on executive brain functions. *Behavioural Brain Research* 297. 268–276. doi:10.1016/j.bbr.2015.10.012.

Meditation improves executive functions such as attention and working memory processes. However, it remains unclear to what extent contextual effects contribute to these improvements, since the role of meditation-associated expectations has not been investigated so far. In a randomized, single-blind, deceptive, between-subject design researchers compared the impact of short-term meditation (MG) on executive functioning with an expectation (ECG) and a passive control group (CG) as well as the effect of positive and negative outcome expectations. Fifty-nine healthy meditation-naïve volunteers participated on three consecutive days (20min/session). Five groups were examined: 2 MGs, 2 ECGs and 1CG. While one MG and one ECG were given positive suggestions concerning the effect of meditation on attention, the other two groups were given negative suggestions. MGs practiced a focused attention meditation technique; ECGs were told that they were practicing meditation but were given instructions for a sham meditation. CG participants sat in silence with their eyes closed. Interference control (Stroop task), selective sustained attention (d2 task), figural and verbal fluency measures of executive functions were assessed. Results indicate that suggestions have a substantial impact on interference control and verbal fluency, with positive suggestions leading to an increase in performance, whereas negative suggestions impeded improvement. This proof of concept study

demonstrates the importance of the implementation of a credible ECG to elucidate context effects in meditation processes. It also indicates that suggestions can modulate the small effect of meditation on verbal fluency.

Telles, Shirley, Singh Deepeshwar, Kalkuni Visweswaraiah Naveen & Subramanya Pailoor. 2015. Long Latency Auditory Evoked Potentials during Meditation. *Clinical EEG and Neuroscience* 46(4). 299–309.

doi:10.1177/1550059414544737.

The auditory sensory pathway has been studied in meditators, using midlatency and short latency auditory evoked potentials. The present study evaluated long latency auditory evoked potentials (LLAEPs) during meditation. Sixty male participants, aged between 18 and 31 years, were assessed in 4 mental states based on descriptions in the traditional texts. They were (a) random thinking, (b) nonmeditative focusing, (c) meditative focusing, and (d) meditation. The order of the sessions was randomly assigned. The LLAEP components studied were P1 (40-60 ms), N1 (75-115 ms), P2 (120-180 ms), and N2 (180-280 ms). For each component, the peak amplitude and peak latency were measured from the prestimulus baseline. There was significant decrease in the peak latency of the P2 component during and after meditation. The P1, P2, and N2 components showed a significant decrease in peak amplitudes during random thinking and nonmeditative focused thinking. The results suggest that meditation facilitates the processing of information in the auditory association cortex, whereas the number of neurons recruited was smaller in random thinking and non-meditative focused thinking, at the level of the secondary auditory cortex, auditory association cortex and anterior cingulate cortex.

Wong, W. P., D. A. Camfield, W. Woods, J. Sarris & A. Pipingas. 2015. Spectral power and functional connectivity changes during mindfulness meditation with eyes open: A magnetoencephalography (MEG) study in long-term meditators. *International Journal of Psychophysiology* 98(1). 95–111.

doi:10.1016/j.ijpsycho.2015.07.006.

While a number of previous studies have been conducted in order to investigate functional brain changes associated with eyes-closed meditation techniques, there is a relative scarcity in the literature with regards to changes occurring during eyes-open meditation. The current project used magnetoencephalography (MEG) to investigate differences in spectral power and functional connectivity between 11 long-term mindfulness meditators (LTMMs) with >5 years of experience and 12 meditation-naïve control participants both during baseline eyes-open rest and eyes-open open-monitoring (OM) mindfulness meditation. During resting with eyes-open, prior to meditating, greater mean alpha power was observed for LTMMs in comparison to controls. However, during the course of OM meditation, a significantly greater increase in theta power was observed over a broad fronto-centro-parietal region for control participants in comparison to LTMMs. In contrast, whole-head mean connectivity was found to be significantly greater for long-term meditators in comparison to controls in the theta band both during rest as well as during meditation. Additionally, mean connectivity was significantly lower for long-term meditators in the low gamma band during rest and significantly lower in both low and high gamma bands during meditation; and the variance of low-gamma connectivity scores for long-term meditators was significantly decreased compared to the control group. The current study provides important new information as to the trait functional changes in brain activity associated with long-term mindfulness meditation, as well as the state changes specifically associated with eyes-open open monitoring meditation techniques.

Zhu, Bo, Yanjie Wang, Guifeng Zhang, Huailiang Ouyang, Jiping Zhang, Yu Zheng, Shaoqun Zhang, et al. 2015. Acupuncture at KI3 in Healthy Volunteers Induces Specific Cortical Functional Activity: An fMRI Study. *BMC Complementary and Alternative Medicine* 15(1). 361.

doi:10.1186/s12906-015-0881-3.

Using functional magnetic resonance imaging (fMRI), we determined brain regions that were activated/ deactivated more by acupuncture at Taixi (KI3) than by non-acupoint or sham acupuncture. A total of 30 healthy volunteers were randomly divided into a KI3 group (15 subjects) and non-acupoint group (15 subjects). Subjects in KI3 group

received a sham acupuncture and then a real acupuncture, fMRI was performed before and after sham acupuncture as well as after real acupuncture. Subjects in non-acupoint group received a real acupuncture and the fMRI was performed before and after real acupuncture. The fMRI data obtained were successively analyzed using DPARSF2.3 and REST1.8 software, yielding regional homogeneity (ReHo) and amplitude of low frequency fluctuations (ALFF) values. Compared with sham acupuncture, ALFF values were higher in Brodmann area (BA) 10 and lower in BA7 and BA18. ReHo values after real acupuncture at KI3 were higher in the right sublobar region and BA10 and were lower in BA31. Compared with the changes before and after real acupuncture at non-acupoint, the changes at KI3 showed higher ALFF values in the left cerebellum posterior lobe, BA10, BA39, BA31 and decreased ALFF was observed in the BA18, BA19 and BA40; and higher ReHo values were shown in left cerebellum posterior lobe pyramis, left cerebellum anterior lobe. BA37, BA10, BA39, BA31 and lower ReHo values were shown in BA18 and BA31. Researchers conclude that acupuncture at KI3 has a specific effect on certain brain regions associated with perception, body movement, spirit, and association. Additionally, visual and auditory cortices were affected, which may be related to the clinical applications of KI3 acupuncture in auditory and cognitive disorders, hypomnesia, loss of concentration, and the loss of ability to work and learn.

1.2 SCIENTIFIC STUDY OF RELIGION: EVOLUTION

Beall, Erica & Jesse Graham. 2015. Variation and levels of analysis in religion's evolutionary origins. *Religion, Brain & Behavior* 5(3). 231–233.
doi:10.1080/2153599X.2014.910261.

The authors of the commentary appreciate the informative nature of the target article (below), but criticize the descriptions of the mechanisms involved, which they see as vague, as well as the lack of attention to the differences in psychological and ecological levels of analysis. They look for greater specificity in future empirical testing.

Holbrook, Colin, Daniel M. T. Fessler & Jeremy Pollack. 2015. With God on our side: Religious primes reduce the envisioned physical formidability of a menacing adversary. *Cognition* 146. 387–392.
doi:10.1016/j.cognition.2015.10.011.

The imagined support of benevolent supernatural agents attenuates anxiety and risk perception. Here, researchers extend these findings to judgments of the threat posed by a potentially violent adversary. Conceptual representations of bodily size and strength summarize factors that determine the relative threat posed by foes. The proximity of allies moderates the envisioned physical formidability of adversaries, suggesting that cues of access to supernatural allies will reduce the envisioned physical formidability of a threatening target. Across two studies, subtle cues of both supernatural and earthly social support reduced the envisioned physical formidability of a violent criminal. These manipulations had no effect on the perceived likelihood of encountering non-conflictual physical danger, raising the possibility that imagined supernatural support leads participants to view themselves not as shielded from encountering perilous situations, but as protected should perils arise.

Hook, Joshua N., Don E. Davis & Daryl R. Van Tongeren. 2015. Shifting social motives and religious expression in a globalized world. *Religion, Brain & Behavior* 5(3). 235–237.
doi:10.1080/2153599X.2014.910254.

The authors of the present commentary respond by focusing on how globalization and its effects on social motives may influence religious expression. They posit that for societies with favorable circumstances that generally meet individual needs for safety and community, religious expression may shift toward meeting other types of needs, such as the need for purpose and meaning. Second, for societies that have high levels of connection among individuals and groups who are religiously diverse, religious expression will need to balance the benefits of holding strong religious convictions with the need to cooperate in an increasingly connected and pluralistic religious world. This need for balance may result in important changes in the way that religious convictions are held.

Johnson, Kathryn A., Yexin Jessica Li & Adam B. Cohen. 2015. Fundamental social motives and the varieties of religious experience. *Religion, Brain & Behavior* 5(3). 197–231.
doi:10.1080/2153599X.2014.918684.

Evolutionary theorists have explained universals in religion, but no integrative theory exists to explain why multiple aspects of religion vary within and between individuals and groups. The authors of this target article propose how four dimensions of religions—beliefs about nonhuman agents, religious rituals, community structures, and moral concerns and values—may change in response to the fundamental social goals of self-protection, disease avoidance, coalition formation, status seeking, mating and mate retention, and kin care. The authors review empirical research and provide testable hypotheses, and finally discuss implications of this theoretical framework for the study of evolution and religion.

Johnson, Kathryn A., Yexin Jessica Li & Adam B. Cohen. 2015. Response to commentaries: a variety of questions about fundamental motives and religious experience. *Religion, Brain & Behavior* 5(3). 257–261.
doi:10.1080/2153599X.2014.910263.

The authors respond to the commentaries on their target article, above.

Jordan, Timothy R., Mercedes Sheen, Lily Abedipour & Kevin B. Paterson. 2015. Seeing Inscriptions on the Shroud of Turin: The Role of Psychological Influences in the Perception of Writing. *PLoS One* 10(10). e0136860.
doi:10.1371/journal.pone.0136860.

The Shroud of Turin (hereafter the Shroud) is one of the most widely known and widely studied artifacts in existence, with enormous historical and religious significance. For years, the Shroud has inspired worldwide interest in images on its fabric which appear to be of the body and face of a man executed in a manner consistent with crucifixion, and many believe that these images were formed in the Shroud's fibers during the Resurrection of Jesus of Nazareth. But, more recently, other reports have suggested that the Shroud also contains evidence of inscriptions, and these reports have been used to add crucial support to the view that the Shroud is the burial cloth of Jesus. Unfortunately, these reports of inscriptions are based on marks that are barely visible on the Shroud, even when images are enhanced, and the actual existence of writing on the Shroud is still a matter of considerable debate. In this article, researchers discuss previous evidence concerning the psychological processes involved generally in the perception of writing, and especially when letters and words are indistinct. Two experiments are reported in which the influence of religious context on perception of inscriptions was addressed specifically, using an image of woven fabric (modern linen) containing no writing and with no religious provenance. This image was viewed in two different contexts: in the Religious Context, participants were informed that the image was of a linen artifact that was important to the Christian faith whereas, in the non-religious Neutral Context, participants were informed that the image was of a simple piece of linen. Both groups were told that the image may contain faint words and were asked to report any words they could see. All participants detected words on the image, and indicated that these words were visible and were able to trace on the image the words they detected. In each experiment, more religious words were detected in the Religious Context condition than in the Neutral Context condition whereas the two contexts showed no effect on the number of non-religious words detected, indicating that religious context had a specific effect on the perception of illusory writing. Indeed, in the Neutral Context condition, no religious words at all were reported in either experiment. These findings suggest that images of woven material, like linen, inspire illusory perceptions of writing and that the nature of these perceptions is influenced considerably by the religious expectations of observers. As a consequence, the normal psychological processes underlying perception of writing, and the tendency of these processes to produce illusory perceptions, should be an essential consideration when addressing the existence of religious inscriptions on religious artifacts such as the Shroud of Turin.

Kay, Aaron & Jaime Napier. 2015. The justice motive as a driver of religious experience. *Religion, Brain & Behavior* 5(3). 238–240.
doi:10.1080/2153599X.2014.910262.

The authors of this response raise an issue that was not covered in the target article. They posit that one potential driver of religious experience is the human concern for justice. This concern is evident across nearly all societies and may be one underpinning of religiosity. By focusing on justice as a motivating force, researchers can better explore the varieties of religious experience, as well as its consequences, across diverse factions of society.

Lambarraa, Fatima & Gerhard Riener. 2015. On the norms of charitable giving in Islam: Two field experiments in Morocco. *Journal of Economic Behavior & Organization* 118. 69–84.
doi:10.1016/j.jebo.2015.05.006.

Charitable giving is one of the major obligations in Islam and a strong Muslim norm endorses giving to the needy, but discourages public displays of giving. Researchers report the results two field experiments with 534 and 200 participants at Moroccan educational institutions to assess the effects of this moral prescription on actual giving levels in anonymous and public settings. Subjects who participated in a paid study were given the option to donate from their payment to a local orphanage, under treatments that varied the publicity of the donation and the salience of Islamic values using either Arabic or French instructions. In the salient Islamic treatment, anonymity of donations significantly increased donation incidence from 59% to 77% percent as well as average donations for religious subjects from 8.90 to 13.00Db out of possibly 30Db. These findings stand in stark contrast to most previous findings in the charitable giving literature and suggest the need for a reconsideration of potential fundraising strategies in Muslim populations.

Laurin, Kristin. 2015. From fundamental motives to religious dimensions: Minding the gap. *Religion, Brain & Behavior* 5(3). 240–247.
doi:10.1080/2153599X.2014.910257.

While the authors of the target article offer a model that explains cultural and individual variations in religion as dynamic responses to fundamental evolved motivations, the present author builds on this model by considering the exact nature of the relationship between dimensions of religion and fundamental motives. She proposes two mechanisms by which religious dimensions may respond to fundamental motives. First, religious cognitions and behaviors might directly enhance fitness by helping people meet needs derived from their fundamental motives. For example, religious cleansing rituals might effectively reduce disease proliferation, and conceptualizing gods as nurturing role models might encourage parents to take better care of their children. Second, it could be that religion serves to alleviate concerns associated with a motive, without actually helping fulfill it. Future research may confirm these mechanisms or identify others, and may also shed empirical light on the conditions that elicit each one.

McBride, Michael. 2015. Why churches need free-riders: Religious capital formation and religious group survival. *Journal of Behavioral and Experimental Economics* 58. 77–87.
doi:10.1016/j.socec.2015.07.001.

Prevailing theory claims that churches thrive when they overcome the free-rider problem. However, this paper argues that religious organizations need free-riders in a dynamic setting. If individuals' contributions to congregations increase as their exposure to religion increases, then allowing potential members to free-ride temporarily may increase future membership and contribution levels. Free-riders thus comprise a risky but necessary investment by the church. Strict churches screen out riskier investments yet still allow some free-riding, while ultra-strict churches screen out all but members' children. This new theory yields predictions consistent with stylized empirical facts.

McCloughlin, Thomas, Maria Kallery & Dimitris Psillos. 2015. The Coconstruction of Scientific and Nonscientific Belief Systems in Educators. *Cybernetics and Systems* 46(6-7). 543–553.
doi:10.1080/01969722.2015.1038477.

This work sets out to indicate whether certain beliefs, be they religious convictions or pseudoscientific beliefs, are related in some way and contribute to poor scientific understanding. Educators were probed for their understanding of natural phenomena in the form of a questionnaire, and correlations were determined between specific questions. There were more interquestion significant correlations in the Greek sample but not in the Irish sample. Researchers found a range of beliefs and abilities concerning answers on evolution, genetics, alternative medicine, and cosmology. However, the ability to answer scientific questions well was not linked significantly to holding religious beliefs.

Pennycook, Gordon. 2015. Domain generality in religious cognition. *Religion, Brain & Behavior* 5(3). 247–250.
doi:10.1080/2153599X.2014.910256.

The author, addressing the target article, notes that much of the religious variation discussed therein relates to long-term changes. However, even long-term religious variation must be ultimately rooted in individual-level cognitive mechanisms, particularly if the focus is on evolved tendencies. He thus provides evidence to support the claim that individual-level religious variation is, to some degree, dependent on domain-general cognitive mechanisms.

Przybylinski, Elizabeth & Susan M. Andersen. 2015. Systems of meaning and transference: Implicit significant-other activation evokes shared reality. *Journal of Personality and Social Psychology* 109(4). 636–661.
doi:10.1037/pspi0000029.

Evidence shows that representations of significant others (SOs) are used in interpersonal relations—for example, in the social-cognitive process of transference, a process that is assumed to serve meaning-making functions. Five studies tested the more specific notion that implicit activation of an SO representation in transference should indirectly activate the worldview shared with the SO, leading to its active pursuit, validation, and protection. Shared worldviews were assessed beforehand, both idiographically, as values (Studies 1 and 4), and nomothetically, as political ideology or religious beliefs (Studies 2, 3, and 5). In each experiment, participants learned about new persons, one subtly resembling their own SO. Transference was assessed and, crucially, as predicted, when considering the new person resembling their SO (vs. the control persons), participants showed faster response latencies in a lexical decision task to words reflecting the worldview shared with the SO (vs. held only personally, Studies 1-3, or only by the SO, Study 3). With this person, they also anticipated a more meaningful interaction and actively socially tuned to the SO-shared worldview, selecting conversation topics reflecting the SO-shared worldview (vs. personally held or SO-held topics, Studies 1-3). Finally, threatening the SO-shared worldview with this person (vs. threatening personally held, SO-held, or irrelevant worldviews) prompted goal activation to restore the disrupted meaning (Studies 4 and 5), assessed by response latency in a lexical decision task. Transference thus evokes shared meaning systems and serves epistemic functions.

Purzycki, Benjamin Grant & Rita A. McNamara. 2015. Ecology, consensus, and variation: issues with time and persistence in religious systems. *Religion, Brain & Behavior* 5(3). 250–253.
doi:10.1080/2153599X.2014.910258.

The authors, using examples from field sites, address three interpenetrating concerns regarding the target article. First, how does the model account for the persistence of religious beliefs? Second, how widespread are the specific religious beliefs detailed in the model predicted to be? Third, when one considers that specific ecological contexts may serve as further predictors for the answers to the first two questions, the model could stand to embrace more dynamism in terms of the proposed causal pathways.

Shi, Wei & Yinuo Tang. 2015. Cultural similarity as in-group favoritism: The impact of religious and ethnic similarities on alliance formation and announcement returns. *Journal of Corporate Finance* 34. 32–46.
doi:10.1016/j.jcorpfin.2015.07.003.

Strategic alliance research has shown that national cultural similarity between partner firms can reduce transaction costs and positively influence cross-border alliance formation and performance. Yet, social identity research in psychology suggests that cultural similarity can give rise to in-group favoritism, which can lead partner firms sharing similar cultural backgrounds to cooperate with each other to defend their shared identity instead of pursuing economic efficiencies associated with cultural similarity. To investigate in-group favoritism associated with cultural similarity, researchers examine the influence of cross-regional religious similarity and ethnic similarity in the U.S. on domestic strategic alliance formation and alliance announcement returns. The researchers found that cross-regional religious similarity and ethnic similarity in the U.S. positively affect the volume of interstate alliance activities, but are negatively associated with combined alliance announcement returns of partner firms. These findings suggest that cross-regional religious similarity and ethnic similarity facilitate interstate alliance activities between U.S. states, but investors seem to negatively interpret alliance decisions that can be potentially driven by in-group favoritism.

Teehan, John. 2015. The varieties of religious predictions. *Religion, Brain & Behavior* 5(3). 253–255. doi:10.1080/2153599X.2014.910260.

The author addresses two questions in order to determine whether Fundamental Social Motive theory can be the source for an integrative theory of religious variation and change. First, is the proposed framework well-grounded in a reliable theory of human behavior? Second, can the framework be used to generate reasonable and specific predictions about religion? He recognizes the success of the target article's authors regarding the first issue, but finds the productive potential problematic.

Watkins, Hanne, Melissa Wheeler & Nick Haslam. 2015. Levels of religiosity and moral motives. *Religion, Brain & Behavior* 5(3). 255–256. doi:10.1080/2153599X.2014.910255.

The authors of this commentary advance the Model of Moral Motives (MMM) as a theory that will guide hypothesis formation within the moral order dimension of religion. The focus of the MMM is on a fundamental distinction in motivation that JLC omits: approach versus avoidance. When these motivations are applied to the moral domain, they distinguish between prescriptive (what one should do) and proscriptive (what one should not do) morality. They hold that employing the MMM across these social motives will enable a cohesive investigation into the moral order dimension of religion.

1.3 SCIENTIFIC STUDY OF RELIGION: PSYCHOLOGY AND CULTURE

Abou-Youssef, Mariam Mourad Hussein, Wael Kortam, Ehab Abou-Aish & Noha El-Bassiouny. 2015. Effects of religiosity on consumer attitudes toward Islamic banking in Egypt. *International Journal of Bank Marketing* 33(6). 786–807. doi:10.1108/ijbm-02-2015-0024.

The purpose of this paper is to explore the effect of Islamic religiosity on consumer attitudes toward Islamic banking in Egypt utilizing a mixed-methods approach, employing both qualitative in-depth interviews and quantitative surveys. The main findings of the study show that religiosity has an impact on consumer attitudes toward Islamic banking in Egypt. Major religiosity clusters were identified from the sample and these were associated with attitudes toward Islamic banking.

Anderson, Joel & Yasin Koc. 2015. Exploring patterns of explicit and implicit anti-gay attitudes in Muslims and Atheists: Islam and anti-gay attitudes. *European Journal of Social Psychology* 45(6). 687–701. doi:10.1002/ejsp.2126.

Research into the relationship between religion and anti-gay attitudes frequently focuses on Christianity. Researchers explored the role of religiosity dimensions, previous contact, and factors in the dual-process motivation model as

predictors of explicit and implicit anti-gay attitudes in samples of Muslims and Atheists. The explicit and implicit attitudes of Muslims were more negative than the attitudes of Atheists. Explicit attitudes were more negative towards gay men than lesbians; implicit attitudes were negative towards gay men but were unexpectedly positive towards lesbians. In regression analyses, religious fundamentalism and extrinsic religious orientations (Study 1), and contact and right-wing authoritarianism (Study 2), were strong significant predictors of explicit anti-gay attitudes. Interestingly, none of the factors of interest predicted implicit anti-gay attitudes. These findings reveal a strong link between Islam and explicit anti-gay attitudes, but suggest that the relationship between religion and implicit anti-gay attitudes may be more complex than previously thought.

Beagan, Brenda L. & Brenda Hattie. 2015. LGBTQ experiences with religion and spirituality: Occupational transition and adaptation. *Journal of Occupational Science* 22(4). 459–476.
doi:10.1080/14427591.2014.953670.

This paper explores how individuals experienced transition regarding spiritual or religious occupations after acknowledging identities as lesbian, gay, bisexual, transgender or queer (LGBTQ). Based on qualitative interviews with 35 self-identified LGBTQ people, it explores experiences of identity conflict and processes of transition, as well as meanings of spiritual or religious occupations. For some, transition occurred very young, for others not until adulthood. Some participants remained in the faith traditions of their upbringings, others adopted new faith traditions, many created personal relationships to spirituality, and a few abandoned anything spiritual. Those who left religions often lost faith, rituals, community, family connections, and specific religious occupational roles. Occupational adaptation took three forms: reducing participation and engagement; altering the meaning of engagement; or changing the occupation itself. The occupations participants identified as spiritual were both private and collective. While borrowing from diverse spiritual paths was common, so too was creating individualized spiritual practices. Spiritual occupations held a range of meanings for participants: enacting openness, truth, honesty, and authenticity; providing meaning; connecting with self and others; transcending the mundane; and ultimately, survival. Occupational transition is shown to entail exploration, competence and achievement, but also loss, abandonment, altered meanings, and revised or novel occupations.

Bragazzi, Nicola Luigi & Giovanni Del Puente. 2015. Hijab and homosexuality: A case report and review of the literature. *The International Journal of Psychoanalysis* 96(5). 1417–1420.
doi:10.1111/1745-8315.12341.

This article provides, by means of a clinical case and a review of the available literature, notes and observations to help psychoanalysts orient themselves in relation to themes relevant to sexuality and Islam. Indeed, the relationship between sexuality and Islam represents a fascinating, though slippery and difficult terrain, rich as it is in symbols and peppered with myths which express themselves by way of prohibitions and permissions, creating a complex dialectic between what may be seen and what by contrast must remain hidden. A young Moroccan Muslim man aged 20 who, refusing to live out his own homosexuality in a free and ego-syntonic manner as being against his religious convictions, imposed the veil on his wife with a sometimes violent coercion, justifying his behavior as being consistent with his cultural code. In his words, his religion considers homosexuals invisible, since they are compelled to have clandestine sexual relationships and rather than living out their orientation in the light of day are constantly compelled to hide it. Certainly, in spite of some recent opening up, homosexuality remains a controversial subject in Arab countries. However, he outlined an interesting parallel between homosexuals as “invisible” in the eyes of society and women as “invisible” when concealed by the veil. Having incorporated and introjected the dictates of his religion into a very strong Superego structure, he felt guilty the moment he diverged from them.

Bruin, Esther I., Renée Meppelink & Susan M. Bögels. 2015. Mindfulness in higher education: Awareness and attention in university students increase during and after participation in a mindfulness curriculum course. *Mindfulness* 6(5). 1137–1142.
doi:10.1007/s12671-014-0364-5.

This study assessed the effects of a mindfulness course in the curriculum of international students (n=104) from 16 different countries at the University of Amsterdam. The curriculum consisted of seven weekly lectures, as well as studying scientific articles on mindfulness research and gaining some experiential learning in meditating. The primary goal of this course was not to become more mindful, but to learn about the origins and the applications of mindfulness in (child) psychiatry. Students filled in the Five Facet Mindfulness Questionnaire (FFMQ) at “wait-list,” pre-course, post-course, and at 7 weeks follow-up. Multilevel analyses showed that mindful awareness decreased during wait-list, increased from pre-course to post-course, and even more so from pre-course to follow-up. Differential effects for students from within and outside the Netherlands are discussed as well as for “meditator” versus “novice” students. International students and meditators showed an increase in mindfulness already during the course, whereas Dutch students and novices only reported an increase in mindfulness at follow-up. Overall, participation in a low-intensity mindfulness course in a university’s curriculum leads to an increased non-judgmental and non-reactive stance towards student’s thoughts, feelings, and emotions, during the course period, and their mindfulness increased even further after the course period. This increased mindfulness may help them in coping with stress given the pressure they are under and may improve their performance and their quality of life.

Cameron, C. Daryl & Barbara L. Fredrickson. 2015. Mindfulness facets predict helping behavior and distinct helping-related emotions. *Mindfulness* 6(5). 1211–1218.
doi:10.1007/s12671-014-0383-2.

Contemplative practices have long emphasized the development of mindfulness: a skill that involves present-focused attention and nonjudgmental acceptance of experiences. In the current study, researchers examine the relationship between these two facets of mindfulness, which are independent in novices, and helping behavior and its emotional correlates. Attention and acceptance each predicted self-reported engagement in real-world helping behavior. Additionally, present-focused attention predicted increased positive emotions during helping, such as love/closeness, moral elevation, and joy, but did not predict negative emotions. By contrast, nonjudgmental acceptance predicted decreased negative emotions during helping, such as stress, disgust, and guilt, but did not predict positive emotions. When helping others, it appears to take two processes, namely attention and acceptance, to support our intention and reap the richest emotional consequences.

Cardeña, Etzel, Joakim O. A. Sjöstedt & David Marcusson-Clavertz. 2015. Sustained attention and motivation in Zen meditators and non-meditators. *Mindfulness* 6(5). 1082–1087.
doi:10.1007/s12671-014-0357-4.

This study investigated the ability of Zen meditators and non-meditators to sustain attention during an ongoing task. Researchers hypothesized that meditators (n=15) would sustain attention more efficiently than non-meditators (n=19) by responding faster to task stimuli, making fewer commission errors, and reporting fewer interfering thoughts in the sustained attention to response task (SART). Their motivation to do the SART was evaluated with the motivation scale of the Dundee Stress State Questionnaire (DSSQ), and after participants had completed the SART, they reported whether they had experienced task-related and task-irrelevant interferences through the thinking content scale of the DSSQ. The results indicated that meditators had higher intrinsic motivation (although this scale had very low reliability) towards the SART whereas non-meditators had higher success motivation. Meditators and non-meditators did not significantly differ on commission errors on the SART, but meditators responded faster to SART stimuli. Meditators reported fewer task-related interferences than non-meditators, but the groups did not differ in the amount of task-irrelevant interferences. These results suggest that the difference between meditators and non-meditators is more nuanced than just a generalized improvement of the former in sustained attention.

Kang, Yoona, Jeremy R. Gray & John F. Dovidio. 2015. The head and the heart: Effects of understanding and experiencing lovingkindness on attitudes toward the self and others. *Mindfulness* 6(5). 1063–1070.

doi:10.1007/s12671-014-0355-6.

Formation and maintenance of compassionate and loving attitudes toward the self and others is essential for adaptive social functioning. In this study, researchers use lovingkindness meditation to enhance positive attitudes toward the self and others. Meditation-based programs often include several components for which specific effects and dynamics are largely unknown, precluding conclusive support for their effectiveness. The present study tested actions underlying two main components of lovingkindness meditation programs: discussion and meditation. Discussion focuses on a conceptual understanding of lovingkindness, whereas meditation focuses on direct experiences and cultivation of lovingkindness. Participants (n=54) were randomly assigned either to attend a 6-week lovingkindness discussion course or to be waitlisted for 6 weeks, both followed by attending a 6-week lovingkindness meditation course. Attending the lovingkindness discussion course alone had beneficial effects on attitudes toward the self, but not others. Attending the lovingkindness meditation course had additional positive impacts on attitudes toward the self and others. These findings suggest that understanding ideas of lovingkindness through knowledge-based discussion without meditation may be sufficient to create positive changes in the view of self. However, for more comprehensive changes in attitude toward others, direct experiences of lovingkindness through meditation may be necessary.

Kunst, Jonas R. & Lotte Thomsen. 2015. Prodigal Sons: Dual Abrahamic Categorization Mediates the Detrimental Effects of Religious Fundamentalism on Christian-Muslim Relations. *International Journal for the Psychology of Religion* 25(4). 293–306.
doi:10.1080/10508619.2014.937965.

Religious fundamentalism is associated with Christian-Islamic conflicts globally, but the psychological reasons remain unexplored. Here, researchers show that fundamentalism is detrimental to interreligious relations because it makes Christians and Muslims alike reject common theological grounds and Abrahamic origins. Specifically, Study 1 demonstrated that such dual Abrahamic categories mediated the negative effects of fundamentalism on real monetary donations to outgroup children desperately in need (i.e., Save the Children Syria) among Christians but not Atheists. Of importance, this was the case only to the degree that Syrian children were perceived as Muslims and, hence, as part of an Abrahamic outgroup. Using a double-randomized experimental design, Study 2 demonstrated the causal effects of religious fundamentalism on Abrahamic categorization and of Abrahamic categorization on mutual resource distribution bias among Muslims and Christians. Together, these studies suggest that religious fundamentalism fuels interreligious conflicts because it crucially impacts basic categorization processes, with subsequent negative effects on intergroup relations.

Lai, Constantine, Benjamin MacNeil & Paul Frewen. 2015. A comparison of the attentional effects of single-session mindfulness meditation and Fp-HEG neurofeedback in novices. *Mindfulness* 6(5). 1012–1020.
doi:10.1007/s12671-014-0347-6.

The efficacy of mindfulness meditation (MM) relative to prefrontal hemoencephalography (Fp-HEG) neurofeedback (NFB) for enhancing attentional functioning and increasing Fp-HEG has not been studied. Moreover, few measures exist for assessing attentional capacities during MM. In the present study, researchers therefore randomized participants to MM (n=23), NFB (n=26), or a passive counting backward control condition (n=21) and measured Fp-HEG at the frontal pole during a pretreatment baseline, during each of the 15-min interventions (MM, NFB, or control) and during subsequent performance of the Attentional Network Test (ANT). Meditation Breath Attention Scores (MBAS) were also assessed in the MM group as a measure of individual differences in the ability to sustain attention to breathing (i.e., to disengage from mind wandering) during MM, and a comparable Counting Backward Attention Score (CBAS) was assessed in the counting control group. Relative to baseline, Fp-HEG was reduced during interventions, as well as during ANT performance, across groups, with no significant differences between groups. NFB participants evidenced improved ANT accuracy relative to control, with MM not differing from NFB or control. Increased accuracy during the ANT was correlated with increasing Fp-HEG across

groups. Within the MM group, increased MBAS were also associated with increased ANT accuracy as well as slower ANT orienting. CBAS were marginally higher than MBAS, indicating that sustaining attention to backward counting may have been easier than sustaining attention to breath sensation. The authors conclude that a single session of Fp-HEG may be effective in improving attention whereas the benefits of MM may require multiple sessions, and infer that mindful concentration during meditation may be associated with general attentional capacities.

- Lazar, Aryeh. 2015. The Relation between God Concept and Prayer Style among Male Religious Israeli Jews. *International Journal for the Psychology of Religion* 25(4). 323–330.
doi:10.1080/10508619.2014.935685.

This study focused on the relation between the manner in which pray-ers perceive God (God concept) and their tendencies to choose various prayer types. A sample of 114 Jewish Israeli religious men responded to multidimensional measures of God concept (Benevolent, Evaluation, Omniness, Guiding, and Deisticness) and of prayer type (Adoration, Confession, Thanksgiving, Supplication, Reception). Canonical correlation analysis uncovered a significant canonical model. Two canonical functions, explaining a total of 36.5% of the variance, were selected for interpretation. Function 1 indicated a perception of God as a benevolent and guiding God together with supplicative prayer. Function 2 indicated a perception of God as a meaningful and close God with active thanksgiving prayer. These results provide support for the notion that the manner in which an individual perceives God and the manner in which that individual chooses to pray to God are indeed related.

- Lin, Chyong-Ling, Jin-Tsann Yeh, Mong-Chun Wu & Wei-Chung Lee. 2015. Religious Orientation, Endorser Credibility, and the Portrayal of Female Nurses by the Media. *Journal of Religion and Health* 54(5). 1699–1711.
doi:10.1007/s10943-014-9908-1.

Medical consumption and media culture in Taiwan contain clear religious elements. It is common for people to believe that medicine is a supernatural treatment and to rely on thoughts of unseen power instead of rational consciousness. Religious-influenced patriarchy, seen in cultural gender roles, significantly influences religious adherents and degrades women as being part of a secondary class in society. As a contradictory tradition, women, in comparison to men, are considered best at undertaking certain jobs that require careful, detailed thought (such as nurses). Nursing and other occupations requiring a high degree of professionalism by women contradict the past religious-based concept of “ignorance is a woman’s virtue.” This study aims to probe female imagery in eastern and western Taiwan and explores whether religious culture and practice influences people’s cognition of female nurses in advertising. The constructs are analyzed through structural equation modeling. Results reveal that religious followers do not necessarily trust female nurses more just because they are portrayed as professional medical specialists. Most consumers reflect this negative cognition through purchase intentions of products. For example, in comparing portrayals of attractiveness with portrayals of professionalism, attractiveness results in a better advertising effect. People with intrinsic or extrinsic religious orientation have gradually lowered their negative impressions of women; however, religious followers still more strongly insist on women’s secondary position. Attractive female nurses are more likely judged as reliable, and this may be transferred to trust in their professional medical skills.

- Madden, Adrian, Catherine Bailey & the Reverend Canon Jean Kerr. 2015. “For this I was made”: Conflict and calling in the role of a woman priest. *Work, Employment and Society* 29(5). 866–874.
doi:10.1177/0950017014559962.

There has been an increasing focus on “work as calling” in recent years, but relatively few empirical sociological accounts that shed light on the experience of performing calling work. Although callings have generally been referred to as positive and fulfilling to the individual and as beneficial to society, researchers have also suggested there is a “dark side” to calling, and have drawn attention to the potential conflicts and tensions inherent in the pursuit of calling, especially for women. This article explores these themes through the first-hand experiences of one woman who felt called to work as a priest. Her narrative illustrates how callings draw the individual irresistibly towards a

particular line of work. It also shows how calling work can be both satisfying individually and beneficial to the wider community but, at the same time, involves sacrifice, compromise and a willingness to defer personal rewards.

- Meladze, Pikria & Jac Brown. 2015. Religion, Sexuality, and Internalized Homonegativity: Confronting Cognitive Dissonance in the Abrahamic Religions. *Journal of Religion and Health* 54(5). 1950–1962. doi:10.1007/s10943-015-0018-5.

This research was aimed at investigating how religious beliefs and internalized shame predicted homonegativity. An online survey, which consisted of a self-report questionnaire assessing religious orientation, internalized shame, and internalized homonegativity, was completed by 133 Caucasian and Asian gay men. The respondents also were asked to write a short answer in which they had to explain how they integrated their religion and sexual practices. The quantitative analyses of data demonstrated no significant difference in internalized homonegativity among the two cultural groups. Internalized homonegativity was predicted by the main Abrahamic faiths (i.e. Christianity, Islam, and Judaism) and internalized shame. Qualitative analysis showed that gay men who adhere to a monotheistic religious faith follow a different path to reconciling their religion and homosexuality compared to gay men who adhere to Philosophical/New Age religions or to gay men who have no religious faith.

- Wazni, Anderson Beckmann Al. 2015. Muslim Women in America and Hijab: A Study of Empowerment, Feminist Identity, and Body Image. *Social Work* 60(4). 325–333.

This article presents an exploratory, qualitative study of 12 Muslim women living in the Triangle area of North Carolina, who were interviewed regarding their voluntary practice of hijab (Muslim tradition of veiling), exercise of choice in hijab, their relationship to feminist belief and identity, female empowerment, and body image. Through examining the influence of political movements in concert with market capitalism, this article examines how the hijab and those who voluntarily practice this Muslim tradition challenge or contradict mainstream images of what is marketed in the West as feminist. Moreover, this article seeks to examine how, if at all, the hijab empowers those women who practice it, whether it offers an avenue of female empowerment and liberation not traditionally included in prevailing feminist thought, and how this may contribute to third-wave feminist theory. This article informs social work practitioners of the strength of Muslim women, the exercise of choice in hijab, and contributions to feminist thought as participants respond to assumptions of oppression, patriarchal control, and prejudice in a post-9/11 society.

- Wilson, Brent M., Laura Mickes, Stephanie Stolarz-Fantino, Matthew Evrard & Edmund Fantino. 2015. Increased False-Memory Susceptibility After Mindfulness Meditation. *Psychological Science* 26(10). 1567–1573. doi:10.1177/0956797615593705.

The effect of mindfulness meditation on false-memory susceptibility was examined in three experiments. Because mindfulness meditation encourages judgment-free thoughts and feelings, researchers predicted that participants in the mindfulness condition would be especially likely to form false memories. In two experiments, participants were randomly assigned to either a mindfulness induction, in which they were instructed to focus attention on their breathing, or a mind-wandering induction, in which they were instructed to think about whatever came to mind. The overall number of words from the Deese-Roediger-McDermott paradigm that were correctly recalled did not differ between conditions. However, participants in the mindfulness condition were significantly more likely to report critical nonstudied items than participants in the control condition. In a third experiment, which tested recognition and used a reality-monitoring paradigm, participants had reduced reality-monitoring accuracy after completing the mindfulness induction. These results demonstrate a potential unintended consequence of mindfulness meditation in which memories become less reliable.

1.4 SCIENTIFIC STUDY OF RELIGION: METHOD & THEORY

Esperandio, Mary Rute Gomes & Luciana Fernandes Marques. 2015. The Psychology of Religion in Brazil. *International Journal for the Psychology of Religion* 25(4). 255–271.
doi:10.1080/10508619.2014.952189.

Religiousness is an important aspect of the formation of Brazilian subjectivity. This raises the issue to be addressed in this article: the issue of the place of the psychology of religion in Brazil. This text presents the psychology of religion in Brazil based on three sources of information: the activities of the Psychology & Religion Working Group, a look at the postgraduate programs that have been developing research on psychology of religion, and an analysis of studies that have been conducted in this area since 2000. A brief examination of Brazil's religious context is performed, considering its impact on culture and behavior, followed by an overview of past developments and current trends in this field of research. Psychology of religion has been studied from a variety of theoretical and methodological perspectives in Brazil and has an interdisciplinary connection mainly to sciences of religion, theology, philosophy, and anthropology. Theoretical approaches go from cognitive psychology of religion to cultural psychology of religion, and to social psychology and psychodynamics. This study concludes with suggestions for future directions.

Harvey, Graham. 2015. Whose society, whose experience? A fundamental question for rethinking religion. *Religion, Brain & Behavior* 5(3). 233–235.
doi:10.1080/2153599X.2014.910259.

The author raises questions about whose society is energized by the “fundamental social motives” that the article discusses, and who has the varied religious experiences that it might explain. The author asks whether the authors of the target article have sufficiently broadened the evolution of religion debate. He has specific questions about the roles of individuals in/ and communities, as he identifies an emphasis on highly individualized beings in the article. He also calls on the target article authors to expand their interest beyond just human beings, but to other species as well.

Lutz, Antoine, Amishi P. Jha, John D. Dunne & Clifford D. Saron. 2015. Investigating the phenomenological matrix of mindfulness-related practices from a neurocognitive perspective. *American Psychologist* 70(7). (The Emergence of Mindfulness in Basic and Clinical Psychological Science). 632–658.
doi:10.1037/a0039585.

There has been a great increase in literature concerned with the effects of a variety of mental training regimes that generally fall within what might be called contemplative practices, and a majority of these studies have focused on mindfulness. Mindfulness meditation practices can be conceptualized as a set of attention-based, regulatory, and self-inquiry training regimes cultivated for various ends, including wellbeing and psychological health. This article examines the construct of mindfulness in psychological research and reviews recent, nonclinical work in this area. Instead of proposing a single definition of mindfulness, researchers interpret it as a continuum of practices involving states and processes that can be mapped into a multidimensional phenomenological matrix which itself can be expressed in a neurocognitive framework. This phenomenological matrix of mindfulness is presented as a heuristic to guide formulation of next-generation research hypotheses from both cognitive/behavioral and neuroscientific perspectives. In relation to this framework, the authors review selected findings on mindfulness cultivated through practices in traditional and research settings, and conclude by identifying significant gaps in the literature and outline new directions for research.

Schnell, Tatjana. 2015. Dimensions of Secularity (DoS): An Open Inventory to Measure Facets of Secular Identities. *International Journal for the Psychology of Religion* 25(4). 272–292.
doi:10.1080/10508619.2014.967541.

Beliefs about the world affect experiences and behavior. Although much is known about beliefs pertaining to religion, or the supernatural, secular identities have, to date, remained largely neglected. To allow for dimensional assessment of different aspects of secular identities, the Dimensions of Secularity (DoS) inventory has been developed. It measures degrees of atheism, agnosticism and several philosophic orientations (scientism, personal responsibility, humanism). As an "open" inventory, these constructs are not seen as comprehensive, and researchers are encouraged to add further scales. The DoS shows good reliabilities and a clear factor structure. Confirmatory factor analysis confirms the theoretically proposed model. Correlation patterns with discriminant measures (religious belonging, belief, spirituality, numinous experiences) support the instrument's discriminant validity. Associations with sources of meaning contribute to construct validity. Demographic relationships are reported and discussed.

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

Arfken, Cynthia L., Wahiba Abu-Ras & Sameera Ahmed. 2015. Pilot Study of Waterpipe Tobacco Smoking Among US Muslim College Students. *Journal of Religion and Health* 54(5). 1543–1554. doi:10.1007/s10943-014-9871-x.

Waterpipe smoking is common among the young in Muslim-majority countries despite recent Islamic rulings on tobacco. US Muslim college students, especially immigrants, may be at high risk for smoking, but information is lacking. In this pilot study, respondent-driven sampling was used to sample 156 Muslim college students. Waterpipe smoking was common (44.3%). Leading motivations to smoke were social and perceived low tobacco harm. Independent risk factors among the Muslim students were perception that friends and other students smoked, and ever drank alcohol. Personal belief that waterpipe smoking is prohibited in Islam was not significant. This pilot suggests that Muslim students are at high risk for waterpipe smoking and more definitive studies are needed.

Babamohamadi, Hassan, Nemat Sotodehasl, Harold G. Koenig, Changiz Jahani & Raheb Ghorbani. 2015. The Effect of Holy Qur'an Recitation on Anxiety in Hemodialysis Patients: A Randomized Clinical Trial. *Journal of Religion and Health* 54(5). 1921–1930. doi:10.1007/s10943-014-9997-x.

Kidney disease and its related psychological costs have significantly increased in recent years. The aim of this study was to investigate the impact of Qur'an recitation on anxiety in hemodialysis patients. Sixty hemodialysis patients were randomized to either Qur'an recitation or a control group. Spielberger's State-Trait Anxiety Inventory (STAI) was completed by patients at baseline and 1 month afterward. The intervention involved listening to the recitation of the Qur'an in traditional cantillation voice. The control group received no intervention. The data were analyzed using Student's t test and general linear models. Recitation of the Qur'an was effective in reducing anxiety in the intervention group. Between-subject comparison at follow-up, after adjusting for baseline differences, indicated a significant reduction in anxiety in the intervention versus the control group. Listening to the Holy Qur'an being recited is an effective intervention for anxiety in patients undergoing hemodialysis in Iran.

Büssing, Arndt, Iwona Pilchowska & Janusz Surzykiewicz. 2015. Spiritual Needs of Polish Patients with Chronic Diseases. *Journal of Religion and Health* 54(5). 1524–1542. doi:10.1007/s10943-014-9863-x.

In a cross-sectional survey using standardized questionnaires such as the Spiritual Needs Questionnaire (SpNQ), researchers analyze unmet spiritual needs of 275 patients with chronic diseases from Catholic Poland. The factorial structure of SpNQ's Polish version is similar to the primary version and has good internal consistency. Here, not only Inner Peace needs and Giving/Generativity needs were of relevance, but also Religious Needs and Existential Needs. These needs were not significantly associated with life satisfaction, but with interpretations of illness.

Butzer, Bethany, Marina Ebert, Shirley Telles & Sat Bir S. Khalsa. 2015. School-based Yoga Programs in the United States: A Survey. *Advances in Mind-Body Medicine* 29(4). 18–26.

Substantial interest has begun to emerge around the implementation of yoga interventions in schools. Researchers have found that yoga practices may enhance skills such as self-regulation and prosocial behavior, and lead to improvements in students' performance. These researchers, therefore, have proposed that contemplative practices have the potential to play a crucial role in enhancing the quality of US public education. The purpose of the present study was to provide a summary and comparison of school-based yoga programs in the United States. Online, listserv, and database searches were conducted to identify programs, and information was collected regarding each program's scope of work, curriculum characteristics, teacher-certification and training requirements, implementation models, modes of operation, and geographical regions. Thirty-six programs were identified that offer yoga in more than 940

schools across the United States, and more than 5400 instructors have been trained by these programs to offer yoga in educational settings. Despite some variability in the exact mode of implementation, training requirements, locations served, and grades covered, the majority of the programs share a common goal of teaching 4 basic elements of yoga: (1) physical postures, (2) breathing exercises, (3) relaxation techniques, and (4) mindfulness and meditation practices. The programs also teach a variety of additional educational, social-emotional, and didactic techniques to enhance students' mental and physical health and behavior. The authors conclude that, given the number of examples, the programs may be acceptable and feasible to implement. The results also suggest that the popularity of school-based yoga programs may continue to grow.

- Crowe, Brandi M., Marieke Van Puymbroeck, Sandra M. Linder, Francis A. Mcguire & Paula J. Watt. 2015. The Effects of Yoga Participation on Women's Quality of Life and Symptom Management During the Menopausal Transition: A Pilot Study. *Health Care for Women International* 36(10). 1124–1142.
doi:10.1080/07399332.2015.1066789.

Typically lasting 5 to 10 years, the menopausal transition is associated with symptoms including hot flashes, night sweats, and labile mood. As these symptoms often hinder a woman's successful functioning in everyday life, hormone therapy is commonly prescribed as a means to diminish symptoms. Many women, however, are seeking complementary and alternative treatments due to side effects and/or detrimental health-risks associated with conventional therapies. Researchers completed a mixed methods study to determine changes in physiological symptoms associated with menopause and changes in women's quality of life, as a result of participation in a 10-week yoga intervention.

- Charzyńska, Edyta. 2015. Sex Differences in Spiritual Coping, Forgiveness, and Gratitude Before and After a Basic Alcohol Addiction Treatment Program. *Journal of Religion and Health* 54(5). 1931–1949.
doi:10.1007/s10943-015-0002-0.

The aim of the study was to examine the sex differences in the initial level of spiritual coping, forgiveness, and gratitude and changes occurring in these areas during a basic alcohol addiction treatment program. The study involved 112 persons, including 56 women and 56 men, who started and completed a basic alcohol addiction treatment program at day care units of 11 treatment centers. Two measurements were taken: one in the first week of the treatment, and one in the last week (5th-7th week after baseline). The Spiritual Coping Questionnaire, the Forgiveness Scale, and Gratitude Questionnaire were used. When starting the therapy, women had a higher level of negative spiritual coping and a lower level of forgiveness of others than men. During the therapy, positive changes in spiritual coping occurred in both sex groups, although in the case of women they involved improvements in more domains and they were stronger. The increase in the level of moral values (except for self-forgiveness) was noted solely in women. The study reveals the need to take sex differences into consideration when introducing spiritual elements into the therapy.

- Delgado-Guay, Marvin O., Gary Chisholm, Janet Williams & Eduardo Bruera. 2015. The association between religiosity and resuscitation status preference among patients with advanced cancer. *Palliative & Supportive Care* 13(5). 1435–1439.
doi:10.1017/S1478951515000140.

The potential influence of patient religious and spiritual beliefs on the approach to end-of-life care and resuscitation status preferences is not well understood. The aim of this study was to assess the association between religiosity and resuscitation preferences in advanced-cancer patients. Researchers performed a secondary analysis of a randomized controlled trial that evaluated the influence of physician communication style on patient resuscitation preferences. All patients completed the Santa Clara Strength of Religious Faith Questionnaire-Short Form (SCSRFQ-SF) and expressed their resuscitation preferences. Researchers determined the frequency of resuscitation preferences and its

association with intensity of religiosity. A total of 78 patients completed the study. The median age was 54 years, with a range of 18-78. Some 46 (59%) were women; 57 patients (73%) were Caucasian, 15 (19%) African American, and 5 (7%) Hispanic. A total of 46 patients (56%) were Protestant and 13 (17%) Catholic. Some 53 of 60 patients who chose Do Not Resuscitate status (DNR) (88%) and 16 of 18 patients who refused DNR (89%) for a video-simulated patient were highly religious. When asked about a DNR for themselves after watching the videos, 43 of 48 who refused DNR (90%) and 26 of 30 patients who chose DNR (87%) were highly religious. Some 30 patients (38%) who chose DNR for the video patient refused DNR for themselves, and 42 who chose DNR for both the video patient and themselves (54%) were highly religious. There was no significant association between intensity of patient religiosity and DNR preference for either the video patient or the patients themselves. Other beliefs and demographic factors likely impact end-of-life discussions and resuscitation status preferences.

Dobos, Gustav, Tatiana Overhamm, Arndt Büssing, Thomas Ostermann, Jost Langhorst, Sherko Kümmel, Anna Paul & Holger Cramer. 2015. Integrating mindfulness in supportive cancer care: a cohort study on a mindfulness-based day care clinic for cancer survivors. *Supportive Care in Cancer* 23(10). 2945–2955.
doi:10.1007/s00520-015-2660-6.

One hundred seventeen Cancer survivors (n=117) participated in an 11-week mindfulness-based day care clinic group program, 6 h per week. The intervention incorporated mindfulness-based meditation, yoga, cognitive-behavioral techniques, and lifestyle modification. Outcome measures including health-related quality of life (EORTC QLQ-C30), depression and anxiety (HADS); and psychological variables including life satisfaction (BMLSS), mindfulness (FMI), adaptive coping styles (AKU), spiritual/religious attitudes in dealing with illness (SpREUK), and interpretation of illness (IIQ) were assessed before, after, and 3 months after the intervention. Following intervention, using mixed linear models, significant improvements in global health status, physical functioning, role functioning, emotional functioning, cognitive functioning, and social functioning were found. Cancer-related symptoms, including fatigue, pain, insomnia, constipation, anxiety, and depression, also improved significantly. Mindfulness, life satisfaction, health satisfaction, all coping styles, all spiritual/religious attitudes, and interpretation of illness as something of value increased; interpretation of illness as punishment decreased significantly. Improved outcomes were associated with increases in psychological variables, mainly life satisfaction, health satisfaction, and trust in medical help.

Espinosa-Hernández, Graciela, Joanna Bissell-Havran & Anna Nunn. 2015. The Role of Religiousness and Gender in Sexuality among Mexican Adolescents. *Journal of Sex Research* 52(8). 887–897.
doi:10.1080/00224499.2014.990951.

This study examined the role of religiousness and gender in age at first intercourse, and sexual expectations and values in Mexico, a macrocontext where the majority is Mexican and Catholic (83%). Participants were Catholic and nonreligious adolescents (54% girls) attending middle (71%) or high school. Findings indicated that Catholic adolescents engaged in sexual intercourse at later ages than nonreligious adolescents. Both religious attendance and importance of religion and values in sexual decision making were associated with more conservative sexual values. Boys who were raised Catholic were more likely to endorse female virginity values and were less likely to expect to wait to have sex until married than nonreligious boys. These associations were not significant among girls. Catholic boys may be more likely to internalize sexual double standard beliefs regarding premarital sex than nonreligious boys.

Fátima Rosas Marchiori, Márcia de, Elisa Harumi Kozasa, Roberto Dischinger Miranda, André Luiz Monezi Andrade, Tatiana Caccese Perrotti & José Roberto Leite. 2015. Decrease in blood pressure and improved psychological aspects through meditation training in hypertensive older adults: A randomized control study. *Geriatrics & Gerontology International* 15(10). 1158–1164.
doi:10.1111/ggi.12414.

Charitable giving is one of the major obligations in Islam and a strong Muslim norm endorses giving to the needy, but discourages public displays of giving. Researchers report the results two field experiments with 534 and 200 participants at Moroccan educational institutions to assess the effects of this moral prescription on actual giving levels in anonymous and public settings. Subjects who participated in a paid study were given the option to donate from their payment to a local orphanage, under treatments that varied the publicity of the donation and the salience of Islamic values using either Arabic or French instructions. In the salient Islamic treatment, anonymity of donations significantly increased donation incidence from 59% to 77% percent as well as average donations for religious subjects from 8.90 to 13.00Dh out of possibly 30Dh. These findings stand in stark contrast to most previous findings in the charitable giving literature and suggest to reconsider potential fundraising strategies in Muslim populations.

Gill, Carman Sue, Casey Barrio Minton & Jane Myers. 2015. Poor, Rural Women: Spirituality, Religion, and Wellness Across the Life Span. *Adultspan Journal* 14(2). 66–76.
doi:10.1002/adsp.12005.

Researchers have suggested strategies in the spiritual domain for improving wellness. This study explored relationships among spirituality, religiosity, and wellness for poor, rural women in early adulthood, early-middle adulthood, and middle-later adulthood. Implications for evidence-based strategies to improve wellness for poor, rural women across the life span are provided.

Hamilton, Jill B., Kayoll V. Galbraith, Nakia C. Best, Valarie C. Worthy & L. T. C. Angelo D. Moore. 2015. African-American Cancer Survivors' Use of Religious Beliefs to Positively Influence the Utilization of Cancer Care. *Journal of Religion and Health* 54(5). 1856–1869.
doi:10.1007/s10943-014-9948-6.

Among African-Americans, religion impacts health-seeking behaviors. This qualitative study used criterion purposeful sampling and thematic analysis in analysis of data from 31 African-American cancer patients to understand the influence of religion on the utilization of cancer care services. Findings suggest that religious beliefs and practices positively influenced attitudes toward their illness and ability to endure treatment. God's ability to heal and cure, God's control over survival, God's will over their lives, and God's promise for health and prosperity were examples of survivor's religious beliefs. Religious practices such as prayer promoted a trusting relationship with healthcare providers and were a source of strength and encouragement.

Hematti, Simin, Milad Baradaran-Ghahfarokhi, Rasha Khajooei-Fard & Zohreh Mohammadi-Bertiani. 2015. Spiritual Well-Being for Increasing Life Expectancy in Palliative Radiotherapy Patients: A Questionnaire-Based Study. *Journal of Religion and Health* 54(5). 1563–1572.
doi:10.1007/s10943-014-9872-9.

Spiritual well-being in patients with an advanced cancer has been found to positively correlate with subjective well-being, lower pain levels, hope and positive mood states, high self-esteem, social competence, purpose in life, and overall quality of life. In this regard, Quran recitation is stated to be an efficient way to increase patient spirituality and also to handle life's everyday challenges. The aim of this study was to investigate the effects of listening, reading, and watching the text of the Holy Quran, called (in this study) Quran recitation, for increasing life expectancy (LE) in palliative radiotherapy patients admitted to Radiotherapy Department of Seyed alshobada Hospital, Isfahan, Iran. A questionnaire-based study was carried out on a total of 89 palliative radiotherapy patients between March 2012 and June 2012. Informed consent was obtained. The patients were requested to complete a standardized questionnaire which was designed based on the European Organization for Research and Treatment of Cancer C30 Scale Quality of Life Questionnaire (EORTC C30 Scale QLQ). There was a significant difference for frequency and duration of Quran recitation among patients, before and after the diagnosis of their cancer. Using the Spearman's rank correlation, it was found that there was a correlation between Quran recitation and subjective well-being. Moreover, there was a correlation between Quran recitation and increasing LE. More than 60% of the patients stated that more frequent recitation would lead to more LE and/or greater reassurance. On the basis of

the present work, listening, reading, and watching the text of the Holy Quran are useful for increasing LE in palliative radiotherapy patients admitted to Radiotherapy Department.

- Hewett, Zoe L., Birinder S. Cheema, Kate L. Pumpa & Caroline A. Smith. 2015. The Effects of Bikram Yoga on Health: Critical Review and Clinical Trial Recommendations. *Evidence-Based Complementary and Alternative Medicine* 2015. 1–13.
doi:10.1155/2015/428427.

Bikram yoga is a style of hatha yoga involving a standardized series of asanas performed to an instructional dialogue in a heated environment (40.6°C, 40% humidity). Several studies evaluating the effect of Bikram yoga on health-related outcomes have been published over the past decade. However, to date, there are no comprehensive reviews of this research and there remains a lack of large-scale, robustly-designed randomized controlled trials (RCT) of Bikram yoga training. The purpose of this review is to contextualize and summarize trials that have evaluated the effects of Bikram yoga on health and to provide recommendations for future research. According to published literature, Bikram yoga has been shown to improve lower body strength, lower and upper body range of motion, and balance in healthy adults. Non-RCTs report that Bikram yoga may, in some populations, improve glucose tolerance, bone mineral density, blood lipid profile, arterial stiffness, mindfulness, and perceived stress. There is vast potential for further, improved research into the effects of Bikram yoga, particularly in unhealthy populations, to better understand intervention-related adaptations and their influence on the progression of chronic disease.

- Hill, Milton C. & Wendi Pollock. 2015. Was Hirschi right? A national-level longitudinal examination of religion as a social bond. *Deviant Behavior* 36(10). 783–806.
doi:10.1080/01639625.2014.977149.

The current research re-examines Hirschi's (1969) omission of religion as a social bond by examining the impact of religious commitment and religious salience on substance use in National Youth Survey Family Study respondents, both in adolescence/early adulthood, and again in middle adulthood. This approach allows for a longitudinal examination of a large, nationally representative sample of respondents. Results challenge Hirschi's decision, and suggest that, particularly in adolescence, a person's religious service attendance, and belief in religion, do affect their likelihood of substance use.

- Hwang, Yoon-Suk, Patrick Kearney, Helen Klieve, Wayne Lang & Jacqueline Roberts. 2015. Cultivating Mind: Mindfulness Interventions for Children with Autism Spectrum Disorder and Problem Behaviours, and Their Mothers. *Journal of Child and Family Studies* 24(10). 3093–3106.
doi:10.1007/s10826-015-0114-x.

Problem behaviors in children with Autism Spectrum Disorder (ASD) are a major source of parenting stress, as they restrict family capacity to maintain quality domestic and social life. It is therefore critical to support parents to manage the problem behaviors of their child with ASD. Recent mindfulness intervention studies have successfully addressed this issue. The current pilot study pursues this line of enquiry and extends the scope of mindfulness intervention by training parents to become a mindfulness teacher of their own child with ASD and problem behaviors, so together they can work on enhancing the quality of their domestic and social life. A total of six dyads of mothers (CA range 34-48 years) and children with ASD and problem behaviors (CA range 8-15 years) participated in a two-stage mindfulness intervention. Mothers attended an 8-week mindfulness program to attain fluency in the theory and practice of mindfulness meditation (Stage 1). Based on this fluency they then taught mindfulness activities to their child (Stage 2). This paper reports on the effects of the mindfulness intervention provided for mothers (Stage 1) and children (Stage 2) as demonstrated by the level of mindfulness, parenting stress, and family quality of life for mothers, and problem behaviors for children. The results highlight overall improvements in the targeted areas.

Jankowski, Peter J., Sam A. Hardy, Byron L. Zamboanga, Lindsay S. Ham, Seth J. Schwartz, Su Yeong Kim, Larry F. Forthun, et al. 2015. Religiousness and Levels of Hazardous Alcohol Use: A Latent Profile Analysis. *Journal of Youth and Adolescence* 44(10). 1968–1983.
doi:10.1007/s10964-015-0302-4.

Prior person-centered research has consistently identified a subgroup of highly religious participants that uses significantly less alcohol when compared to the other subgroups. The construct of religious motivation is absent from existing examinations of the nuanced combinations of religiousness dimensions within persons, and alcohol expectancy valuations have yet to be included as outcome variables. Variable-centered approaches have found religious motivation and alcohol expectancy valuations to play a protective role against individuals' hazardous alcohol use. The current study examined latent religiousness profiles and hazardous alcohol use in a large, multisite sample of ethnically diverse college students. The sample consisted of 7,412 college students aged 18-25. Three latent profiles were derived from measures of religious involvement, salience, and religious motivations: Quest-Intrinsic Religiousness (highest levels of salience, involvement, and quest and intrinsic motivations; lowest level of extrinsic motivation), Moderate Religiousness (intermediate levels of salience, involvement, and motivations) and Extrinsic Religiousness (lowest levels of salience, involvement, and quest and intrinsic motivations; highest level of extrinsic motivation). The Quest-Intrinsic Religiousness profile scored significantly lower on hazardous alcohol use, positive expectancy outcomes, positive expectancy valuations, and negative expectancy valuations, and significantly higher on negative expectancy outcomes, compared to the other two profiles. The Extrinsic and Moderate Religiousness profiles did not differ significantly on positive expectancy outcomes, negative expectancy outcomes, negative expectancy valuations, or hazardous alcohol use. The results advance existing research by demonstrating that the protective influence of religiousness on college students' hazardous alcohol use may involve high levels on both quest and intrinsic religious motivation.

Kim, Gwang Suk, Eun Gyeong Kim, Ki Young Shin, Hee Jung Choo & Mi Ja Kim. 2015. Combined pelvic muscle exercise and yoga program for urinary incontinence in middle-aged women. *Japan Journal of Nursing Science* 12(4). 330–339.
doi:10.1111/jjns.12072.

Urinary incontinence is a major health problem among middle-aged women. Pelvic muscle exercise is one of the primary interventions, but difficulty performing this exercise has led researchers to seek alternative or conjunctive exercise. This study aimed to examine the effect of a combined pelvic muscle exercise and yoga intervention program on urinary incontinence. Subjects were recruited from a community health center in Seoul, Korea, and a questionnaire survey was conducted. Fifty-five women participated in the first day of the program, 34 of whom completed the 8 week, twice weekly intervention program. Urinary incontinence was measured by five domains of urinary tract symptoms: filling factor, voiding factor, incontinence factor, sexual function, and quality of life. Also measured were attitude toward pelvic muscle exercise and pelvic muscle strength. Following intervention, significant improvements were found in attitude toward pelvic muscle exercise, pelvic muscle strength, and incontinence factor. Daily performance of pelvic muscle exercise was positively correlated with improved incontinence factor and with quality of life related to urinary tract symptoms.

Li, Jie, Jessie S. M. Chan, Amy Y. M. Chow, Lai Ping Yuen & Cecilia L. W. Chan. 2015. From Body to Mind and Spirit: Qigong Exercise for Bereaved Persons with Chronic Fatigue Syndrome-Like Illness. *Evidence-based Complementary & Alternative Medicine (eCAM)* 2015. 631410.
doi:10.1155/2015/631410.

Bereavement may bring negative impacts on the mind, body, and spiritual well-being of grieving persons. Some bereaved persons with chronic fatigue syndrome- (CFS-) illness experience a dual burden of distress. This study investigated the effects of bereavement on CFS-like illness by comparing bereaved and nonbereaved participants. It also adopted a random group design to investigate the effectiveness of Qigong on improving the well-being of bereaved

participants. The Qigong intervention comprised 10 group sessions delivered twice a week for 5 weeks and home-practice for at least three times a week lasting 15-30 minutes each. The participants' fatigue, anxiety, and depression, quality of life (QoL), and spiritual well-being were measured at baseline and 3 months after treatment. The bereaved participants experienced significantly greater mental fatigue and lower physical QoL than their nonbereaved counterparts. After 3 months, the mental fatigue and physical fatigue experienced by intervention group had declined significantly, and improvements on their spirituality and psychological QoL scores exceeded those of the control group.

Longpré, Heather S., Elora C. Brenneman, Ayesha L. M. Johnson & Monica R. Maly. 2015. Identifying yoga-based knee strengthening exercises using the knee adduction moment. *Clinical Biomechanics* 30(8). 820–826.

doi:10.1016/j.clinbiomech.2015.06.007.

This study aimed to compare muscle activations, co-contraction indices, and the knee adduction moment between static standing yoga postures to identify appropriate exercises for knee osteoarthritis. Healthy young women participated. Researchers found that squatting and lunging postures could improve leg strength while potentially minimizing exposure to high knee adduction moments.

Nazarzadeh, Milad, Mandana Sarokhani & Kouros Sayehmiri. 2015. The Relationship between Religious Attitudes, Fear of Death and Dying with General Health Condition: A Survey in College Students. *Journal of Religion and Health* 54(5). 1672–1680.

doi:10.1007/s10943-014-9903-6.

This study aims to assess the relationship between religious attitudes of Ilam universities students (west of Iran), their perspectives about the fear of self and other's death and dying, with their general health. This paper is an analytic survey in which 351 college students, who were selected by multistage sampling, participated. To measure interested variables, Persian format of standardized self-administered questionnaires was employed. Religious attitudes and fear of self-dying were identified as a protective factors against the inappropriate general health condition. However, the fear of other's death was identified as a risk factor. This study showed that people who had more religious attitudes and fear of self-dying had better general health as well as the fear of other's death had a significant direct relationship with inappropriate general health condition.

Răban-Motounu, Nicoleta & Ileana Loredana Vitalia. 2015. Religiosity and Proactive Coping with Social Difficulties in Romanian Adolescents. *Journal of Religion and Health* 54(5). 1647–1659.

doi:10.1007/s10943-014-9888-1.

Even though medical and psychological sciences and services evolved so much, in many cases, the healing process has its mystery, and some recoveries seem to be entirely magical. Especially in such cases, religion seems to play an important role, as it helps people face the "mystery" of the healing process and integrate it. Religion has helped people face potentially traumatic events with minimum consequences for their health, or, moreover, to use these experiences for personal development, making them more prepared for life challenges. Adolescents with developed proactive coping skills are less socially inhibited or non-assertive, and those that are less cold/distant or more self-sacrificing have stronger spiritual values.

Rafferty, Katherine A., Ashley K. Billig & Katie E. Mosack. 2015. Spirituality, Religion, and Health: The Role of Communication, Appraisals, and Coping for Individuals Living with Chronic Illness. *Journal of Religion and Health* 54(5). 1870–1885.

doi:10.1007/s10943-014-9965-5.

Currently, 10% of Americans are living with a chronic illness. One coping mechanism for individuals living with chronic illness is religion and/or spiritual (R/S). To better explicate the relationship among R/S and psychological well-being, researchers conceptualize R/S as an interpersonal process involving conversations that may facilitate positive reappraisals. The study uses a mixed-method approach from data collected from 106 participants, involving

a content analysis of R/S conversations and test Burleson and Goldsmith's appraisal-based comforting model. Partial support for the model was found. In addition, the majority of R/S conversations were considered positive, helpful, and supportive.

- Sun, Jing & Nicholas Buys. 2015. Community-Based Mind-Body Meditative Tai Chi Program and Its Effects on Improvement of Blood Pressure, Weight, Renal Function, Serum Lipoprotein, and Quality of Life in Chinese Adults With Hypertension. *American Journal of Cardiology* 116(7). 1076–1081.
doi:10.1016/j.amjcard.2015.07.012.

Obesity, metabolic syndrome, dyslipidemia, and poor quality of life are common conditions associated with hypertension, and incidence of hypertension is age dependent. However, an effective program to prevent hypertension and to improve biomedical factors and quality of life has not been adequately examined or evaluated in Chinese older adults. This study aims to examine the effectiveness of a Tai Chi program to improve health status in participants with hypertension and its related risk factors such as dyslipidemia, hyperglycemia, and quality of life in older adults in China. A randomized study design was used. At the conclusion of the intervention, 266 patients remained in the study. Blood pressure and biomedical factors were measured according to the World Diabetes Association standard 2002. A standardized quality-of-life measure was used to measure health-related quality of life. It was found that a Tai Chi program to improve hypertension in older adults is effective in reducing blood pressure and body mass index, maintaining normal renal function, and improving physical health of health-related quality of life. It did not improve existing metabolic syndrome levels, lipid level (dyslipidemia) or fasting glucose level (hyperglycemia), to prevent further deterioration of the biomedical risk factors. In conclusion, Tai Chi is effective in managing a number of risk factors associated with hypertension in Chinese older adults.

- Thomas, Tami, Amy Blumling & Augustina Delaney. 2015. The Influence of Religiosity and Spirituality on Rural Parents' Health Decision Making and Human Papillomavirus Vaccine Choices. *ANS. Advances in nursing science* 38(4). E1–E12.
doi:10.1097/ANS.0000000000000094.

General health implications of religiosity and spirituality on health have been associated with health promotion, so the purpose of this study was to examine the influence of religiosity and spirituality on rural parents' decision making to vaccinate their children against human papillomavirus (HPV). The associations of religiosity and spirituality with parental HPV vaccine decisions were examined in a sample of parents residing in small rural communities (n=37). Parents of children aged 9 to 13 years participated in focus groups held in rural community contexts. Religiosity (i.e., participation in religious social structures) was a recurring and important theme when discussing HPV vaccination. Spirituality (i.e., subjective commitment to spiritual or religious beliefs) was found to influence the ways in which parents perceived their control over and coping with health issues potentially related to HPV vaccination. Together, religiosity and spirituality were found to play integral roles in these parents' lives and influenced their attitudes toward HPV vaccination uptake for their children.

- Yeterian, Julie D., Krisanne Bursik & John F. Kelly. 2015. Religiosity as a Predictor of Adolescents' Substance Use Disorder Treatment Outcomes. *Substance Abuse* 36(4). 453–461.
doi:10.1080/08897077.2014.960550.

A growing body of research on adults with substance use disorders (SUDs) suggests that higher levels of religiosity and/or spirituality are associated with better treatment outcomes. However, investigation into the role of religiosity and spirituality in adolescent SUD treatment response remains scarce. The present study examines religiosity as a predictor of treatment outcomes in an adolescent sample, with alcohol/other drug problem recognition as a hypothesized moderator of this relationship. Problem recognition was selected as a moderator in an attempt to identify a subset of adolescents who would be more likely to use religious resources when attempting to change their substance use. One hundred twenty-seven outpatient adolescents aged 14 to 19 were followed for 1 year after treatment intake.

Growth curve analyses were used to assess the impact of baseline religiosity and problem recognition on subsequent abstinence rates, drug-related consequences, and psychological distress. On average, abstinence did not change significantly during the follow-up period, whereas drug-related consequences and psychological distress decreased significantly. Religiosity did not predict changes in abstinence or psychological distress over time. Religiosity did predict reductions in drug-related consequences over time. However, when problem recognition was added to the model, the impact of religiosity on consequences became nonsignificant, and there was no interaction between religiosity and problem recognition on consequences. The authors conclude that the main hypothesis was largely unsupported. Possible explanations include that the sample was low in religiosity and few participants were actively seeking sobriety at treatment intake. Findings suggest adolescent outpatients with SUD may differ from their adult counterparts in the role that religiosity plays in recovery.

2.2 SPIRITUALITY & HEALTH: MENTAL HEALTH

Akkaya-Kalayci, Türkan, Christian Popow, Thomas Waldhör & Zeliha Özlü-Erkilic. 2015. Impact of religious feast days on youth suicide attempts in Istanbul, Turkey. *Neuropsychiatrie: Klinik, Diagnostik, Therapie Und Rehabilitation* 29(3). 120–124.
doi:10.1007/s40211-015-0147-9.

Suicidal behavior is related to psychosocial and biological factors. Although suicide is strictly forbidden by the Islamic faith, there are non-confirmed observations of increased suicidality on religious feast days. The objective of the present study was to find out if suicide attempts of youths living in Istanbul increase on religious feast days compared to ordinary and non-religious holidays. Researchers retrospectively analyzed all suicide attempts (n=2,232) of young people up to 25 years of age seeking support at various hospitals in Istanbul in 2010. The main hypothesis was that the number of suicide attempts would increase during religious feast days. The number of suicide attempts was higher on religious feast days and non-religious holidays except for New Year's Day and International Labor Day than the daily average number of the actual months. Like on ordinary days, more female than male youth (84.9% vs. 15.1%) attempted suicide on feast days. The authors speculate that changes of the daily rhythm and increased family interaction on feast days and non-religious holidays could lead to unexpected confrontations and disputes instead of the expected positive family climate. This "Broken-Promise Effect" and changes of the daily rhythm could contribute to the observed increased suicidal behavior.

Alexander, Gina K., Kari Rollins, Danielle Walker, Lily Wong & Jacquelyn Pennings. 2015. Yoga for Self-Care and Burnout Prevention Among Nurses. *Workplace Health & Safety* 63(10). 462–470.
doi:10.1177/2165079915596102.

The promotion of self-care and the prevention of burnout among nurses is a public health priority. Evidence supports the efficacy of yoga to improve physical and mental health outcomes, but few studies have examined the influence of yoga on nurse-specific outcomes. The purpose of this pilot-level randomized controlled trial was to examine the efficacy of yoga to improve self-care and reduce burnout among nurses. Compared with controls (n=20), yoga participants (n=20) reported significantly higher self-care as well as less emotional exhaustion and depersonalization upon completion of an 8-week yoga intervention. Although the control group demonstrated no change throughout the course of the study, the yoga group showed a significant improvement in scores from pre- to post-intervention for self-care, mindfulness, emotional exhaustion, and depersonalization outcomes.

Azam, Muhammad Abid, Joel Katz, Samantha R. Fashler, Tina Changoor, Saam Azargive & Paul Ritvo. 2015. Heart rate variability is enhanced in controls but not maladaptive perfectionists during brief mindfulness meditation following stress-induction: A stratified-randomized trial. *International Journal of Psychophysiology* 98(1). 27–34.
doi:10.1016/j.ijpsycho.2015.06.005.

Heart rate variability (HRV) is a vagal nerve-mediated biomarker of cardiac function used to investigate chronic illness, psychopathology, stress and, more recently, attention-regulation processes such as meditation. This study investigated HRV in relation to maladaptive perfectionism, a stress-related personality factor, and mindfulness meditation, a stress coping practice expected to elevate HRV, and thereby promote relaxation. Maladaptive perfectionists (n=21) and Controls (n=39) were exposed to a lab-based assessment in which HRV was measured during (1) a 5-minute baseline resting phase, (2) a 5-minute cognitive stress-induction phase, and (3) a post-stress phase. In the post-stress phase, participants were randomly assigned to a 10-minute audio-instructed mindfulness meditation condition or a 10-minute rest condition with audio-description of mindfulness meditation. Analyses revealed a significant elevation in HRV during meditation for Controls but not for Perfectionists. These results suggest that mindfulness meditation promotes relaxation following cognitive stress and that the perfectionist personality hinders relaxation possibly because of decreased cardiac vagal tone. The results are discussed in the context of developing psychophysiological models to advance therapeutic interventions for distressed populations.

Bell, Hope, Lameria Jacobson, Melissa Zeligman, Jesse Fox & Gulnora Hundley. 2015. The Role of Religious Coping and Resilience in Individuals With Dissociative Identity Disorder. *Counseling and Values* 60(2). 151–163.
doi:10.1002/cvj.12011.

Survivors with dissociative identity disorder (DID) often report a history of traumatic events in their lives. Past studies indicated a link between trauma, resilience, and spiritual coping in both positive and negative aspects of a survivor's life. This article includes a review of existing literature salient to these constructs in relation to individuals with DID, as well as results from a study examining the relationships between these constructs and individuals with DID (n=52).

Bhargav, Hemant, Aarti Jagannathan, Nagarathna Raghuram, T. M. Srinivasan & Bangalore N. Gangadhar. 2015. Schizophrenia Patient or Spiritually Advanced Personality? A Qualitative Case Analysis. *Journal of Religion and Health* 54(5). 1901–1918.
doi:10.1007/s10943-014-9994-0.

Many aspects of spiritual experience are similar in form and content to symptoms of psychosis. Both spiritually advanced people and patients suffering from psychopathology experience alterations in their sense of "self." Psychotic experiences originate from derangement of the personality, whereas spiritual experiences involve systematic thinning out of the selfish ego, allowing individual consciousness to merge into universal consciousness. Documented instances and case studies suggest possible confusion between the spiritually advanced and schizophrenia patients. Clinical practice contains no clear guidelines on how to distinguish them. Here researchers use a case presentation to help tabulate clinically useful points distinguishing spiritually advanced persons from schizophrenia patients. A 34-year-old unmarried male reported to our clinic with four main complaints: lack of sense of self since childhood; repeated thoughts questioning whether he existed or not; social withdrawal; and inability to continue in any occupation. Qualitative case analysis and discussions using descriptions from ancient texts and modern psychology led to the diagnosis of schizophrenia rather than spiritual advancement.

Blanc, Judite, Guitale J. Rahill, Stéphanie Laconi & Yoram Mouchenik. 2015. Religious Beliefs, PTSD, Depression and Resilience in Survivors of the 2010 Haiti Earthquake. *Journal of Affective Disorders* 190. 697–703.
doi:10.1016/j.jad.2015.10.046.

This study examines relationships between religious beliefs regarding the origin of the 2010 earthquake in Haiti and posttraumatic symptomatology as well as depressive symptoms and resilience among its survivors. Researchers used convenient sampling to recruit participants (n=167). They completed six scales, which had been translated into Haitian Creole. Of the participants, 51% were male, 92% were believers in some sort of supernatural force, and 65% endorsed the earthquake as a natural phenomenon. There was significant difference in average scores at

peritraumatic distress, PTSD symptoms and Resilience measures between those perceiving a divine origin and/or a punishment through the event and those who did not. Peritraumatic responses were best predictors for PTSD and Depression symptoms. Voodoo adherents appeared to be vulnerable to depression, but reported superior resilience factors.

- Connell, Alida, Liezl Koen, Dana Niehaus, Karen J. Cloete, Esme Jordaan & Ulla Botha. 2015. Religious Delusions in a Xhosa Schizophrenia Population. *Journal of Religion and Health* 54(5). 1555–1562.
doi:10.1007/s10943-014-9860-0.

Here, researchers assessed for the first time the frequency of religious delusions and the effect of treatment on religiosity and the phenomena of religious delusions in a Xhosa schizophrenia population. Religious delusions were present in 42 (70%) participants, and treatment significantly reduced religiosity as well as mean scores for certain phenomena associated with the delusions including changes in both thinking and behavior, as well as affective response to the delusion. The high frequency of religious delusions may indicate a higher tolerance for religious delusions in this community.

- Çuhadar, Döndü, Haluk Asuman Savaş, Ahmet Ünal & Fatma Gökpinar. 2015. Family Functionality and Coping Attitudes of Patients with Bipolar Disorder. *Journal of Religion and Health* 54(5). 1731–1746.
doi:10.1007/s10943-014-9919-y.

The coping of patients with prodromal syndromes prevents relapses, and the differences in coping strategies affect the results of bipolar disorder. The various functionality levels of bipolar disorder patients such as work, marital relations, parental abilities and social presentation are significantly related with how well they cope. The objective of this study was to determine the family functionality and coping attitudes of bipolar disorder patients. The study planned as a descriptive one was carried with 81 bipolar disorder patients. Personal description form, family assessment device and Coping Attitudes Scale were used as data acquisition tools. It was determined that the adaptive coping attitudes used most frequently by the patients were religious coping, positive reinterpretation, active coping, problem-focused coping and emotional focused coping, beneficial social support use, emotional social support use, planning, suppression of competing activities and restraint coping; maladaptive coping attitudes used most frequently by the patients were “focusing on the problem and venting of emotions and mental disengagement.” It was determined that family functions affected the coping attitudes of patients and that the patients who evaluated family functions in a healthy manner made use of adaptive coping strategies more at a statistically significant level.

- Doehring, Carrie. 2015. Resilience as the Relational Ability to Spiritually Integrate Moral Stress. *Pastoral Psychology* 64(5). 635–649.
doi:10.1007/s11089-015-0643-7.

Resilience is an outcome of caregiving relationships that help people spiritually integrate moral stress. Moral stress arises from lived theologies and spiritual orienting systems-patterns of values, beliefs, and ways of coping energized by shame, guilt, fear of causing harm, or self-disgust (some of the so-called negative moral emotions that cut people off from social support). Spiritual care compassionately brings to light these life-limiting lived theologies of shame and fear shaped by intersecting social systems of oppression like sexism, classism, and racism. Spiritual care helps people co-create intentional theologies that draw upon goodness, compassion, and love-moral emotions that connect them to the web of life. This interdisciplinary approach to moral stress draws upon the living stories of moral stress and resilience by feminist theologians Bonnie Miller-McLemore and Valerie Saiving.

- Doolittle, Benjamin, Malachi Courtney & Joan Jasien. 2015. Satisfaction With Life, Coping, and Spirituality Among Urban Families. *Journal of Primary Care & Community Health* 6(4). 256–259.
doi:10.1177/2150131915596961.

Urban families face many challenges that affect life satisfaction, including low income, limited access to resources, and unstable neighborhoods. The aim of this research is to investigate life satisfaction and identify potential mediators: neighborhood stability, emotional coping strategies, religion, and spirituality. A convenience sample of families presenting to an urban primary care clinic for routine care filled out an anonymous, voluntary survey that included demographic data, the Satisfaction with Life Scale (SWLS), the Spiritual Inventory and Beliefs Scale, and an emotional coping inventory. 127 individuals filled out the survey. Life satisfaction was high. Families in the lowest quartile of the SWLS were 4.5 times as likely to have a child with a chronic medical illness. SWLS correlated with strategy planning, external practices of religion, and humility.

Fazio, Pasquale De, Raffaele Gaetano, Mariarita Caroleo, Gregorio Cerminara, Francesca Giannini, Maria Jose Jaén Moreno, Maria José Moreno Díaz, Antonio Medina León & Cristina Segura-García. 2015. Religiousness and spirituality in patients with bipolar disorder. *International Journal of Psychiatry in Clinical Practice* 19(4). 233–237.
doi:10.3109/13651501.2014.1000929.

Religiousness and spirituality (R/S) are often neglected features among psychiatric patients but important both for quality of life and coping strategies for mental disorders. In patients affected by bipolar disorder (BD), R/S can sometimes be confused with symptoms related to the psychiatric disorder. This study aimed to perform a clinical review of the relationship between R/S and BD. Following a literature review, nine works were found, but only five used homogeneous samples with BD patients. R/S were important when facing symptoms and relapses in the lifeworld. These beliefs influenced the relationship with psychiatrists and spiritual figures of reference. The authors conclude that R/S play a role as a psychosocial variable in the course of BD. However, the hypothesis that the R/S factor can be relevant both in terms of providing a protective effect as well as a provocative element in depressive or hypomanic phases was not fully supported.

Gonçalves, J. P. B., G. Lucchetti, P. R. Menezes & H. Vallada. 2015. Religious and spiritual interventions in mental health care: A systematic review and meta-analysis of randomized controlled clinical trials. *Psychological Medicine* 45(14). 2937–2949.
doi:10.1017/S0033291715001166.

Despite the extensive literature assessing associations between religiosity/spirituality and health, few studies have investigated the clinical applicability of this evidence. The purpose of this paper was to assess the impact of religious/spiritual interventions (RSI) through randomized clinical trials (RCTs). A systematic review was performed in the following databases: PubMed, Scopus, Web of Science, PsycINFO, Cochrane Collaboration, Embase and SciELO. Through the use of a Boolean expression, articles were included if they: (i) investigated mental health outcomes; (ii) had a design consistent with RCTs. Researchers excluded protocols involving intercessory prayer or distance healing. The study was conducted in two phases by reading: (1) title and abstracts; (2) full papers and assessing their methodological quality. Then, a meta-analysis was carried out. Through this method, 4,751 papers were obtained, of which 23 remained included. The meta-analysis showed significant effects of RSI on anxiety general symptoms and in subgroups: meditation; psychotherapy; 1 month of follow-up; and comparison groups with interventions. Two significant differences were found in depressive symptoms: between 1 and 6 months and comparison groups with interventions. In general, studies have shown that RSI decreased stress, alcoholism and depression.

Güngörmüş, Zeynep, Derya Tanrıverdi & Tuğba Gündoğan. 2015. The Effect of Religious Belief on the Mental Health Status and Suicide Probability of Women Exposed to Violence. *Journal of Religion and Health* 54(5). 1573–1583.
doi:10.1007/s10943-014-9877-4.

It is known that violence against women is an important health problem both in the world and in Turkey. Religion is an important factor in preventing suicide and mental disorders by increasing one's ability to cope with events,

channeling his/her perspective on life and the future toward a more positive path satisfying people about topics such as the need to be safe, the need for meaning and the reason for creation. The objective of this study was to determine the effects of religious belief on the mental health status and suicide probabilities of women exposed to violence in Turkey. The study used a descriptive design. The study sample consisted of 135 women who have suffered violence who were consecutively admitted to the Department of Emergency of a State Hospital due to exposed to violence. They entered the study based on their acceptance to the questionnaire. The belief levels of women are based on their own statements and they are all Muslims. The data were collected using a questionnaire form, the Suicide Probability Scale and Brief Symptom Inventory. Statistical analyses were used percentage calculation, chi-square and Kruskal-Wallis test. In conclusion, a negative relationship was determined between the religious belief levels of women exposed to violence in Turkey and their moods and suicide probabilities. Hence, nurses who can stay alone with women for long periods of time can provide advancement in the determination and prevention of suicides decreasing depression via specific methods and overcoming hopelessness.

Gutierrez, Daniel, Jesse Fox & Andrew W. Wood. 2015. Center, Light, and Sound: The Psychological Benefits of Three Distinct Meditative Practices. *Counseling and Values* 60(2). 234–247.
doi:10.1002/cvj.12016.

Meditation has been a popular topic in counseling and psychological research in recent years. However, other meditative practices have been gaining exposure recently of which counselors may not be aware. The current article provides a brief overview of 3 meditative practices: centering prayer, jyoti meditation, and acem meditation. The purpose of this article is to provide counselors with introductions to alternative meditative practices that may be otherwise overshadowed.

Huguelet, Philippe, Sylvia Mohr, Isabelle Rieben, Roland Hasler, Nader Perroud & Pierre-Yves Brandt. 2015. Attachment and coping in psychosis in relation to spiritual figures. *BMC Psychiatry* 15. 237.
doi:10.1186/s12888-015-0617-4.

Studies have found higher levels of insecure attachment in individuals with schizophrenia. Attachment theory provides a framework necessary for conceptualizing the development of interpersonal functioning. Some aspects of the attachment of the believer to his/her spiritual figure are similar to those between the child and his/her parents. The correspondence hypothesis suggests that early child-parent interactions correspond to a person's relation to a spiritual figure. The compensation hypothesis suggests that an insecure attachment history would lead to a strong religiousness/spirituality as a compensation for the lack of felt security. The aim of this study is to explore attachment models in psychosis vs. healthy controls, the relationships between attachment and psychopathology and the attachment processes related to spiritual figures. Attachment models were measured in 30 patients with psychosis and 18 controls with the AAI (Adult Attachment interview) in relationship with psychopathology. Beliefs and practices related to a spiritual figure were investigated by qualitative and quantitative analyses. Patients with psychosis showed a high prevalence of insecure avoidant attachment. Spiritual entities functioned like attachment figures in two thirds of cases. Interviews revealed the transformation of internal working models within relation to a spiritual figure: a compensation process was found in 7 of the 32 subjects who showed a significant attachment to a spiritual figure.

Jagt-Jelsma, W. van der, M. R. de Vries-Schot, Rint de Jong, C. A. Hartman, F. C. Verhulst, H. Klip, P. a. M. van Deurzen & J. K. Buitelaar. 2015. Religiosity and mental health of pre-adolescents with psychiatric problems and their parents: The TRAILS study. *European Psychiatry* 30(7). 845–851.
doi:10.1016/j.eurpsy.2015.07.006.

This study investigated the association between the religiosity of parents and pre-adolescents, and pre-adolescents' psychiatric problems. In a clinic-referred cohort of 543 pre-adolescents at least once referred to a mental health outpatient clinic, mental health problems were assessed using self-reports, parent reports, and teacher reports of child

behavioral and emotional problems. Paternal, maternal, and pre-adolescent religiosity were assessed by self-report. Results indicate that pre-adolescents of actively religious mothers had more internalizing symptoms than pre-adolescents of nonreligious mothers. Harmony and gender did not significantly affect the association between maternal religiosity and internalizing problems. No associations between religiosity of pre-adolescents, religiosity of mothers, religiosity of fathers and/or harmony of parents and externalizing problem behavior have been found. Overall, associations between mental health and religiosity were modest to absent.

- Kemper, Kathi J. & Michael Khirallah. 2015. Acute Effects of Online Mind-Body Skills Training on Resilience, Mindfulness, and Empathy. *Journal of Evidence-Based Complementary & Alternative Medicine* 20(4). 247–253.
doi:10.1177/2156587215575816.

Some studies have begun to show benefits of brief in-person mind-body skills training. Researchers evaluated the effects of 1-hour online elective mind-body skills training for health professionals on mindfulness, resilience, and empathy. Between May and November, 2014, researchers described enrollees for the most popular 1-hour modules in a new online mind-body skills training program; compared enrollees' baseline stress and burnout to normative samples; and assessed acute changes in mindfulness, resilience, and empathy. The 513 enrollees included dietitians, nurses, physicians, social workers, clinical trainees, and health researchers; about 25% were trainees. The most popular modules were the following: Introduction to Stress, Resilience, and the Relaxation Response (n=261); Autogenic Training (n=250); Guided Imagery and Hypnosis for Pain, Insomnia, and Changing Habits (n=112); Introduction to Mindfulness (n=112); and Mindfulness in Daily Life (n=102). Initially, most enrollees met threshold criteria for burnout and reported moderate to high stress levels. Completing 1-hour modules was associated with significant acute improvements in stress, mindfulness, empathy, and resilience.

- Khanna, Surbhi & Bruce Greyson. 2015. Near-Death Experiences and Posttraumatic Growth. *Journal of Nervous and Mental Disease* 203(10). 749–755.
doi:10.1097/nmd.0000000000000362.

Posttraumatic growth denotes positive psychological change after a traumatic experience that is an improvement over the state before the trauma. Inasmuch as it involves existential reevaluation, posttraumatic growth overlaps with spiritual change, although it also encompasses other domains of positive outcome. This study investigated posttraumatic growth and presence and depth of near-death experience at the time of the close brush with death among 251 survivors of a close brush with death, using the Posttraumatic Growth Inventory and the Near-Death Experience (NDE) Scale. Near-death experiences were associated with greater posttraumatic growth than were close brushes with death in the absence of such an experience, and scores on the NDE Scale were significantly correlated with scores on the Posttraumatic Growth Inventory. To the extent that NDEs are interpreted as spiritual events, these findings support prior research suggesting that spiritual factors make a significant contribution to posttraumatic growth and are consistent with the model that posits challenges to the assumptive worldview as a major stimulus to posttraumatic growth.

- Krause, Neal & R. David Hayward. 2015. Assessing Whether Trust in God Offsets the Effects of Financial Strain on Health and Well-Being. *The International Journal for the Psychology of Religion* 25(4). 307–322.
doi:10.1080/10508619.2014.952588.

Having trust in God is widely viewed as an essential component of many faith traditions (e.g., Christianity). Even so, researchers have paid relatively little attention to this core facet of religious life. The purpose of this study was to see if trust in God helps offset the effects of chronic economic problems on self-rated health, depressed affect, and life satisfaction. Data from a nationwide survey of middle-aged and older adults (n=1,535) indicated that the effect of ongoing financial hardship on self-rated health, depressed affect scores, and life satisfaction was reduced for individuals who have greater trust in God.

- Krok, Dariusz. 2015. Religiousness, spirituality, and coping with stress among late adolescents: A meaning-making perspective. *Journal of Adolescence* 45. 196–203.
doi:10.1016/j.adolescence.2015.10.004.

The purpose of this study was to examine the associations between religiousness, spirituality (R/S), and coping among late adolescents within a meaning-making perspective. Specifically, global meaning and situational meaning were examined as potential mediators. Two hundred and twenty one Polish participants (115 women and 106 men) completed the Religious Meaning System Questionnaire, the Self-description Questionnaire of Spirituality, the Meaning in Life Questionnaire, and the Situational Meaning Scale. Results of SEM analysis showed that R/S had both direct and indirect effects on coping, suggesting that global meaning and situational meaning served as partial mediators among late adolescents. The mediating role of global meaning and situational meaning may be more fully understood within the framework of the meaning-making model. Consistent with the model, individuals with higher levels of R/S had a propensity to experience stronger global meaning in life and situational meaning, which in turn contributed to more frequent using coping styles.

- Latzer, Yael, Sarah L. Weinberger-Litman, Barbara Gerson, Anna Rosch, Rebecca Mischel, Talia Hinden, Jeffrey Kilstein & Judith Silver. 2015. Negative Religious Coping Predicts Disordered Eating Pathology Among Orthodox Jewish Adolescent Girls. *Journal of Religion and Health* 54(5). 1760–1771.
doi:10.1007/s10943-014-9927-y.

Recent research suggests the importance of exploring religious and spiritual factors in relation to the continuum of disordered eating. This continuum ranges from mild disordered eating behaviors and attitudes to moderate levels of disordered eating pathology (DEP) through full-blown clinical levels of eating disorders (EDs). The current study is the first to explore the role that religious coping (both positive and negative) plays in the development DEP, which is considered a risk factor for the development of EDs. In addition, the study aims to describe levels of DEP among a non-clinical sample of 102 Orthodox Jewish adolescent females. Participants completed a questionnaire measuring religious coping strategies, DEP and self-esteem. Results indicated that greater use of negative religious coping was associated with higher levels of DEP. Mediation analyses suggested that greater negative religious coping is related to lower levels of self-esteem, which accounts for higher levels of DEP. Furthermore, findings revealed relatively lower overall levels of DEP among this sample, compared to similar populations in Israel and the USA. These results suggest that a strong religious and spiritual identity may serve as a protective factor against DEP.

- Lau, Esther Yuet Ying, Sing-Hang Cheung, Jasmine Lam, C. Harry Hui, Shu-Fai Cheung & Doris Shui Ying Mok. 2015. Purpose-Driven Life: Life Goals as a Predictor of Quality of Life and Psychological Health. *Journal of Happiness Studies* 16(5). 1163–1184.
doi:10.1007/s10902-014-9552-1.

On the basis of self-determination theory, researchers predicted that the pursuit of material goals might negatively affect quality of life and psychological outcomes including sleep quality and mood states. Researchers further hypothesized that the link between religious affiliation and these outcome variables could be explained, at least partially, by life goals. Longitudinal data collected from 700 Chinese adults demonstrated that for both Christians and non-believers, material goals had a detrimental effect on outcome variables measured 6 months later. More importantly, material goals partially mediated the effects of religious affiliation. That is, Christians were different from non-believers on the outcome variables partly because the former did not go after material goals. For these believers, moreover, the pursuit of religion-based goals brought psychological benefits. Not only can certain life goals explain why people with religious faiths have better psychological health and quality of life, they can also explain why not every religious person feels good and is content about their lives.

- López, J., C. Camilli & C. Noriega. 2015. Posttraumatic Growth in Widowed and Non-widowed Older Adults: Religiosity and Sense of Coherence. *Journal of Religion and Health* 54(5). 1612–1628.

doi:10.1007/s10943-014-9876-5.

Older people may experience psychological growth following a life major event. The objective of this study is to analyze the degree of posttraumatic growth (PTG) developed by widowed and non-widowed older adults (n=103) as well as the impact of possible predicting variables such as sociodemographic characteristics, experienced or witnessed life major events, religiosity and sense of coherence. The findings suggest that, in spite of widowhood, elder people develop PTG in the same way that non-widowed elder people. Therefore, the support of a religious community, age, life major events experienced and the subjective meaning given to them correlated with PTG.

Mahintorabi, Somayeh, Mairwen K. Jones, Lynne M. Harris & Alireza Zahiroddin. 2015. Religious observance and obsessive compulsive washing among Iranian women. *Journal of Obsessive-Compulsive and Related Disorders* 7. 35–42.

doi:10.1016/j.jocrd.2015.10.001.

This study examined relationships between religiosity, scrupulosity, cognitive beliefs and Obsessive–Compulsive Disorder (OCD) among High Religious (HR) and Low Religious (LR) Muslim women with OCD washing subtype (OCD-W) who presented for treatment in Tehran. Four groups of women were recruited for the study: HR Muslim women with OCD washing subtype (n=33); HR Muslim women without OCD (n=45); LR Muslim women with OCD-W (n=31); LR Muslim women without OCD (n=30). The OCD-W group had higher scores than the non-OCD group on measures of scrupulosity and beliefs. The HR group had higher scores on religiosity, scrupulosity and beliefs than the LR group. Compared to LR Muslim women with OCD, HR Muslim women were first diagnosed with OCD symptoms at a later age, their OCD symptoms were of maximum intensity at a later age, first sought help for OCD at a later age, were older at the time of their last visit to a health professional, were less likely to have been previously treated for OCD and scored higher on self-report measures of OCD symptomatology at the time of assessment. These findings have implications for models of OCD scrupulosity and for early diagnosis and treatment of OCD for highly religious Iranian Muslim women.

Mannheimer, Andrew H. & Terrence D. Hill. 2015. Deviating from Religious Norms and the Mental Health of Conservative Protestants. *Journal of Religion and Health* 54(5). 1826–1838.

doi:10.1007/s10943-014-9951-y.

Although numerous studies show that religious involvement is associated with favorable mental health outcomes, research also suggests that religious struggles can be psychologically distressing. Building on previous research, this study examines the psychological consequences of deviating from religious norms among Conservative Protestants. Using data from a statewide probability sample of Texas adults (n=463), this study tests the hypothesis that Conservative Protestants who fall short of religious norms for attending religious services, reading scripture, and praying will suffer more psychological distress, anxiety, and depressive symptoms than those who meet or exceed religious expectations. Findings indicate that falling short of population average levels for church attendance and reading of religious scripture is associated with higher levels of psychological distress. Interestingly, falling short of population averages for prayer is unrelated to psychological distress, depressive symptoms, and anxiety.

Miklowitz, David J., Randy J. Semple, Monika Hauser, Dana Elkun, Marc J. Weintraub & Sona Dimidjian. 2015. Mindfulness-Based Cognitive Therapy for Perinatal Women with Depression or Bipolar Spectrum Disorder. *Cognitive Therapy and Research* 39(5). 590–600.

doi:10.1007/s10608-015-9681-9.

The perinatal period is a high-risk time for mood deterioration among women vulnerable to depression. This study examined feasibility, acceptability, and improvement associated with mindfulness-based cognitive therapy (MBCT) in perinatal women with major depressive disorder (MDD) or bipolar spectrum disorder (BSD). Following a diagnostic evaluation, 39 perinatal women with a lifetime history of MDD (n=27) or BSD (n=12) enrolled in an 8-week program of MBCT classes (2 h each) that incorporated meditation, yoga, and mood regulation strategies.

Participants were pregnant (n=12), planning pregnancy (n=11), or up to 1-year postpartum (n=16). Participants were self-referred and most had subthreshold mood symptoms. Assessments of depression, (hypo)mania, and anxiety were obtained by interview and self-report at baseline, post-treatment and at 1- and 6-month post-treatment. Women with a history of MDD were more likely to complete the classes than women with BSD. Of 32 women who completed the classes, 7 (21.9 %) had a major depressive episode during the 6-month post-treatment follow-up. On average, participants with MDD reported improvements in depression from pre- to post-treatment. Mood improvement was not observed in the BSD group. In the full sample, improvements in depression symptoms across time points were associated with increasing mindful tendency scores.

Pereyra, Sergio B., Jonathan G. Sandberg, Roy A. Bean & Dean M. Busby. 2015. A Comparison of the Effects of Negative Communication and Spirituality on Relationship Quality among Different Latino and Anglo Couple Groups. *American Journal of Family Therapy* 43(5). 480–493.
doi:10.1080/01926187.2015.1081083.

The article focuses on a research study conducted to analyze the impact of negative communication and spirituality on relationship quality of individuals belonging to different Latino and Anglo groups. It states that for the study, data from Anglo couples, interethnic Latino and Anglo couples, and Latino couples were gathered and a mediating Actor-Partner Interaction Model (APIM) was used to analyze the data. It discusses a positive relationship between male spirituality and relationship quality.

Pigeon, Wilfred, Christy Allen, Kyle Possemato, Dessa Bergen-Cico & Scott Treatman. 2015. Feasibility and acceptability of a brief mindfulness program for veterans in primary care with posttraumatic stress disorder. *Mindfulness* 6(5). 986–995.
doi:10.1007/s12671-014-0340-0.

Mindfulness-based stress reduction programs have improved psychological health for clinical populations including veterans with posttraumatic stress disorder (PTSD). Veterans with PTSD who seek services in Department of Veterans Affairs primary care are especially in need of brief treatments that can alleviate PTSD symptoms. A clinical demonstration project was carried out to assess the feasibility and acceptability of a brief mindfulness program consisting of four weekly 1.5-h class sessions. Veterans enrolled in primary care with diagnostic or subthreshold PTSD were recruited. The brief mindfulness intervention was feasible to deliver, and veterans were generally satisfied with the program. Despite good retention once a class session was attended, a large number of veterans provided a variety of reasons for not attending the program at all. Veteran feedback that can be addressed to improve the brief mindfulness program is discussed, including enhancing initial attendance.

Pradhan, Basant, Tapan Parikh, Ramkrishna Makani & Madhusmita Sahoo. 2015. Ketamine, Transcranial Magnetic Stimulation, and Depression Specific Yoga and Mindfulness Based Cognitive Therapy in Management of Treatment Resistant Depression: Review and Some Data on Efficacy. *Depression Research and Treatment* 2015. 842817.
doi:10.1155/2015/842817.

Depression affects about 121 million people worldwide and prevalence of major depressive disorder (MDD) in US adults is 6.4%. Treatment resistant depression (TRD) accounts for approximately 12-20% of all depression patients and costs \$29-\$48 billion annually. Ketamine and repetitive transcranial magnetic stimulation (rTMS) have useful roles in TRD, but their utility in long term is unknown. As per the latest literature, the interventions using Yoga and meditation including the mindfulness based cognitive therapy (MBCT) have been useful in treatment of depression and relapse prevention. In this article, researchers present a review of rTMS, ketamine, and MBCT, and also report efficacy of a depression specific, innovative, and translational model of Yoga and mindfulness based cognitive therapy (DepS Y-MBCT), developed by the first author. DepS Y-MBCT as an adjunctive treatment successfully ameliorated TRD symptoms in 27/32 patients in an open label pilot trial in TRD patients. Considering the limitations of existing treatment options, including those of ketamine and rTMS when used as the

sole modality of treatment, the authors suggest a “tiered approach for TRD” by combining ketamine and rTMS (alone or along with antidepressants) for rapid remission of acute depression symptoms and to use DepS Y-MBCT for maintaining remission and preventing relapse.

- Puente, Cecilia Peñacoba, Dolores Marín Morales & Francisco Javier Carmona Monge. 2015. Religious Coping and Locus of Control in Normal Pregnancy: Moderating Effects between Pregnancy Worries and Mental Health. *Journal of Religion and Health* 54(5). 1598–1611. doi:10.1007/s10943-014-9881-8.

Most studies about coping in pregnancy focus on risk pregnancies where it has generally been found that the use of religious coping has a positive effect, although to our knowledge there are no studies that associate religious coping to locus of control. Researchers analyzed, in a sample of 285 Spanish women with normal pregnancies, the effect of both variables on psychiatric symptoms and on the relationship between psychiatric symptoms and pregnancy worries. The results show no association between locus of control and religious coping. Locus of control has a significant influence on the pregnant women’s mental health, while religious coping just adds an additional influence.

- Shonin, Edo, William Van Gordon, Angelo Compare, Masood Zangeneh & Mark D. Griffiths. 2015. Buddhist-derived loving-kindness and compassion meditation for the treatment of psychopathology: A systematic review. *Mindfulness* 6(5). 1161–1180. doi:10.1007/s12671-014-0368-1.

Although clinical interest has predominantly focused on mindfulness meditation, interest into the clinical utility of Buddhist-derived loving-kindness meditation (LKM) and compassion meditation (CM) is also growing. This paper follows the preferred reporting items for systematic reviews and meta-analysis (PRISMA) guidelines and provides an evaluative systematic review of LKM and CM intervention studies. Five electronic academic databases were systematically searched to identify all intervention studies assessing changes in the symptom severity of Diagnostic and Statistical Manual of Mental Disorders (text revision fourth edition) Axis I disorders in clinical samples and/or known concomitants thereof in subclinical/healthy samples. The comprehensive database search yielded 342 papers and 20 studies (comprising a total of 1,312 participants) were eligible for inclusion. The Quality Assessment Tool for Quantitative Studies was then used to assess study quality. Participants demonstrated significant improvements across five psychopathology-relevant outcome domains: (i) positive and negative affect, (ii) psychological distress, (iii) positive thinking, (iv) interpersonal relations, and (v) empathic accuracy. It is concluded that LKM and CM interventions may have utility for treating a variety of psychopathologies. However, to overcome obstacles to clinical integration, a lessons-learned approach is recommended whereby issues encountered during the (ongoing) operationalization of mindfulness interventions are duly considered. In particular, there is a need to establish accurate working definitions for LKM and CM.

- Tabak, Naomi T., William P. Horan & Michael F. Green. 2015. Mindfulness in schizophrenia: Associations with self-reported motivation, emotion regulation, dysfunctional attitudes, and negative symptoms. *Schizophrenia Research* 168(1-2). 537–542. doi:10.1016/j.schres.2015.07.030.

Mindfulness-based interventions are gaining empirical support as alternative or adjunctive treatments for a variety of mental health conditions, including anxiety, depression, and substance use disorders. Emerging evidence now suggests that mindfulness-based treatments may also improve clinical features of schizophrenia, including negative symptoms. However, no research has examined the construct of mindfulness and its correlates in schizophrenia. In this study, researchers examined self-reported mindfulness in patients (n=35) and controls (n=25) using the Five-Facet Mindfulness Questionnaire. They examined correlations among mindfulness, negative symptoms, and psychological constructs associated with negative symptoms and adaptive functioning, including motivation, emotion regulation, and dysfunctional attitudes. As hypothesized, patients endorsed lower levels of mindfulness than controls. In patients, mindfulness was unrelated to negative symptoms, but it was associated with more adaptive emotion

regulation (greater reappraisal) and beliefs (lower dysfunctional attitudes). Some facets of mindfulness were also associated with self-reported motivation (behavioral activation and inhibition). These patterns of correlations were similar in patients and controls. Findings from this initial study suggest that schizophrenia patients may benefit from mindfulness-based interventions because they (a) have lower self-reported mindfulness than controls and (b) demonstrate strong relationships between mindfulness and psychological constructs related to adaptive functioning.

- Vassiliou, Andreas. 2015. Obsessive-Compulsive Symptomatology, Religiosity Levels and the Illusion-of-Control Paradigm in a Non-Clinical Undergraduate Sample. *Journal of Religion and Health* 54(5). 1712–1730.
doi:10.1007/s10943-014-9922-3.

The present research employed the illusion-of-control paradigm to investigate the relationships between Obsessive-Compulsive disorder (OCD) symptoms, religiosity levels, and illusory sense of control (SC). An opportunistic sample of 60 undergraduate students was presented with a pre-programmed series of neutral visual stimuli (i.e. lines) and was expected to try to control the sequence through the use of keyboard presses. Participants assessed their perceived level of control twice throughout the computerized task. In addition, the study was interested at examining the relationship between religiosity and OC behavior and the Santa Clara Strength of Religious Faith Questionnaire (SCSRF) was employed. In proportion to predictions, OCD symptoms were correlated with higher illusory SC; furthermore, religiosity levels were related to some degree to OCD symptoms. The essential role of mental control in OCD is discussed, particularly the significant clinical implications of such an association. Furthermore, the possible contribution of religious affiliations to the maintenance of OC behavior is further discussed.

2.3 SPIRITUALITY & HEALTH: METHOD AND THEORY

- Alvarez-Segura, M., M. F. Echavarría & P. C. Vitz. 2015. Re-conceptualizing Neurosis as a Degree of Egocentricity: Ethical Issues in Psychological Theory. *Journal of Religion and Health* 54(5). 1788–1799.
doi:10.1007/s10943-014-9939-7.

Psychology's historical rejection of ethics has led to an oversimplification of the origins and treatments of mental disorders. In this article, researchers present an analysis of how classical neurosis can be reformulated from an ethical and psychological interaction. They focus on the crucial role that egocentricity plays and argue that this term can help to clarify how ego defensive ethical decisions can undermine psychological capacities and contribute to a progressive depersonalization that can result in typical clinical disorders. In Christian anthropology, the virtues, especially humility and love have a crucial role in the positive growth of human affective and cognitive capacities. In addition, the person in his/her nature is endowed with the capacity to transcend the self and to escape egocentricity through self-giving love of God and of others. This capacity of self-giving is diametrically opposed to egocentricity and opens a new way for possible psychological recovery.

- Arjona, Rubén. 2015. William James and the Varieties of Religious and Drinking Experience: The Case of Pablo Ávila. *Pastoral Psychology* 64(5). 553–566.
doi:10.1007/s11089-015-0658-0.

*Based on William James's idea that the most instructive documents humans are found "along the beaten highway," this paper revisits the life of Pablo Ávila (the author's father-in-law) using Donald Capps's relocation of Erik Erikson's life stages. The essay connects Pablo Ávila's religious and drinking experience to Bill W., the co-founder of Alcoholics Anonymous, and through him, to William James, particularly to James's references to alcohol in *The Varieties* and his response to different forms of anti-alcohol activism. The paper argues that studying individual experience can engender human creativity and offer insights for more effective pastoral caregiving.*

Ballboni, Michael J., Julia Bandini, Christine Mitchell, Zachary D. Epstein-Peterson, Ada Amobi, Jonathan Cahill, Andrea C. Enzinger, John Peteet & Tracy Balboni. 2015. Religion, Spirituality, and the Hidden Curriculum: Medical Student and Faculty Reflections. *Journal of Pain and Symptom Management* 50(4). 507–515.
doi:10.1016/j.jpainsymman.2015.04.020.

Religion and spirituality play an important role in physicians' medical practice, but little research has examined their influence within the socialization of medical trainees and the hidden curriculum. The objective of this article is thus to explore the role of religion and spirituality as they intersect with aspects of medicine's hidden curriculum. Semistructured, one-on-one interviews and focus groups (n=33 respondents) were conducted to assess Harvard Medical School student and faculty experiences of religion/spirituality and the professionalization process during medical training. Using grounded theory, theme extraction was performed with interdisciplinary input (medicine, sociology, and theology), yielding a high inter-rater reliability score. Three domains emerged where religion and spirituality appear as a factor in medical training. First, religion/spirituality may present unique challenges and benefits in relation to the hidden curriculum. Religious/spiritual respondents more often reported to struggle with issues of personal identity, increased self-doubt, and perceived medical knowledge inadequacy. However, religious/spiritual participants less often described relationship conflicts within the medical team, work-life imbalance, and emotional stress arising from patient suffering. Second, religion/spirituality may influence coping strategies during encounters with patient suffering. Religious/spiritual trainees described using prayer, faith, and compassion as means for coping whereas nonreligious/nonspiritual trainees discussed compartmentalization and emotional repression. Third, levels of religion/spirituality appear to fluctuate in relation to medical training, with many trainees experiencing an increase in religiousness/spirituality during training.

Ball, Michael Stephen & Bryan Vernon. 2015. A review on how meditation could be used to comfort the terminally ill. *Palliative & Supportive Care* 13(5). 1469–1472.
doi:10.1017/S1478951514001308.

The objective of this study was to review how meditation could comfort the terminally ill. The methodology was a literature search, which included books, journals, papers in collections, and online databases. The main search engines employed were Google Scholar and the Durham University Library. The main databases consulted were the Christian Meditation Centre, Project Meditation, and Stress-Related Facts and Well-Being at Monash. The present researchers were specifically interested in data acquired from clinical and nonclinical trials. The arguments needed to be based on qualitative and quantitative scientific data. Papers were published between 1985 and 2014. The researchers then subdivided the review into three subcategories: physical, emotional, and self-awareness. When reviewing each category, results were put into tabular form. In each table, the percentage of terminally ill patients (TIPs) and non-terminally ill patients (NTIPs), and whether meditation had comforted them, was noted. Results indicate that there are many areas that have yet to be researched. First, very little work has been done on how meditation affects the physical health of TIPs, including such variables as blood pressure, chronic pain, and sleeping patterns. However, no research has been done on heart disease, hypertension, depression, among others. Second, virtually no research has been conducted on how meditation affects the mental health of TIPs. Notably neglected areas include anxiety, compliance, depression, and stress. Third, no research has been done on whether meditation increases self-awareness in TIPs. In each of these cases, most NTIPs reacted positively; however, no research has been done on why TIPs reacted differently.

Baruth, Meghan, Melissa Bopp, Benjamin L. Webb & Jane A. Peterson. 2015. The Role and Influence of Faith Leaders on Health-Related Issues and Programs in their Congregation. *Journal of Religion and Health* 54(5). 1747–1759.
doi:10.1007/s10943-014-9924-1.

This qualitative study explored the influence of faith leaders on health-related issues within their congregation. Semi-structured interviews with 24 faith leaders found that chronic conditions and poor health behaviors were the top health challenges facing their congregation. A majority mentioned health-related activities taking place at their church. Most believed they had influence on their congregation for issues related to health/wellness, most commonly in the form of increasing awareness. A majority talked about the importance of being a role model. It is important to understand how to most effectively capitalize on the strengths of and engage pastors in health promotion efforts.

- Bassett, A. M., C. Baker & S. Cross. 2015. Religion, assessment and the problem of “normative uncertainty” for mental health student nurses: a critical incident-informed qualitative interview study. *Journal of Psychiatric and Mental Health Nursing* 22(8). 606–615.
doi:10.1111/jpm.12225.

There is limited research around how mental health (MH) student nurses interpret and differentiate between people’s religious and cultural beliefs and the existence of psychopathological symptomatology and experiences. Here researchers focus on one cultural issue that arose from research exploring how MH student nurses approach and interpret religion and culture in their practice, that is, the difficulties in determining the clinical significance of the religious beliefs and experiences expressed by the people they care for. While problems with establishing the cultural boundaries of normality in clinical assessments are an important area of debate in cultural psychiatry, it remains a peripheral issue in MH nurse education. An anthropologically informed qualitative research design underpinned “critical incident” (CI) focused ethnographic interviews with 36 second and third-year MH nursing field students and seven undergraduate MH branch lecturers. Follow up focus groups were also carried out. Interview transcripts were subject to thematic analysis. Four subthemes were identified under the broad theme of the clinical significance of religious-type expression and experience: (1) identifying the difference between delusions and religious belief; (2) identifying whether an experience was hallucination or religious experience; (3) the clinical implications of such challenges; and (4) applying religion-specific knowledge. There are clinical implications that may result from the difficulties with assessing the clinical significance of religious beliefs and experiences, identified in both our research and within international cultural psychiatry literature and research. Misinterpretation and therefore wrongly assessing someone’s experience as pathological is a significant concern. It is suggested that CI analysis could be adapted to help nurses, nursing students and nurse educators recognize the religious dimensions of mental distress, particularly those that then potentially impact upon the accuracy and person centeredness of clinical assessment.

- Bellin, Zvi J. 2015. The Meaning Connection Between Mindfulness and Happiness. *Journal of Humanistic Counseling* 54(3). 221–235.
doi:10.1002/johc.12013.

This article proposes a humanistic-oriented theoretical foundation for meaning in life as a mediator between mindfulness meditation and happiness. Three main functions of mindfulness are introduced: nonidentification, choice, and compassion. These functions are examined through the lens of meaning in life theory. Implications for humanistic counselors are discussed.

- Best, Megan, Lynley Aldridge, Phyllis Butow, Ian Olver, Melanie Price & Fleur Webster. 2015. Assessment of spiritual suffering in the cancer context: A systematic literature review. *Palliative & Supportive Care* 13(5). 1335–1361.
doi:10.1017/S1478951514001217.

An important goal of cancer medicine is relief of patients’ suffering. In view of the clinical challenges of identifying suffering patients, researchers sought to identify valid instruments for assessing the spiritual suffering of people diagnosed with cancer. A systematic review of the literature was conducted in the Medline, Embase, the Cochrane Library, and PsycINFO databases seeking assessment instruments that measure either suffering or one of its synonyms or symptoms. The psychometric properties of the identified measures were compared. A total of 90 articles were identified that supplied information about 58 measures. The constructs examined were: suffering,

hopelessness/demoralization, hope, meaning, spiritual well-being, quality of life where a spiritual/existential dimension was included, distress in the palliative care setting and pain, distress or struggle of a spiritual nature. The Pictorial Representation of Illness and Self Measure (PRISM) (patient completed) was the most promising measure identified for measuring the burden of suffering caused by illness due to its ease of use and the inclusion of a subjective component. The authors conclude that, although the appropriateness of any measure for the assessment of spiritual suffering in cancer patients will depend on the context in which it is intended to be utilized, the PRISM is promising for measuring the burden of suffering due to illness.

Buchholz, Laura. 2015. Exploring the promise of mindfulness as medicine. *JAMA: Journal of the American Medical Association* 314(13). 1327–1329.
doi:10.1001/jama.2015.7023.

This article explores the promise of mindfulness as medicine. A new frontier in treatment for mental illnesses and other chronic conditions may not come from pharmaceutical companies, but from within, as mindfulness practices gain traction. Mindfulness practices as they are known today are rooted in 2500-year-old Buddhist meditation practices and are often described as "...paying attention to the present moment experiences with openness, curiosity, and a willingness to be with what is." Whether physicians choose to recommend mindfulness practices to their patients may ultimately depend not just on accessibility, but on their willingness to incorporate mindfulness approaches into their clinical toolbox that are supported by the evidence base.

Canzona, Mollie Rose, Emily Bylund Peterson, Melinda M. Villagran & Dean A. Seehusen. 2015. Constructing and communicating privacy boundaries: How family medicine physicians manage patient requests for religious disclosure in the clinical interaction. *Health Communication* 30(10). 1001–1012.
doi:10.1080/10410236.2014.913222.

Religion/spirituality (R/S) is an important component of some patients' psychosocial framework when facing illness. While many patients report an increased desire for R/S dialogue in clinical interaction, especially when facing a frightening diagnosis, some physicians report discomfort talking about R/S and hold various beliefs regarding the appropriateness of such discussions. Not only do physicians manage conversations centering on patient disclosures in the clinical visit, they must also navigate requests to share their own personal information. Farber et al. (2000) found that over a 12-month period nearly 40% of physicians reported that patients asked questions that transgressed professional boundaries. This article uses Petronio's communication privacy management theory as a lens through which to situate our understanding of how family medicine physicians construct and communicate privacy boundaries in response to patient requests for religious disclosure. Results provide an in-depth theoretical understanding of issues surrounding religious disclosure in the medical visit and expand the discussion on health care providers' personal and professional privacy boundaries as documented by Petronio and Sargent (2011). Implications for health care training and practice are discussed.

Carey, Lindsay B. & Jeffrey Cohen. 2015. The Utility of the WHO ICD-10-AM Pastoral Intervention Codings Within Religious, Pastoral and Spiritual Care Research. *Journal of Religion and Health* 54(5). 1772–1787.
doi:10.1007/s10943-014-9938-8.

The World Health Organization (WHO) "Pastoral Intervention Codings" were first released in 2002 as part of the International Statistical Classification of Diseases and Related Health Problems (WHO 2002). The purpose of the WHO pastoral intervention codings (colloquially abbreviated as "WHO-PICs") was to record and account for the religious, pastoral and/or spiritual interventions of chaplains and volunteers providing care to patients and other clients experiencing religious and/or spiritual health and well-being issues. The intent of such WHO codings was to provide information in five areas: statistical, research, clinical, education and policy. The purpose of this paper predominantly accounts for research although it does intersect and relate to other WHO priorities. Over the past 10

years, research by the current and associated authors to test the efficacy of the WHO-PICs has been implemented in a number of different health and welfare contexts that have engaged chaplaincy personnel. In summary, while the WHO-PICs are yet to be more widely utilized internationally, the codings have largely proven to be valuable indices appropriate to a variety of contexts. Research utilizing the WHO-PICs, however, has also revealed the necessity for a number of changes and inclusions to be implemented. Recommendations concerning the future utilisation of the WHO-PICs are made, as are recommendations for these codings to be further developed and promoted by the WHO, so as to more accurately record religious, pastoral and spiritual interventions.

- Charzyńska, Edyta. 2015. Multidimensional Approach Toward Spiritual Coping: Construction and Validation of the Spiritual Coping Questionnaire (SCQ). *Journal of Religion and Health* 54(5). 1629–1646.
doi:10.1007/s10943-014-9892-5.

The aim of this research was to construct the Spiritual Coping Questionnaire (SCQ). Two studies have been carried out: the first on the sample of 1,296 persons facing stressful situations, and the second, on 352 persons undergoing alcohol addiction therapy. The first study provided data for PCA and CFA, calculation of internal consistency, test-retest reliability and descriptive statistics of the questionnaire. The second study allowed the author to verify the construct and criterion validity of the tool. The final version of the SCQ is composed of 32 items constituting two scales: positive and negative spiritual coping. The scale of positive spiritual coping includes four subscales-domains (personal, social, environmental and religious), and the scale of negative spiritual coping, three subscales (personal, social and religious). The validity and reliability of the tool are satisfactory. The questionnaire can be used to measure spiritual coping, both among religious and non-religious people.

- Choi, Philip J., Farr A. Curlin & Christopher E. Cox. 2015. “The Patient Is Dying, Please Call the Chaplain”: The Activities of Chaplains in One Medical Center’s Intensive Care Units. *Journal of Pain and Symptom Management* 50(4). 501–506.
doi:10.1016/j.jpainsymman.2015.05.003.

Patients and families commonly experience spiritual stress during an intensive care unit (ICU) admission. Although most patients report that they want spiritual support, little is known about how these issues are addressed by hospital chaplains. This was a retrospective cross-sectional study of adult ICUs at an academic medical center. Measures included days from ICU admission to initial chaplain visit, days from chaplain visit to ICU death or discharge, hospital and ICU lengths of stay, severity of illness at ICU admission and chaplain visit, and chart documentation of chaplain communication with the ICU team. Of a total of 4,169 ICU admissions over six months, 248 (5.9%) patients were seen by chaplains. Of the 246 patients who died in an ICU, 197 (80%) were seen by a chaplain. There was a median of two days from ICU admission to chaplain encounter and a median of one day from chaplain encounter to ICU discharge or death. Chaplains communicated with nurses after 141 encounters (56.9%) but with physicians after only 14 encounters (5.6%); there was no documented communication in 55 encounters (22%). The authors conclude that, in the ICUs at this tertiary medical center, chaplain visits are uncommon and generally occur just before death among ICU patients. Communication between chaplains and physicians is rare. Chaplaincy service is primarily reserved for dying patients and their family members rather than providing proactive spiritual support. These observations highlight the need to better understand challenges and barriers to optimal chaplain involvement in ICU patient care.

- Chopra, Rohit & Corina Sas. 2015. MeditAid: A wearable adaptive neurofeedback-based system for training mindfulness state. *Personal & Ubiquitous Computing* 19(7). 1169–1182.
doi:10.1007/s00779-015-0870-z.

A recent interest in interaction design is towards the development of novel technologies emphasizing the value of mindfulness, monitoring, awareness, and self-regulation for both health and well-being. Whereas existing systems have focused mostly on relaxation and awareness of feelings, there has been little exploration on tools supporting the

self-regulation of attention during mindfulness sitting meditation. This paper describes the design and initial evaluation of MeditAid, a wearable system integrating electroencephalography technology with an adaptive aural entrainment for real-time training of mindfulness state. The system identifies different meditative states and provides feedback to support users in deepening their meditation. Researchers report on a study with 16 meditators about the perceived strengths and limitations of the MeditAid system. They demonstrate the benefits of binaural feedback in deepening meditative states, particularly for novice meditators.

Crane, Rebecca S., Steven Stanley, Michael Rooney, Trish Bartley, Lucinda Cooper & Jody Mardula. 2015. Disciplined improvisation: Characteristics of inquiry in mindfulness-based teaching. *Mindfulness* 6(5). 1104–1114.
doi:10.1007/s12671-014-0361-8.

Evidence for the effectiveness of mindfulness-based stress reduction (MBSR) and mindfulness-based cognitive therapy (MBCT) is rapidly growing as interest in this field expands. By contrast, there are few empirical analyses of the pedagogy of MBSR and MBCT. Development of the evidence base concerning the teaching of MBCT or MBSR would support the integrity of the approach in the context of rapid expansion. This paper describes an applied conversation analysis (CA) of the characteristics of inquiry in the MBSR and MBCT teaching process. Audio-recordings of three 8-week MBCT and MBSR classes, with 24, 12, and 6 participants, were transcribed and systematically examined. The study focused on the teacher-led interactive inquiry which takes place in each session after a guided meditation practice. The study describes and analyzes three practices within the inquiry process that can be identified in sequences of talk: turn-taking talk involving questions and reformulations; the development of participant skills in a particular way of describing experience; and talk that constructs intersubjective connection and affiliation within the group. CA enables fine-grained analysis of the interactional work of mindfulness-based inquiry. Inquiry is a process of disciplined improvisation which is both highly specific to the conditions of the moment it took place in and uses repeated and recognizable patterns of interaction.

Davidson, Richard J. & Alfred W. Kaszniak. 2015. Conceptual and methodological issues in research on mindfulness and meditation. *American Psychologist* 70(7). (The Emergence of Mindfulness in Basic and Clinical Psychological Science). 581–592.
doi:10.1037/a0039512.

Both basic science and clinical research on mindfulness, meditation, and related constructs have dramatically increased in recent years. However, interpretation of these research results has been challenging. The present article addresses unique conceptual and methodological problems posed by research in this area. Included among the key topics is the role of first-person experience and how it can be best studied, the challenges posed by intervention research designs in which true double-blinding is not possible, the nature of control and comparison conditions for research that includes mindfulness or other meditation-based interventions, issues in the adequate description of mindfulness and related trainings and interventions, the question of how mindfulness can be measured, questions regarding what can and cannot be inferred from self-report measures, and considerations regarding the structure of study design and data analyses. Most of these topics are germane to both basic and clinical research studies and have important bearing on the future scientific understanding of mindfulness and meditation.

Ernecoff, Natalie C., Farr A. Curlin, Praewpannarai Buddadhumaruk & Douglas B. White. 2015. Health Care Professionals' Responses to Religious or Spiritual Statements by Surrogate Decision Makers during Goals-of-Care Discussions. *JAMA Internal Medicine* 175(10). 1662–1669.
doi:10.1001/jamainternmed.2015.4124.

Although many patients and their families view religion or spirituality as an important consideration near the end of life, little is known about the extent to which religious or spiritual considerations arise during goals-of-care conversations in the intensive care unit. The objective of this article is to determine how frequently surrogate decision makers and health care professionals discuss religious or spiritual considerations during family meetings in the

intensive care unit and to characterize how health care professionals respond to such statements by surrogates. A multicenter prospective cohort study was conducted over three years, regarding 249 goals-of-care conversations between 651 surrogate decision makers and 441 health care professionals in 13 intensive care units across the United States. Audio-recorded conversations between surrogate decision makers and health care professionals were analyzed, transcribed, and qualitatively coded. Constant comparative methods to develop a framework for coding religious and spiritual statements were applied to the transcripts. Of 457 surrogate decision makers, 355 (77.6%) endorsed religion or spirituality as fairly or very important in their life. Discussion of religious or spiritual considerations occurred in 40 of 249 conferences (16.1%). Surrogates were the first to raise religious or spiritual considerations in most cases (26 of 40). Surrogates' statements (n=59) fell into the following 5 main categories: references to their religious or spiritual beliefs, including miracles (n=34); religious practices (n=19); religious community (n=8); the notion that the physician is God's instrument to promote healing (n=4); and the interpretation that the end of life is a new beginning for their loved one (n=4). Some statements fell into more than 1 category. In response to surrogates' religious or spiritual statements, health care professionals redirected the conversation to medical considerations (n=15), offered to involve hospital spiritual care providers or the patient's own religious or spiritual community (n=14), expressed empathy (n=13), acknowledged surrogates' statements (n=11), or explained their own religious or spiritual beliefs (n=3). In only 8 conferences did health care professionals attempt to further understand surrogates' beliefs, for example, by asking questions about the patient's religion.

- Fang, Mei Lan, Lorraine Halinka Malcoe, Judith Sixsmith, Louise Yuen Ming Wong & Matthew Callender. 2015. Exploring traditional end-of-life beliefs, values, expectations, and practices among Chinese women living in England: Informing culturally safe care. *Palliative & Supportive Care* 13(5). 1261–1274.
doi:10.1017/S1478951514001126.

This study explores the end-of-life (EoL) beliefs, values, practices, and expectations of a select group of harder-to-reach Chinese women living in England. A cultural safety approach was undertaken to interpret 11 in-depth, semistructured interviews. Interviews were conducted in Mandarin and Cantonese. Transcripts were translated and back-translated by two researchers. Findings were analyzed using the technical analytical principles of grounded theory. The key themes generated from our analysis include: acculturation; differential beliefs and norms in providing care: family versus health services; language and communication; Eastern versus Western spiritual practices and beliefs; and dying, death, and the hereafter. The analysis revealed variations between/within Eastern and Western culture that resulted in pronounced, and oftentimes gendered, differences in EoL care expectations.

- Franzen, Aaron B. 2015. Physicians in the USA: Attendance, Beliefs and Patient Interactions. *Journal of Religion and Health* 54(5). 1886–1900.
doi:10.1007/s10943-014-9986-0.

While much religion-health research depends on social support explanations, little is known about whether religious support is also a part of clinical interactions. How many physicians include religious/spiritual topics in clinical conversations? What characteristics are related to inclusion or avoidance? Using a national sample (n=1,144), this study provides an overview of religious beliefs and practices of physicians in the USA and their patient interactions. Physician attendance rates are related to the inclusion of religious/spiritual topics, but the religious/spiritual orientation of physicians more closely relates to religious/spiritual patient interactions. Further, some physician specialties have more religious/spiritual physicians than others, providing additional reason to think religious/spiritual patient conversations are not equally distributed throughout the medical landscape.

- Giske, Tove & Pamela H. Cone. 2015. Discerning the healing path: How nurses assist patient spirituality in diverse health care settings. *Journal of Clinical Nursing* 24(19-20). 2926–2935.
doi:10.1111/jocn.12907.

The objective of this study was to examine nurses' experiences in spiritual care in diverse clinical settings, preferably not palliative care. Classical grounded theory methodology with open and selective coding was used to identify the participants' main concern and the strategies they used to resolve it, and to develop a substantive grounded theory. Data were collected in 2008 and 2014 during eight focus group interviews with a total of 22 nurses recruited from a master's program, postgraduate programs and a local hospital. Data were analyzed through constant comparison until the grounded theory emerged. The participants' main concern was how to assist the patient to alleviation. The participants resolved this by Discerning the healing path, which comprises three stages: Tuning in on spirituality, Uncovering deep concerns and Facilitating the healing process. These three stages are accompanied all the way by the participants' Willingness to overcome own comfort zone and Building a trusting relationship.

Gockel, Annemarie. 2015. Practicing Presence: A Curriculum for Integrating Mindfulness Training Into Direct Practice Instruction. *Journal of Social Work Education* 51(4). 682–690.
doi:10.1080/10437797.2015.1076275.

Mindfulness training is increasingly being recommended as a vehicle for fostering clinical skill development across the helping professions. This teaching note introduces a curriculum for integrating mindfulness training into a foundational social work practice course. Research supporting the potential efficacy of applying mindfulness to social work training and practice is reviewed, and the application of the curriculum is described in detail. Student responses to the training are integrated with a description of relevant exercises, and implications for social work education are considered.

Harrington, Anne & John D. Dunne. 2015. When mindfulness is therapy: Ethical qualms, historical perspectives. *American Psychologist* 70(7). (The Emergence of Mindfulness in Basic and Clinical Psychological Science). 621–631.
doi:10.1037/a0039460.

In the past 20 years, mindfulness therapeutic programs have moved firmly into the mainstream of clinical practice and beyond. As they have, researchers have also seen the development of an increasingly vocal critique. At issue is often less whether or not these mindfulness practices “work,” and more whether there is a danger in dissociating them from the ethical frameworks for which they were originally developed. Mindfulness, the argument goes, was never supposed to be about weight loss, better sex, helping children perform better in school, helping employees be more productive in the workplace, or even improving the functioning of anxious, depressed people. It was never supposed to be a merchandized commodity to be bought and sold. The larger clinical and religious community, however, has not always been troubled by the idea that meditation might sometimes be used as a highly pragmatic remedy for various ailments. Why, then, are people troubled now? This essay is an effort to recapture a bigger historical perspective on current ethical qualms: to move beyond criticism and instead to try to understand the anatomy of our discontent.

Helsel, Philip. 2015. Witnessing the Body's Response to Trauma: Resistance, Ritual, and Nervous System Activation. *Pastoral Psychology* 64(5). 681–693.
doi:10.1007/s11089-014-0628-y.

This essay describes the body's states of nervous system activation after trauma—focusing on intimate partner violence and sexual assault against women—as signs of resistance and posits that caregivers should attend to these phenomena as the body's way of communicating. Trauma triggers nervous system responses, and understanding these responses helps caregivers to read the body language of survivors and thus avoid retraumatizing them in pastoral care. Fundamentally, rather than being seen as symptomatic of a disorder, the aftereffects of trauma should be seen as a survivor's witness to the profound harm experienced as well as to the image of God in the survivor. This approach offers ritual and social ways of addressing this harm.

Humphrey, Caroline. 2015. Evil, Child Abuse and the Caring Professions. *Journal of Religion and Health* 54(5). 1660–1671.
doi:10.1007/s10943-014-9898-z.

The aim of this paper is to explore the ways in which the concept of evil has been invoked in relation to child abuse. First, the scene is set by juxtaposing professional discourses which have eschewed the concept of evil and public opinion which is affronted by the evil of child abuse. Second, the author discusses the work of some therapists in the USA whose work with perpetrators and survivors has led them to frame the causes and consequences of child abuse in terms of moral evil. Third, case studies of Satanic abuse and spirit possession in the UK are drawn upon to illustrate that some social workers and religious communities have interpreted child abuse as an outcome of or as an antidote to metaphysical evil. Finally, there is a critical appraisal of the merits of referencing moral and metaphysical evil in the discourses of caring professionals, with a suggestion that a mythical-metaphorical conception of evil could be a more flexible and fruitful resource for therapeutic work.

Irajpour, Alireza, Fereshteh Ghaljaei & Mousa Alavi. 2015. Concept of Collaboration from the Islamic Perspective: The View Points for Health Providers. *Journal of Religion and Health* 54(5). 1800–1809.
doi:10.1007/s10943-014-9942-z.

Collaboration involves direct and open communication and respect for different perspectives. In particular, religious literature has many references to collaboration. This study is a report of knowledge synthesis based on qualitative systematic review by content analysis. The study surveys the concept of collaboration from the Islamic point of view and intends to answer the question, “Does the Quran deal with the use of collaboration in human activities?” This study was conducted using electronic documents from websites related to Islamic and Quran sciences, such as Howzab.net, Nashriat.ir, Tebyan.net and Google Scholar from 1950 until 2013 by focusing on the keywords, collaboration and Islam, and then retrieving the Islamic document (Quran and Hadith). The language in which the search was conducted was English and Persian. Nearly, 28 articles and 72 books related to this topic were found and after applying the search criteria, only 13% of the references were found to be applicable. In the Quran, collaboration is equivalent to Taavon, and Muslims are requested to collaborate in their affairs and never collaborate with each other for illegal affairs. Islam asserts that everyone requires social relationship in their life. God has enacted mutual rights for people and meeting these requirements is only possible through collaboration and respecting mutual rights.

Janse van Rensburg, A. B. R., M. Poggenpoel, C. P. H. Myburgh & C. P. Szabo. 2015. Defining and Measuring Spirituality in South African Specialist Psychiatry. *Journal of Religion and Health* 54(5). 1839–1855.
doi:10.1007/s10943-014-9943-y.

To define the meaning of “spirituality” in a South African phenomenological, theory-generating qualitative inquiry, theory construction methodology was used. This refers to the tradition of nursing theory development, where a central core concept identified from the integrated data-in this case, interviews and the literature content-had to be defined. A major focus of the study was to distinguish spirituality from religion. The denotative and connotative meanings of “spirituality” were explored to establish the components for a definition. The attributes of this definition included that spirituality constitutes a “quality”, a “journey”, a “relationship” as well as a “capacity”. While these items derived from this local definition of spirituality can be proposed for inclusion in a questionnaire for measuring spirituality in a South African context, the limits of the scope of the explorative qualitative inquiry from which it was derived must be considered.

Jeppsen, Benjamin, Patrick Pössel, Stephanie Winkeljohn Black, Annie Bjerg & Don Wooldridge. 2015. Closeness and Control: Exploring the Relationship between Prayer and Mental Health. *Counseling and Values* 60(2). 164–185.
doi:10.1002/cvj.12012.

This study explored closeness to God and God-mediated control as mediators in the relationship between prayer and mental health. The authors tested 3 models for mediation using structural equation modeling to assess the separate and combined effects in an online sample of 330 praying adults from predominantly Christian backgrounds. Although both mediators were relevant when entered separately, closeness to God proved to be a superior mediator when both variables were entered in 1 model. Counselors should consider prayer behaviors when culturally relevant and encourage meditative and colloquial prayer for clients where increased sources of perceived social support would be beneficial.

Jerath, Ravinder & Molly W. Crawford. 2015. How Does the Body Affect the Mind? Role of Cardiorespiratory Coherence in the Spectrum of Emotions. *Advances in Mind-Body Medicine* 29(4). 4–16.

The brain is considered to be the primary generator and regulator of emotions; however, afferent signals originating throughout the body are detected by the autonomic nervous system (ANS) and brainstem, and, in turn, can modulate emotional processes. During stress and negative emotional states, levels of cardiorespiratory coherence (CRC) decrease, and a shift occurs toward sympathetic dominance. In contrast, CRC levels increase during more positive emotional states, and a shift occurs toward parasympathetic dominance. The dynamic changes in CRC that accompany different emotions can provide insights into how the activity of the limbic system and afferent feedback manifest as emotions. The authors propose that the brainstem and CRC are involved in important feedback mechanisms that modulate emotions and higher cortical areas. That mechanism may be one of many mechanisms that underlie the physiological and neurological changes that are experienced during pranayama and meditation and may support the use of those techniques to treat various mood disorders and reduce stress.

Khan, Sarah & Gillian Woolhead. 2015. Perspectives on cervical cancer screening among educated Muslim women in Dubai (the UAE): a qualitative study. *BMC Womens Health* 15. 90. doi:10.1186/s12905-015-0252-8.

Cervical cancer (CC) is the seventh leading cause of death among women in the United Arab Emirates (UAE), with most deaths attributed to late detection of this cancer. The UAE lacks a national CC screening program. Thus, cervical screening is only performed opportunistically during women's visits to health facilities. CC screening rates in the UAE are as low as 16.9%, and little is known about the perspectives of the nation's educated Muslim women regarding screening. Consequently, the aim of this study is to explore Muslim women's perspectives towards cervical screening in Dubai to promote strategies for increasing its uptake, thereby leading to a decrease in morbidity and mortality associated with CC. Interpretivist and social constructivist epistemological approaches were applied for this qualitative study. Data were obtained through 13 in-depth interviews. Purposive and snowballing methods were used to recruit six South Asian women and seven Emirati women living in Dubai. Thematic content analysis was concurrently applied with comparative analysis to the data. Four themes regarding women's perceptions of CC emerged from the data. First, CC was considered a "silent disease" that could be detected with early screening. However, it was also associated with extramarital sexual relations, which negatively influenced screening uptake. Second, women's fear, pain and embarrassment, along with cultural influences, deterred them from undergoing screening. Third, a growing mistrust of allopathic medicine and impersonal healthcare promoted a negative view of screening. Last, women became aware of screening mainly when they were pregnant or receiving fertility treatment.

Kopacz, Marek S. & Elizabeth Karras. 2015. Student Service Members and Veterans Who Access Pastoral Care for the Purposes of Mental Health Support. *Journal of American College Health* 63(7). 496–501. doi:10.1080/07448481.2014.923430.

This article seeks to describe the demographic characteristics of student service members and veterans (SSM/V) who seek pastoral care for mental health support, and to evaluate patterns of access to mental health care providers among pastoral care users and nonusers. Participants were respondents to the Fall 2011 National College Health

Assessment who reported a history of military service and ever having sought mental health care (n=331). One-third of participants used pastoral care. Users were more likely to be male and older. No significant differences were noted for race/ethnicity, sexual orientation, or exposure to hazardous duty. Users had a greater than 6-fold increase in proportional odds of accessing multiple providers.

Lepherd, Laurence. 2015. Spirituality: Everyone has it, but what is it? *International Journal of Nursing Practice* 21(5). 566–574.
doi:10.1111/ijn.12285.

Spirituality has been the subject of discussion over many years, yet understanding its nature, and usefulness during illness, can be elusive. Nurses and other health-care practitioners can often be in the position to help patients discuss spiritual matters because of their direct contact on a frequent basis, but might not feel confident to do so because the subject can appear to be overly complex. This paper summarizes some of the essential elements of spirituality as synthesized from literature that refers to it. The literature draws attention to spirit as the core of a person's being, and the notion that spirituality comprises multiple dimensions that exist internally or become externally manifest through behaviors. The presence and use of spirituality can lead to such outcomes as peace of mind, self-fulfillment and alleviation of suffering. Underpinning all spirituality is the concept of transcendence where a person can be 'lifted up' above the challenges of illness.

Lin, Yu-Ling, Kun-Ming Rau, Yi-Hui Liu, Yu-Hua Lin, Jeremy Ying & Chia-Chan Kao. 2015. Development and validation of the Chinese Version of Spiritual Interests Related Illness Tool for patients with cancer in Taiwan. *European Journal of Oncology Nursing* 19(5). 589–594.
doi:10.1016/j.ejon.2015.03.005.

The purpose of the study was to develop and validate the Chinese Version of Spiritual Interests Related Illness Tool (C-SpIRIT) for patients with cancer in Taiwan. Translation, adaptation, and content validation were performed based on the 44-item Spiritual Interests Related Illness Tool. The psychometric validation was conducted based on 260 participants who were recruited from the oncology outpatient clinic of a medical center in southern Taiwan. The data were analyzed using exploratory factor analysis, Cronbach's alpha, and Pearson's correlations. Five subscales (related to beliefs/religion, positive attitudes toward life, love to/from others, seeking for the meaning of life, and peaceful mind) were extracted from an exploratory factor analysis. The five subscales (with 21 items) accounted for 50.43% of the variance. The authors conclude that this preliminary 21-item and 5-factor constructed C-SpIRIT demonstrated a valid and reliable instrument to assess the spiritual needs of patients with cancer in Taiwan.

Paley, John. 2015. Why the cognitive science of religion cannot rescue “spiritual care.” *Nursing Philosophy: An International Journal for Healthcare Professionals* 16(4). 213–225.
doi:10.1111/nup.12102.

Peter Kevern believes that the cognitive science of religion (CSR) provides a justification for the idea of spiritual care in the health services. In this paper, Paley suggests that he is mistaken on two counts. First, CSR does not entail the conclusions Kevern wants to draw. His treatment of it consists largely of nonsequiturs. Paley show this by presenting an account of CSR, and then explaining why Kevern's reasons for thinking it rescues 'spirituality' discourse do not work. Second, the debate about spirituality-in-health is about classification: what shall count as a 'spiritual need' and what shall count as 'spiritual care'. It is about the politics of meaning, an exercise in persuasive definition. The function of 'spirituality' talk in health care is to change the denotation of 'spiritual', and attach its indelibly religious connotations to as many health-related concepts and practices as possible. CSR, however plausible it may be as a theory of the origins and pervasiveness of religious belief, is irrelevant to this debate.

Pedroni, Ingrid. 2015. Finding new ways of belonging through religious experience in the framework of a therapeutic encounter. *International Journal of Psychoanalytic Self Psychology* 10(4). 343–354.
doi:10.1080/15551024.2015.1073996.

One of the major innovations in contemporary psychoanalysis is the dismissal of Freud's unilateral assumption of religious beliefs as nothing more than a childish regression, in favor of a more complex consideration of their evolving potentials in the framework of an empathic affective connection. Winnicott, Loewald, and Kohut have contributed to a reevaluation of the primary process as a transitional space where rigid distinctions between subject and object are blurred so that creative and spiritual experiences can take place. This article relates to three clinical cases, outlining, in different ways, the transformative power in self and self-with-other representations inherent in a dialogue over intimate religious feelings, when beliefs and the search for spirituality are received as a crucial feature of a developing self, an essential condition for new relational patterns fostering a rediscovered sense of belonging within an accomplished sense of personal freedom. When this happens, analyst and patient may discover their shared personal disposition toward spiritual values and the transformative potential inherent in the dialogue over these issues, quite independently from the effective contents of their specific religious attitudes.

Peng, Wenbo, David W. Sibbritt, Louise Hickman & Jon Adams. 2015. Association between use of self-prescribed complementary and alternative medicine and menopause-related symptoms: A cross-sectional study. *Complementary Therapies in Medicine* 23(5). 666–673. doi:10.1016/j.ctim.2015.07.004.

The objective of this research is to examine the association between self-prescribed complementary and alternative medicine use and menopause-related symptoms, stratified by menopausal status. Data were obtained from a cross-sectional survey of a nationally representative sample of 10,011 menopausal women from the Australian Longitudinal Study on Women's Health, conducted in 2010. Multivariable logistic regression models were applied to identify if the use of selected self-prescribed complementary and alternative medicine was significantly associated with a range of menopause-related symptoms. Results revealed that vitamins/minerals were more likely to be used by natural menopausal women experiencing anxiety and/or stiff/painful joints. Yoga/meditation was more likely to be used by women with hysterectomy or natural menopausal women experiencing anxiety. Herbal medicines were more likely to be used by natural menopausal women experiencing anxiety, tiredness, and/or stiff/painful joints, and by women with oophorectomy experiencing tiredness. Aromatherapy oils were more likely to be used by natural menopausal women experiencing night sweats and by women with hysterectomy experiencing anxiety. Chinese medicines were more likely to be used by women with oophorectomy experiencing stiff/painful joints and/or palpitations.

Rassool, G. Hussein. 2015. Cultural Competence in Counseling the Muslim Patient: Implications for Mental Health. *Archives of Psychiatric Nursing* 29(5). 321–325. doi:10.1016/j.apnu.2015.05.009.

Given the rapidly growing population of Muslims in Western societies, it is imperative to develop a better understanding of the mental health needs and concerns of this community. Muslim religious beliefs have an impact on the mental health of individuals, families and communities. The lack of understanding of the interplay between religious influences on health or sickness behaviors can have a significant effect upon the delivery of nursing practice. The Muslim community is experiencing social exclusion (social exclusion correlates with mental health problems) related to their cultural and religious identity. In addition, the emergence of radical extremism and the resulting media coverage have magnified this problem. Misunderstanding the worldview of the patient can lead to ethical dilemmas, practice problems, and problems in communication. Often, Muslim individuals are stigmatized and families are rejected and isolated for their association with mental health problems, addiction and suicide. There are indicators that Muslims experience mental ill health, but that they either are unidentified by mainstream mental health services or present late to the services. The aims of the paper are to examine the religious and cultural influences on mental health beliefs of Muslims, and provide an understanding of mental health problems, and its implications in counseling and spiritual interventions.

Shaikh, Masood Ali, Anila Kamal & Irum Naqvi. 2015. Gender association of prayer for health: Perspective from university students in Islamabad and Rawalpindi. *JPMA. The Journal of the Pakistan Medical Association* 65(10). 1116–1118.

The role of religion and spirituality in coping with disease and promoting health has been reported in many parts of the world. However, no scientific studies on the use of prayers for health and wellbeing have been reported from Pakistan. A cross-sectional survey, using a self-administered questionnaire, was conducted among 1342 graduate and undergraduate students in the twin cities of Islamabad and Rawalpindi. A huge majority of students had prayed for their own as well as their family members' health in the preceding three months. There is a need to better understand the role in Pakistan of prayers related to health.

Snowden, Austyn & Mick Fleming. 2015. Validation of the electronic Holistic Needs Assessment. *SpringerPlus* 4. 623.
doi:10.1186/s40064-015-1401-0.

Macmillan Cancer Support UK have developed an electronic Holistic Needs Assessment (eHNA) to help people living with cancer express all their needs, and help those helping them better target support. eHNA consists of 48 items each ranked from zero (no problem) to 10. There has been no psychometric analysis of this tool and so its validity and reliability are untested. The aim of this study was to evaluate the psychometric properties of the eHNA by examining its construct validity. Objectives were to test whether the eHNA measured holistic concerns and analyze the factor structure of the eHNA. Objectives were achieved through a secondary analysis of 5421 responses to eHNA using concurrent application of Rasch analysis and principal component analysis. All the items bar one fit with the Rasch rating model and were equivalently important to people. Differential item functioning was evident according to whether people were described as curative or not. A 12-factor solution explained 46 % variance. Of this the emotional/spiritual factor explained the most variance accounting for 15 %. The eHNA was internally consistent and conceptually coherent with the construct of holistic needs assessment. Clinical focus is best directed to the individual items highlighted by the patient except where patients check too many problems for the clinician to accurately prioritize. In these cases only, the emotional/spiritual factor may help identify appropriate clinical action.

Tamagawa, Rie, Michael Specca, Joanne Stephen, Barbara Pickering, Linette Lawlor-Savage & Linda E. Carlson. 2015. Predictors and effects of class attendance and home practice of yoga and meditation among breast cancer survivors in a Mindfulness-Based Cancer Recovery (MBCR) program. *Mindfulness* 6(5). 1201–1210.
doi:10.1007/s12671-014-0381-4.

Previous studies have demonstrated health benefits of mindfulness-based interventions (MBIs) among cancer patients. While sustained mindfulness practice is an integral part of MBIs, few studies have examined the role of home practice on intervention outcomes. Also, little is known about characteristics of those who attend more classes and practice more yoga and meditation. Hence, this study investigated predictors and outcomes of engagement in a Mindfulness-Based Cancer Recovery (MBCR) program. Questionnaire data and home practice logs of 38 breast cancer survivors were collected before and after MBCR. A range of demographic, personality, and symptom-related factors were measured. Correlations and regression analyses were conducted. Only greater baseline anxiety was correlated with more home meditation practice. Class attendance and home meditation and yoga practice were all significantly associated with improved post-traumatic growth (PTG) and attendance with improved spirituality and vigor. In multiple regression, total home practice time was the best predictor of improvements in PTG. Class attendance was the best predictor of changes in vigor and improvements in spirituality, and meditation time was the best predictor of improvements in mood. More neurotic survivors attended more classes, while more defensive women attended fewer. Additionally, married or cohabitating women, those with greater baseline self-esteem and to a lesser extent lower depressive mood, higher social support, and more extraversion, practiced more yoga during the program. Directionality and clinical significance of these changes need to be further investigated.

Tanaka, Guaraci Ken, Tolou Maslahati, Mariana Gongora, Juliana Bittencourt, Luiz Carlos Serramo Lopez, Marcelo Marcos Piva Demarzo, Henning Budde, et al. 2015. Effortless Attention as a Biomarker for Experienced Mindfulness Practitioners. *PLoS One* 10(10). e0138561. doi:10.1371/journal.pone.0138561.

The present study aimed at comparing frontal beta power between long-term (LTM) and first-time meditators (FTM), before, during and after a meditation session. Researchers hypothesized that LTM would present lower beta power than FTM due to lower effort of attention and awareness. Twenty one participants were recruited, eleven of whom were long-term meditators. The subjects were asked to rest for 4 minutes before and after open monitoring (OM) meditation (40 minutes). Analysis of resulted revealed low power frontal beta activity for LTM during the task. This may be associated with the fact that OM is related to bottom-up pathways that are not present in FTM.

Tomkins, Andrew, Jean Duff, Atallah Fitzgibbon, Azza Karam, Edward J Mills, Keith Munnings, Sally Smith, et al. 2015. Controversies in faith and health care. *Lancet* 386(10005). 1776–1785. doi:10.1016/S0140-6736(15)60252-5.

Differences in religious faith-based viewpoints (controversies) on the sanctity of human life, acceptable behavior, health-care technologies and health-care services contribute to the widespread variations in health care worldwide. Faith-linked controversies include family planning, child protection (especially child marriage, female genital mutilation, and immunization), stigma and harm reduction, violence against women, sexual and reproductive health and HIV, gender, end-of-life issues, and faith activities including prayer. Buddhism, Christianity, Hinduism, Islam, Judaism, and traditional beliefs have similarities and differences in their viewpoints. Improved understanding by health-care providers of the heterogeneity of viewpoints, both within and between faiths, and their effect on health care is important for clinical medicine, public-health programs, and health-care policy. Increased appreciation in faith leaders of the effect of their teachings on health care is also crucial. This Series paper outlines some faith-related controversies, describes how they influence health-care provision and uptake, and identifies opportunities for research and increased interaction between faith leaders and health-care providers to improve health care.

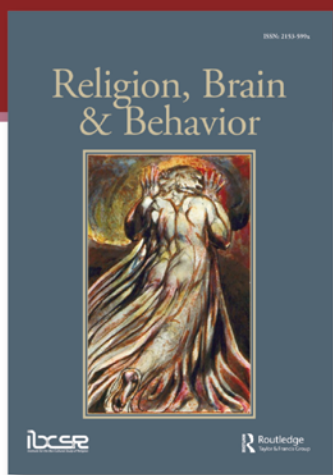
Walker, Jenelle, Barbara Ainsworth, Steven Hooker, Colleen Keller, Julie Fleury, Jack Chisum & Pamela Swan. 2015. Optimal Health (Spirit, Mind, and Body): A Feasibility Study Promoting Well-Being for Health Behavior Change. *Journal of Religion and Health* 54(5). 1681–1698. doi:10.1007/s10943-014-9890-7.

Faith-based programs have shown beneficial effects for health and behaviors. Few have specifically intervened on the spiritual, mental (i.e., stress), and physical dimensions of well-being combined for health and healthy behaviors (i.e., exercise and diet). The purpose of this report is to describe the feasibility of executing a spirituality-based health behavior change, program founded upon the Spiritual Framework of Coping. This study was a quasi-experimental one group pretest-posttest design. Feasibility objectives were assessed, and limited efficacy of pretest and posttest measures was analyzed. Acceptance of the program was positive, and modest demand was shown with initial interest and an average attendance of 78.7%. The program was successfully implemented as shown by meeting session objectives and 88% homework completion. The program was practical for the intended participants and was successfully integrated within the existing environment. Limited efficacy measures showed no pre-post changes. This study provided preliminary support for the design and further testing of the theoretical components of the Spiritual Framework of Coping that informed the program.

Wirth, Mathias. 2015. “Living in a Shell of Something I’m Not”: Transsexuality, Medical Ethics, and the Judeo-Christian Culture. *Journal of Religion and Health* 54(5). 1584–1597. doi:10.1007/s10943-015-0085-7.

A surgeon participating in a 2008 congress on the topic of trans-identified people posed the question of whether doctors would have to defend themselves when “judgment day” comes for having employed surgical means to turn

men into women or vice versa? What might be viewed as a certain level of (medical) irrationality surrounding transgender life, coupled with widely documented cases of violence directed at these groups may well partly be attributable to the deeply internalized doctrine of creation in Judeo-Christian culture. Objections, however, to the use of transgender medicine “in the name of normalization” cannot relate to the biblical tradition, for there is no normative concept of gender and no text whose scope is to articulate theory of gender. In the vast expanse and freedom of the Judeo-Christian creator there is space for diversity, variations, and, above all, for the development of individual freedom.



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PART 3: BOOKS

3.1 SCIENTIFIC STUDY OF RELIGION, BRAIN, AND BEHAVIOR

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