

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, 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 983 articles, 105 articles have been retained from 78 journals. There are 47 pre-publication citations from 26 journals.

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PART 1: ARTICLES IN RELIGION, BRAIN, AND BEHAVIOR

1.1 SCIENTIFIC STUDY OF RELIGION: COGNITIVE NEUROSCIENCE

Bower, Julienne E. & Michael R. Irwin. 2016. Mind-body therapies and control of inflammatory biology: A descriptive review. *Brain, Behavior, and Immunity* 51. 1–11.
doi:10.1016/j.bbi.2015.06.012.

The use of mind-body therapies, including Tai Chi, Qigong, yoga, and meditation, has grown steadily in recent years. These approaches have been shown to be effective in reducing symptoms and improving quality of life, and research has begun to examine the impact of these therapies on biological processes, including inflammation. A review of 26 randomized controlled trials was conducted to describe the effects of mind-body therapies (MBTs) on circulating, cellular, and genomic markers of inflammation. This qualitative evaluation showed mixed effects of MBTs on circulating inflammatory markers, including CRP and IL-6, and on measures of stimulated cytokine production. More consistent findings were seen for genomic markers, with trials showing decreased expression of inflammation-related genes and reduced signaling through the proinflammatory transcription factor NF- κ B. Potential mechanisms for these effects are discussed, including alterations in neuroendocrine, neural, and psychological and behavioral processes.

Chandra, Sushil, Greeshma Sharma, Alok Prakash Mittal & Devendra Jha. 2016. Effect of Sudarshan Kriya (meditation) on gamma, alpha, and theta rhythm during working memory task. *International Journal of Yoga* 9(1). 72–76.
doi:10.4103/0973-6131.171715.

The present study focuses on analyzing the effects of Sudarshan Kriya yoga (SKY) on brain signals during a working memory (WM) task. To envision the significant effects of SKY on WM capacity (WMC), researchers chose a control group for contriving a cogent comparison that could be corroborated using statistical tests. A total of 25 subjects were taken in the study, of which 10 were allotted to a control group and 15 to an experimental group.

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Electroencephalograph was taken during a WM task, which was an automated operation span test before and after SKY with 90 day intervals. No SKY was given to the control group. Results indicated that SKY promoted the efficient use of energy and power spectral density (PSD) for different brain rhythms in the desired locations as depicted by the gamma (F8 channel), alpha, and theta 2 (F7 and FC5) bands. It was found that gamma PSD reduced for both phases of memory in the experimental group. Alpha energy increased during the retrieval phase in the experimental group after SKY. Theta 1 rhythm was not affected by SKY, but theta 2 had shown left hemispheric activation. Theta rhythm was associated with memory consolidation.

Cristofori, Irene, Joseph Bulbulia, John H. Shaver, Marc Wilson, Frank Krueger & Jordan Grafman. 2016. Neural correlates of mystical experience. *Neuropsychologia* 80. 212–220.
doi:10.1016/j.neuropsychologia.2015.11.021.

Mystical experiences, or subjectively believed encounters with a supernatural world, are widely reported across cultures and throughout human history. Previous theories speculate that executive brain functions underpin mystical experiences. To evaluate causal hypotheses, structural studies of brain lesion are required. Previous studies suffer from small samples or do not have valid measures of cognitive functioning prior to injury. Researchers investigated mystical experience among participants from the Vietnam Head Injury Study and compared those who suffered penetrating traumatic brain injury (pTBI; n=116) with matched healthy controls (HC; n=32). Voxel-based lesion-symptom mapping analysis showed that lesions to frontal and temporal brain regions were linked with greater mystical experiences. Such regions included the dorsolateral prefrontal cortex (dlPFC) and middle/superior temporal cortex (TC). In a confirmatory analysis, the researchers grouped pTBI patients by lesion location and compared mysticism experiences with the HC group. The dlPFC group presented markedly increased mysticism. Notably, longitudinal analysis of pre-injury data (correlating with general intelligence and executive performance) excludes explanations from individual differences. These findings support previous speculation linking executive brain functions to mystical experiences, and reveal that executive functioning (dlPFC) causally contributes to the down-regulation of mystical experiences.

Haase, Lori, Nate J. Thom, Akanksha Shukla, Paul W. Davenport, Alan N. Simmons, Elizabeth A. Stanley, Martin P. Paulus & Douglas C. Johnson. 2016. Mindfulness-based training attenuates insula response to an aversive interoceptive challenge. *Social Cognitive and Affective Neuroscience* 11(1). 182–190.
doi:10.1093/scan/nsu042.

Neuroimaging studies of mindfulness training (MT) modulate anterior cingulate cortex (ACC) and insula among other brain regions, which are important for attentional control, emotional regulation and interoception. Inspiratory breathing load (IBL) is an experimental approach to examine how an individual responds to an aversive stimulus. Military personnel are at increased risk for cognitive, emotional and physiological compromise as a consequence of prolonged exposure to stressful environments and, therefore, may benefit from MT. This study investigated whether MT modulates neural processing of interoceptive distress in infantry marines scheduled to undergo pre-deployment training and deployment to Afghanistan. Marines were divided into two groups: individuals who received training as usual (control) and individuals who received an additional 20-h mindfulness-based mind fitness training (MMFT). All subjects completed an IBL task during functional magnetic resonance imaging at baseline and post-MMFT training. Marines who underwent MMFT relative to controls demonstrated a significant attenuation of right anterior insula and ACC during the experience of loaded breathing. These results support the hypothesis that MT changes brain activation such that individuals process more effectively an aversive interoceptive stimulus. Thus, MT may serve as a training technique to modulate the brain's response to negative interoceptive stimuli, which may help to improve resilience.

- Laneri, Davide, Verena Schuster, Bruno Dietsche, Andreas Jansen, Ulrich Ott & Jens Sommer. 2015. Effects of Long-Term Mindfulness Meditation on Brain's White Matter Microstructure and its Aging. *Frontiers in Aging Neuroscience* 7. 254. doi:10.3389/fnagi.2015.00254.

Although research on the effects of mindfulness meditation (MM) is increasing, still very little has been done to address its influence on the white matter (WM) of the brain. The authors hypothesized that the practice of MM might affect the WM microstructure adjacent to five brain regions of interest associated with mindfulness. Diffusion tensor imaging was employed on samples of meditators and non-meditators (n=64) in order to investigate the effects of MM on group difference and aging. Tract-Based Spatial Statistics was used to estimate the fractional anisotropy of the WM connected to the thalamus, insula, amygdala, hippocampus, and anterior cingulate cortex. The subsequent generalized linear model analysis revealed group differences and a group-by-age interaction in all five selected regions. These data provide preliminary indications that the practice of MM might result in WM connectivity change and might provide evidence on its ability to help diminish age-related WM degeneration in key regions which participate in processes of mindfulness.

- Lutz, J., A. B. Brühl, N. Doerig, H. Scheerer, R. Achermann, A. Weibel, L. Jäncke & U. Herwig. 2016. Altered processing of self-related emotional stimuli in mindfulness meditators. *NeuroImage* 124(Pt A). 958–967. doi:10.1016/j.neuroimage.2015.09.057.

Mental health benefits of mindfulness techniques are thought to involve changes in self-processing, such as decreased attachment to the self, higher self-compassion and lower emotional reactivity to inner experience. However, self-related emotion processing in regular mindfulness practitioners is not extensively studied. In the current work researchers investigate differential neural and behavioral correlates of self-criticism and self-praise in 22 mid-to-long-term mindfulness meditators (LTM) compared to 22 matched meditation-naïve participants (MNP). In an fMRI experiment, participants were presented with blocks of individually selected positive (self-praise, SP), negative (self-critical, SC), negative but not-self-critical (NNSC), and general, neutral (NT) adjectives, and reported their affective state after the blocks. On the neural level, both SP and SC yielded more activation in the dorso-medial prefrontal cortex (DMPFC) in LTM compared to MNP. Activation in this region correlated positively with non-react scores of the Five Facets Mindfulness Questionnaire (FFMQ) and showed decreased functional connectivity to posterior midline and parietal regions in LTM compared to MNP during both self-related appraisals. Further, evidence was found for emotional reactivity in LTM on the neural level, particularly during SP. On the behavioral level, a mixed effects analysis revealed significantly higher differences in affective ratings after blocks of SC compared to SP in MNP compared to LTM. Differences in DMPFC activation and affective ratings point towards increased awareness, potentially mindful regulation of SC and SP in LTM, while decreased connectivity to other regions of the default mode network could reflect a decreased self-focus in this group. As such, these results illustrate differences in self-related emotional processes in meditators and offer clinically relevant insights into mechanisms of mindful emotion regulation when facing self-criticism and self-praise.

1.2 SCIENTIFIC STUDY OF RELIGION: EVOLUTION

- Barrett, Deirdre. 2016. Hypnosis and Empathy: A Complex Relationship. *American Journal of Clinical Hypnosis* 58(3). 238–250. doi:10.1080/00029157.2015.1102122.

This article takes its inspiration from Wickramasekera II's empathic involvement theory of hypnosis. That model illuminates the mutual territory of hypnosis and empathy-common to much interaction between hypnotist and subject, and to the internal process of subjects as they enact suggestions of the hypnotist. However, the present article suggests that the overlap is not as ubiquitous as the empathic involvement theory asserts. Other aspects of hypnosis involve

disengagement from real persons in the environment and dissociating from other ego states of the self. Amnesia and certain uses of focused attention in the hypnotic context run counter to empathy. The fantasizer type of high hypnotizables experiences hypnosis more empathically than do the equally hypnotizable dissociater type. This article also explores the relationship of hypnosis and empathy to other related states, including meditation, dreaming, and psychedelic drugs. The conclusion is that empathy is an important component of many hypnotic phenomena, but that the relationship is as partial and complex as the manner in which other traits, such as imagery ability and dissociation, map onto hypnosis.

Decety, Jean, Inbal Ben-Ami Bartal, Florina Uzefovsky & Ariel Knafo-Noam. 2016. Empathy as a driver of prosocial behaviour: Highly conserved neurobehavioural mechanisms across species. *Philosophical Transactions of the Royal Society B-Biological Sciences* 371(1686). 20150077. doi:10.1098/rstb.2015.0077.

Empathy reflects the natural ability to perceive and be sensitive to the emotional states of others, coupled with a motivation to care for their well-being. It has evolved in the context of parental care for offspring, as well as within kinship bonds, to help facilitate group living. In this paper, researchers integrate the perspectives of evolution, animal behavior, developmental psychology, and social and clinical neuroscience to elucidate an understanding of the proximate mechanisms underlying empathy. The authors focus, in particular, on processing of signals of distress and need, and their relation to prosocial behavior. The ability to empathize, both in animals and humans, mediates prosocial behavior when sensitivity to others' distress is paired with a drive towards their welfare. Disruption or atypical development of the neural circuits that process distress cues and integrate them with decision value leads to callous disregard for others, as is the case in psychopathy. The realization that basic forms of empathy exist in non-human animals is crucial for gaining new insights into the underlying neurobiological and genetic mechanisms of empathy, enabling translation towards therapeutic and pharmacological interventions.

Gowen, E., E. Bolton & E. Poliakoff. 2016. Believe it or not: Moving non-biological stimuli believed to have human origin can be represented as human movement. *Cognition* 146. 431–438. doi:10.1016/j.cognition.2015.10.010.

Does our brain treat non-biological movements (e.g. moving abstract shapes or robots) in the same way as human movements? The current work tested whether the movement of a non-biological rectangular object, believed to be based on a human action is represented within the observer's motor system. A novel visuomotor priming task was designed to pit true imitative compatibility, due to human action representation against more general stimulus response compatibility that has confounded previous belief experiments. Stimulus response compatibility effects were found for the object. However, imitative compatibility was found when participants repeated the object task with the belief that the object was based on a human finger movement, and when they performed the task viewing a real human hand. These results provide the first demonstration that non-biological stimuli can be represented as a human movement if they are believed to have human agency and have implications for interactions with technology and robots.

Heiphetz, Larisa, Jonathan D. Lane, Adam Waytz & Liane L. Young. 2016. How Children and Adults Represent God's Mind. *Cognitive Science* 40(1). 121–144. doi:10.1111/cogs.12232.

For centuries, humans have contemplated the minds of gods. Research on religious cognition is spread across sub-disciplines, making it difficult to gain a complete understanding of how people reason about gods' minds. Here, researchers integrate approaches from cognitive, developmental, and social psychology and neuroscience to illuminate the origins of religious cognition. First, they show that although adults explicitly discriminate supernatural minds from human minds, their implicit responses reveal far less discrimination. Next, the research demonstrates that children's religious cognition often matches adults' implicit responses, revealing anthropomorphic notions of God's mind. Together, data from children and adults suggest the intuitive nature of perceiving God's mind as human-like.

The authors then propose three complementary explanations for why anthropomorphism persists in adulthood, suggesting that anthropomorphism may be (a) an instance of the anchoring and adjustment heuristic; (b) a reflection of early testimony; and/or (c) an evolutionary byproduct.

- Hopkins, Nick, Stephen D. Reicher, Sammyh S. Khan, Shruti Tewari, Narayanan Srinivasan & Clifford Stevenson. 2016. Explaining effervescence: Investigating the relationship between shared social identity and positive experience in crowds. *Cognition and Emotion* 30(1). 20–32.
doi:10.1080/02699931.2015.1015969.

This article investigates the intensely positive emotional experiences arising from participation in a large-scale collective event. The authors predicted such experiences arise when those attending a collective event are (1) able to enact their valued collective identity and (2) experience close relations with other participants. In turn, they predicted both of these to be more likely when participants perceived crowd members to share a common collective identity. A team investigated these predictions in a survey of pilgrims (n=416) attending a month-long Hindu pilgrimage festival in north India. The researchers found participants' perceptions of a shared identity amongst crowd members had an indirect effect on their positive experience at the event through (1) increasing participants' sense that they were able to enact their collective identity and (2) increasing the sense of intimacy with other crowd members. The authors discuss the implications of these data for how crowd emotion should be conceptualized.

- Krátký, Jan, John J. McGraw, Dimitris Xygalatas, Panagiotis Mitkidis & Paul Reddish. 2016. It Depends Who Is Watching You: 3-D Agent Cues Increase Fairness. *PloS One* 11(2). e0148845.
doi:10.1371/journal.pone.0148845.

Laboratory and field studies have demonstrated that exposure to cues of intentional agents in the form of eyes can increase prosocial behavior. However, previous research mostly used 2-dimensional depictions as experimental stimuli. Thus far no study has examined the influence of the spatial properties of agency cues on this prosocial effect. To investigate the role of dimensionality of agency cues on fairness, 345 participants engaged in a decision-making task in a naturalistic setting. The experimental treatment included a 3-dimensional pseudo-realistic model of a human head and a 2-dimensional picture of the same object. The control stimuli consisted of a real plant and its 2-D image. These results partly support the findings of previous studies that cues of intentional agents increase prosocial behavior. However, this effect was only found for the 3-D cues, suggesting that dimensionality is a critical variable in triggering these effects in real-world settings. This research sheds light on a hitherto unexplored aspect of the effects of environmental cues and their morphological properties on decision-making.

- Lifshin, Uri, Jeff Greenberg, David Weise & Melissa Soenke. 2016. It's the End of the World and I Feel Fine: Soul Belief and Perceptions of End-of-the-World Scenarios. *Personality & Social Psychology Bulletin* 42(1). 104–117.
doi:10.1177/0146167215616800.

Five studies tested the effects that soul beliefs have on reactions to end-of-the-world scenarios. In Studies 1 and 2, participants who firmly believe in an immortal soul showed less resistance to an article predicting the end of humanity than those without such belief. However, in Studies 3 to 5, thoughts of symbolic immortality made soul believers more resistant to scientific evidence predicting the end of humanity. These results suggest that belief in an immortal soul provides psychological protection against the threat of humanity's demise that does not hold for symbolic immortality beliefs.

- Mann, Liesbeth, Allard R. Feddes, Bertjan Doosje & Agneta H. Fischer. 2016. Withdraw or affiliate? The role of humiliation during initiation rituals. *Cognition and Emotion* 30(1). 80–100.
doi:10.1080/02699931.2015.1050358.

Initiation rituals can take different forms and empirical evidence is inconsistent as to whether these rituals promote affiliation among novices. The present researchers argue that experienced humiliation during initiations leads to less

affiliation among novices, in particular when one is initiated as sole group member rather than as part of the group. The researchers examined this hypothesis in three studies, using different paradigms. In Study 1 (n=123), perceived severity of an initiation in the past was associated with lower affiliation with other novices; this relationship was mediated by experienced humiliation. Study 2 (n=64) showed that public derogation in the lab led to more humiliation when participants were the only victim than when they were derogated as a group. Study 3 (n=248), a vignette study, showed that a similar effect of social context was mediated by expected support from other novices. The authors conclude that severe initiations may, due to experienced humiliation, result in less rather than more affiliation with fellow novices.

Noone, Chris, Brendan Bunting & Michael J. Hogan. 2015. Does Mindfulness Enhance Critical Thinking? Evidence for the Mediating Effects of Executive Functioning in the Relationship between Mindfulness and Critical Thinking. *Frontiers in Psychology* 6. 2043. doi:10.3389/fpsyg.2015.02043.

Mindfulness originated in the Buddhist tradition as a way of cultivating clarity of thought. Despite the fact that this behavior is best captured using critical thinking (CT) assessments, no studies have examined the effects of mindfulness on CT or the mechanisms underlying any such possible relationship. Even so, mindfulness has been suggested as being beneficial for CT in higher education. CT is recognized as an important higher-order cognitive process which involves the ability to analyze and evaluate evidence and arguments. Such non-automatic, reflective responses generally require the engagement of executive functioning (EF) which includes updating, inhibition, and shifting of representations in working memory. Based on research showing that mindfulness enhances aspects of EF and certain higher-order cognitive processes, researchers hypothesized that individuals higher in facets of dispositional mindfulness would demonstrate greater CT performance, and that this relationship would be mediated by EF. Cross-sectional assessment of these constructs in a sample of 178 university students was achieved using the observing and non-reactivity sub-scales of the Five Factor Mindfulness Questionnaire, a battery of EF tasks and the Halpern Critical Thinking Assessment. Hypotheses were tested by constructing a multiple mediation model which was analyzed using Structural Equation Modeling. Evidence was found for inhibition mediating the relationships between both observing and non-reactivity and CT in different ways. Indirect-only (or full) mediation was demonstrated for the relationship between observing, inhibition, and CT. Competitive mediation was demonstrated for the relationship between non-reactivity, inhibition, and CT. This suggests additional mediators of the relationship between non-reactivity and CT which are not accounted for in this model and have a negative effect on CT in addition to the positive effect mediated by inhibition. These findings are discussed in the context of the Default Interventionist Dual Process Theory of Higher-order Cognition and previous studies on mindfulness, self-regulation, EF, and higher-order cognition. In summary, dispositional mindfulness appears to facilitate CT performance and this effect is mediated by the inhibition component of EF. However, this relationship is not straightforward which suggests many possibilities for future research.

Ramsay, Jonathan E., Eddie M. W. Tong, Joyce S. Pang & Avijit Chowdhury. 2016. A Puzzle Unsolved: Failure to Observe Different Effects of God and Religion Primes on Intergroup Attitudes. *PLoS One* 11(1). e0147178. doi:10.1371/journal.pone.0147178.

Religious priming has been found to have both positive and negative consequences, and recent research suggests that the activation of God-related and community-related religious cognitions may cause outgroup prosociality and outgroup derogation respectively. The present research sought to examine whether reminders of God and religion have different effects on attitudes towards ingroup and outgroup members. Over two studies, little evidence was found for different effects of these two types of religious primes. In study 1, individuals primed with the words "religion", "God" and a neutral control word evaluated both ingroup and outgroup members similarly, although a marginal tendency towards more negative evaluations of outgroup members by females exposed to religion primes was observed. In study 2, no significant differences in attitudes towards an outgroup member were observed between the God,

religion, and neutral priming conditions. Furthermore, the gender effect observed in study 1 did not replicate in this second study. Possible explanations for these null effects are discussed.

- Rutjens, Bastiaan T., Frenk van Harreveld, Joop van der Pligt, Michiel van Elk & Tom Pyszczynski. 2016. A March to a Better World? Religiosity and the Existential Function of Belief in Social-Moral Progress. *International Journal for the Psychology of Religion* 26(1). 1–18.
doi:10.1080/10508619.2014.990345.

This article reports an investigation of the existential function of belief in progress, specifically faith in social and moral advancement. The researchers argue that for belief in progress to provide a sense of purpose and significance in the world, it must concern humanity and society and not merely the technological advances humankind accomplishes. The results indicated an effect of mortality salience on belief in social-moral (but not scientific-technological) progress, which was moderated by strength of religious belief. Participants low in religious belief showed an increase in belief in social-moral progress, while those high in religious belief did not. Follow-up analyses revealed that the latter finding was primarily due to Protestant participants, who scored highest on strength of religious faith and belief in inherent sin, and were the least optimistic about the future of humanity.

- Saroglou, Vassilis. 2016. Intergroup conflict, religious fundamentalism, and culture. *Journal of Cross-Cultural Psychology* 47(1). 33–41.
doi:10.1177/0022022115621174.

Kashima underlines the importance of considering religion as a major contemporary cultural source of intergroup conflict around the world. In this commentary, the author first examines theory and psychological research either discrediting or crediting religion per se, including fundamentalism, as being a cultural cause of intergroup conflict and violence. The evidence is in favor of the latter. Second, he proposes a model of cultural psychological diversity of religious fundamentalism, across monotheistic religions and denominations. Finally, it is argued, following Kashima's global perspective on the person-culture-nature interactions, that cultural differences in religious fundamentalism may be understood as reflections of longtime interactions between natural and cultural environments and human animals, which, by creating religious (sub)cultures, rebuild, even if frequently with negative consequences, their ecological niches.

- Van Cappellen, Patty, Vassilis Saroglou & Maria Toth-Gauthier. 2016. Religiosity and Prosocial Behavior Among Churchgoers: Exploring Underlying Mechanisms. *International Journal for the Psychology of Religion* 26(1). 19–30.
doi:10.1080/10508619.2014.958004.

Research has shown that religious beliefs and practices are related, to some extent, to prosocial behaviors, but less is known about why it is so. In addition, participating in the traditional Christian ritual (Sunday Mass) may be particularly powerful in eliciting prosocial behavior among believers. The present study explores the aspects of the Sunday Mass that may be involved in the activation of religious prosociality. The social, emotional, and cognitive aspects of the Mass were concurrently assessed among churchgoers (n = 548) across 20 different parishes. Prosociality was measured by looking at spontaneous intention to share a hypothetical lottery prize. Results showed that a positive relation found between religion and prosociality was mediated by the social aspect of the Mass. Additional analyses revealed that this social aspect also induced the emotion of love, which in turn promoted prosociality.

- Wen, Nicole J., Patricia A. Herrmann & Cristine H. Legare. 2016. Ritual increases children's affiliation with in-group members. *Evolution and Human Behavior* 37(1). 54–60.
doi:10.1016/j.evolhumbehav.2015.08.002.

This study examined the impact of ritual participation on children's in-group affiliation (n=71, 4–11-year-old children). A novel social group paradigm was used in an afterschool program to test the influence of a ritual versus a control task on a measure of affiliation with in-group versus out-group members. The data support the hypothesis that the experience of participating in a ritual increases in-group affiliation to a greater degree than group activity

alone. The results provide insight into the early-developing preference for in-group members and are consistent with the proposal that rituals facilitate in-group cohesion. The researchers propose that humans are psychologically prepared to engage in ritual as a means of in-group affiliation.

1.3 SCIENTIFIC STUDY OF RELIGION: PSYCHOLOGY AND CULTURE

Arli, Denni, Helene Cherrier & Fandy Tjiptono. 2016. God blesses those who wear Prada: Exploring the impact of religiousness on attitudes toward luxury among the youth of Indonesia. *Marketing Intelligence & Planning* 34(1). 61–79.
doi:10.1108/MIP-12-2014-0232.

The purpose of this paper is to explore the impact of religiousness (i.e. intrinsic religiousness, extrinsic religiousness) on purchase intention of luxury brands, affective attitude, and self-presentation; and, to explore the mediating effect of affective and self-presentation attitudes towards luxury brand purchase intention. Data were derived using convenience sampling at three large universities (i.e. one public and two private universities) in Yogyakarta, Indonesia. Researchers hand-delivered approximately 600 questionnaires to students in classrooms and public spaces (e.g. canteens and lounge rooms) of the universities. However, of the 525 questionnaires returned, only 491 were usable thereby offering an overall response rate of 81 per cent. The study found that intrinsic religiousness was related positively to affective attitudes towards luxury brands while extrinsic religiousness was positively related to self-presentation attitudes. Affective attitude and self-presentation were positively related to consumer intention to purchase luxury brands. The result of the present study shows that religious consumers are not necessarily anti materialism and often opt for luxury brands over purely utilitarian possession.

Cervantes, Joseph M. & Alexis V. Arczynski. 2015. Children's spirituality: Conceptual understanding of developmental transformation. *Spirituality in Clinical Practice* 2(4). 245–255.
doi:10.1037/scp0000037.

Children's spirituality is a dimension of human functioning not well addressed in the professional literature. This article provides an overview of the primary conceptual issues related to the spirituality of children and the role this understanding brings to practice for counselors working with children. A working definition of children's spirituality is prescribed and followed by a discussion of relational/cultural theory, relational consciousness, and transpersonal experiences for children. Voices of children are also included to add clarity and concreteness to the conceptual ideas of spirituality that are presented. Lastly, the importance of knowledge about children's spirituality and its contribution to counseling practice is described.

Choe, Elise, Don E. Davis, Stacey E. McElroy, Charles J. Westbrook, Marieke van Nuenen, Daryl R. Van Tongeren & Joshua N. Hook. 2016. Relational Spirituality and Forgiveness of Offenses Committed by Religious Leaders. *International Journal for the Psychology of Religion* 26(1). 46–60.
doi:10.1080/10508619.2014.992752.

In the present article, researchers extend a model of relational spirituality and forgiveness to the context of major offenses by clergy. In Study 1, undergraduate students (n= 208) described a major offense that they had experienced by a religious leader and then completed several questionnaires in relation to the offense and the religious leader. Appraisals of relational spirituality were significantly associated with forgiveness, after controlling for known predictors of forgiveness (i.e., hurtfulness, time since the offense, and commitment to God or another source of spirituality). In Study 2, the researchers replicated and extended the findings from Study 1 using an independent sample of undergraduates (n= 365). In a series of structural equation models, they found that relational engagement of God (or another source of spirituality) partially mediated the relationship between anger toward God (or another source of spirituality) and unforgiving motivations. The authors conclude by discussing implications for future research.

- Colzato, Lorenza S., Pauline van der Wel, Roberta Sellaro & Bernhard Hommel. 2016. A single bout of meditation biases cognitive control but not attentional focusing: Evidence from the global-local task. *Consciousness and Cognition* 39. 1–7.
doi:10.1016/j.concog.2015.11.003.

Recent studies show that a single bout of meditation can impact information processing. The present researchers were interested to see whether this impact extends to attentional focusing and the top-down control over irrelevant information. Healthy adults underwent brief single bouts of either focused attention meditation (FAM), which is assumed to increase top-down control, or open monitoring meditation (OMM), which is assumed to weaken top-down control, before performing a global-local task. While the size of the global-precedence effect (reflecting attentional focusing) was unaffected by type of meditation, the congruency effect (indicating the failure to suppress task-irrelevant information) was considerably larger after OMM than after FAM. These findings suggest that engaging in particular kinds of meditation creates particular cognitive-control states that bias the individual processing style toward either goal-persistence or cognitive flexibility.

- Cox, Anne E., Sarah Ullrich-French, Amy N. Cole & Margo D’Hondt-Taylor. 2016. The role of state mindfulness during yoga in predicting self-objectification and reasons for exercise. *Psychology of Sport and Exercise* 22. 321–327.
doi:10.1016/j.psychsport.2015.10.001.

Objectification theory is a useful framework for understanding how individuals internalize the sexual objectification of male and female bodies. This internalization, called self-objectification, can result in negative psychological and behavioral outcomes (e.g., body shame, disordered eating). Exercise that uses mindfulness to draw attention to the body’s function and sensations rather than appearance may be one way to minimize self-objectification and improve associated outcomes. Therefore, the objective of this study was to explore how state mindfulness during exercise may associate with change in self-objectification, body image variables, and reasons for exercise. This study prospectively followed participants (n=148, 80% female) from six yoga classes that met 2–3 times a week across an 8-week period. Analysis of data revealed significant decreases in self-objectification and increases in physical self-concept, health/fitness-related reasons for exercise, and state mindfulness. Further, results indicated that mindfulness during exercise was linked with decreases in self-objectification and increases in more internal reasons for exercise over time.

- Dalessandro, Cristen. 2016. “I don’t advertise the fact that I’m a Catholic”: College students, religion, and ambivalence. *Sociological Spectrum* 36(1). 1–12.
doi:10.1080/02732173.2015.1068141.

Based on twenty in-depth interviews with Catholic college students, this article investigates religious identity for emerging adults at a public university in the United States. Using sociological ambivalence as an analytical tool, the author demonstrates how the expectations of collegiate emerging adulthood can shape students’ expressions of religious identity. The students manage their expressions in strategic ways in order to craft particular kinds of identities as college students and religious people, and to situate themselves as either those who fit in or those who go against the norm.

- Gallagher, Eugene V. 2016. Scientology’s Sunday Service: Scripture in Action. *Numen* 63(1). 95–112.
doi:10.1163/15685276-12341410.

Although they have received little scholarly attention, the communal rituals of the Church of Scientology, particularly the Sunday service, provide a distinctive perspective on how the Church, through the presiding minister, uses a selection of its scriptural texts to form the consciousness and attitudes of those in attendance. While several elements of the Sunday service are invariable, the minister must craft each service by choosing from among a limited selection of possible sermons and group processing exercises, attributed to L. Ron Hubbard himself, that can be delivered to the congregation. Thus, in keeping with the understanding of scripture articulated by Wilfred Cantwell Smith and

of canon by Jonathan Z. Smith, the minister exercises a degree of exegetical ingenuity within the strictures of a strongly literal approach to Hubbard's canonical teachings. Scientology ministers in the context of the Sunday service thus function like other indigenous theologians who work with canonical bodies of texts.

- Ginges, Jeremy, Hammad Sheikh, Scott Atran & Nichole Argo. 2016. Thinking from God's perspective decreases biased valuation of the life of a nonbeliever. *Proceedings of the National Academy of Sciences of the United States of America* 113(2). 316–319.
doi:10.1073/pnas.1512120113.

Religious belief is often thought to motivate violence because it is said to promote norms that encourage tribalism and the devaluing of the lives of nonbelievers. If true, this should be visible in the multigenerational violent conflict between Palestinians and Israelis which is marked by a religious divide. Researchers conducted experiments with a representative sample of Muslim Palestinian youth (n=555), examining whether thinking from the perspective of Allah (God), who is the ultimate arbitrator of religious belief, changes the relative value of Jewish Israelis' lives (compared with Palestinian lives). Participants were presented with variants of the classic "trolley dilemma," in the form of stories where a man can be killed to save the lives of five children who were either Jewish Israeli or Palestinian. They responded from their own perspective and from the perspective of Allah. Analysis of results indicates that whereas a large proportion of participants were more likely to endorse saving Palestinian children than saving Jewish Israeli children, this proportion decreased when thinking from the perspective of Allah. This finding raises the possibility that beliefs about God can mitigate bias against other groups and reduce barriers to peace.

- Gregory, Ian N. & Niall A. Cunningham. 2016. "The judgement of God on an indolent and unself-reliant people"?: the impact of the Great Irish Famine on Ireland's religious demography. *Journal of Historical Geography* 51. 76–87.
doi:10.1016/j.jhg.2015.07.001.

It has suited both sides of Ireland's religious and political divide to portray the Great Famine that affected Ireland in the late 1840s as primarily affecting the Catholic population. However, while the geographies of the Famine have been explored in detail in recent years its religious dimensions have been largely ignored, albeit with a few exceptions. As a consequence, the assumption that the Great Famine was a Catholic famine has not been sufficiently challenged. Drawing on a relatively untapped source, the 1834 Commission on 'the state of religion and other instruction in Ireland,' as well as census data, this paper explores the relationship between religion, poverty and population loss over the Famine period. It shows that Catholics were disproportionately affected by the Famine because the Famine was most severe in areas whose population was overwhelmingly Catholic. In more mixed areas, however, the Protestant population seems to have been at least as affected as Catholics if not more so. This conundrum explains why the Famine actually had a surprisingly small impact on Ireland's religious demography.

- Higgins, Leighanne & Kathy Hamilton. 2016. Mini-miracles: Transformations of self from consumption of the Lourdes pilgrimage. *Journal of Business Research* 69(1). 25–32.
doi:10.1016/j.jbusres.2015.07.017.

This paper explores transformations of self through pilgrimage consumption. A three-year ethnographic study of Lourdes, one of the largest Catholic pilgrimage destinations, reveals the concept of "mini-miracles" to refer to those miracles that occur in and are important to an individual's life, but are unlikely ever to be officially deemed as miracles in the eyes of the church. Mini-miracles transform selves and in turn draw pilgrims annually and recurrently to consume the Lourdes pilgrimage experience. The findings reveal the existence of three forms of subjectively experienced mini-miracles: physical, social and peaceful, each of which act as intangible word-of-mouth consumption drivers to the Lourdes pilgrimage. Lourdes, as a business institution, should capitalize on the word-of-mouth mini-miracles shared among consumers as a means of building and maintaining stronger networks and relationships within Catholic/Christian communities at both the national and local level.

Hinterberger, Thilo, Anna von Haugwitz & Stefan Schmidt. 2016. Does a Healing Procedure Referring to Theta Rhythms Also Generate Theta Rhythms in the Brain? *Journal of Alternative and Complementary Medicine* 22(1). 66–74.

doi:10.1089/acm.2014.0394.

ThetaHealing® (Vianna Stibal, Kalispell, MT) is a spiritual healing method in which the practitioner and client engage in joint meditations during several healing sessions. It is claimed that these meditation periods are characterized by a “theta state” in which the presence of theta-waves in the electroencephalograph (EEG) frequency spectrum of both the healer and the client is supposed. This study sought to test this hypothesis as well as the presence of synchronicities in the two EEGs. Measurements were obtained with a dual EEG system with 2x32 channels, allowing for simultaneous EEG measurements of healer and client. Ten healers and 10 clients performed 10 ThetaHealing sessions while the EEG was measured. Theta frequency band did not increase in healers or in clients. Rather, the contrary was found, with a significant decrease in theta-2 band during healing in healers. Small correlations were seen between the Fourier amplitudes of healer and client in the theta-2 band, as well as small phase synchronicities in theta frequencies. The authors find that the hypothesis that ThetaHealing is associated with an enhanced generation of theta frequencies in the brain could not be confirmed. This finding makes no claim about whether ThetaHealing is beneficial from a clinical perspective.

Iveniuk, James, Colm O’Muircheartaigh & Kathleen A. Cagney. 2016. Religious Influence on Older Americans’ Sexual Lives: A Nationally-Representative Profile. *Archives of Sexual Behavior* 45(1). 121–131.

doi:10.1007/s10508-015-0534-0.

This study investigated the relationship between religious influence and sexual expression in older Americans, with specific attention to gender. Using the National Social Life, Health, and Aging Project, a nationally-representative survey of older adults, researchers created a composite measure of religious influence on sexual expression using Latent Class Analysis. They found more variability within denominations than between in terms of membership in the high-influence class; this indicated that religious influence on sexual expression was diverse within faiths. The authors show that religious influence was associated with higher self-reported satisfaction with frequency of sex, as well as higher physical and emotional satisfaction with sex, but only for men. Men were also significantly more likely than women to report that they would only have sex with a person they love. These results persisted in the presence of controls for demographic characteristics, religious affiliation, church attendance, intrinsic religiosity, political ideology, and functional health.

Jazaieri, Hooria, Ihno A. Lee, Kelly McGonigal, Thupten Jinpa, James R. Doty, James J. Gross & Philippe R. Goldin. 2016. A wandering mind is a less caring mind: Daily experience sampling during compassion meditation training. *Journal of Positive Psychology* 11(1). 37–50.

doi:10.1080/17439760.2015.1025418.

Mind wandering, or the tendency for attention to drift to task-irrelevant thoughts, has been associated with worse intra- and inter-personal functioning. Utilizing daily experience sampling with 51 adults during 9-weeks of a compassion meditation program, researchers examined effects on mind wandering (to neutral, pleasant, and unpleasant topics) and caring behaviors for oneself and others. Results indicated that compassion meditation decreased mind wandering to neutral topics and increased caring behaviors towards oneself. When collapsing across topics, mind wandering did not serve as an intermediary between the frequency of compassion meditation practice and caring behaviors, though mind wandering to pleasant and unpleasant topics was linked to both variables. A path analysis revealed that greater frequency of compassion meditation practice was related to reductions in mind wandering to unpleasant topics and increases in mind wandering to pleasant topics, both of which were related to increases in caring behaviors for oneself and others.

- Jo, Han-Gue, Stefan Schmidt, Elisa Inacker, Michael Markowiak & Thilo Hinterberger. 2016. Meditation and attention: A controlled study on long-term meditators in behavioral performance and event-related potentials of attentional control. *International Journal of Psychophysiology* 99. 33–39. doi:10.1016/j.ijpsycho.2015.11.016.

Meditation practice involves attention regulation, and thus is thought to facilitate attention control mechanisms. Studies on meditation techniques using a behavioral measurement of the Attention Network Test (ANT) have shown enhanced attention control, but neural features remain unknown. In the present study, event-related potentials (ERPs) and behavioral data from twenty long-term meditators were examined, compared to data obtained from twenty matched controls. Results showed that meditators made fewer error responses than controls, especially during the incongruent target condition, suggesting higher accuracy in executive attention control among meditators. The P3 amplitude in the parietal area remained constant in the congruent and incongruent target conditions among meditators, indicating a higher parietal P3 amplitude during the incongruent target condition relative to matched controls. The findings that meditators exhibited fewer error responses on the ANT and a lack of parietal P3 modulation irrespective of reaction time are discussed in the context of attentional resource allocation.

- Lee, Sherman A. 2016. Religion and pet loss: Afterlife beliefs, religious coping, prayer and their associations with sorrow. *British Journal of Guidance & Counselling* 44(1). 123–129. doi:10.1080/03069885.2015.1043236.

This study examined the relationship between religion and sorrow among a sample of 219 owners of deceased pets (the sample was predominantly comprised of white, female, educated Christians). The results indicated that the vast majority of the participants believed that their pets' souls reside in a better place and that they will reunite with them in the afterlife. A sizeable percentage also engaged in positive religious coping and afterlife prayers to deal with their loss. A smaller, but significant percentage engaged in negative forms of religious coping. The results also showed that sorrow was correlated with education, gender, attachment, afterlife prayers and negative religious coping. However, gender and prayer did not predict sorrow when the other variables were taken into account. Implications for counsellors are discussed.

- Lewis, James R. 2016. Technological Exorcism, Body Thetans, and Scientology's Secret Mythology. *Numen* 63(1). 33–53. doi:10.1163/15685276-12341407.

When applying the category of "mythology" to a contemporary new religious group like the Church of Scientology (CoS), one has to choose from among several different categories of narratives which could be regarded as mythological. If one sets aside the body of tales surrounding L. Ron Hubbard, CoS's founder (which could arguably be classified as mythology), one of Scientology's key stories is the so-called Xenu narrative (also referred to as the OT-III teachings). Although this story is only revealed after one has tread the "Bridge" for some time, it is arguably a foundational myth, which sets the Scientology enterprise into a cosmological framework. While the present article will focus on the Xenu story, it also discusses Hubbard's self-mythologizing, including his "discovery" of Incident Two (the Xenu narrative) as a hero myth.

- Quinn, Katherine & Julia Dickson-Gomez. 2016. Homonegativity, Religiosity, and the Intersecting Identities of Young Black Men Who Have Sex with Men. *AIDS and Behavior* 20(1). 51–64. doi:10.1007/s10461-015-1200-1.

Young, Black men who have sex with men (YBMSM) are disproportionately affected by HIV. Homonegativity, or the stigma associated with homosexuality, may be an important social factor influencing racial disparities in HIV. This research, conducted using an intersectional framework, examines experiences of homonegativity among YBMSM with a particular emphasis on the influence of the Black Church. RESEARCHERS conducted 30 semi-structured interviews with YBMSM ages 16-24. Interview transcripts were analyzed in MAXQDA using

thematic content analysis, guided by principles of grounded theory and constant comparative method. The Black Church is an integral aspect of YBMSM's identity, history, family, and community life. As such, the Church's construction of homosexuality dominated throughout YBMSM's lives. The expectations of masculinity facing YBMSM emphasize expectations of physical and sexual dominance, which are viewed as incompatible with homosexuality. Participants describe complex decision-making around whether to disclose their sexuality and to whom, and weigh the consequences of disclosure and non-disclosure. For many YBMSM, their multiple, intersecting identities significantly influenced their experiences with homonegativity and their decisions about disclosing their sexual orientation. Findings lend support for the need to develop community-, family-, and church-based stigma reduction interventions that address homonegativity among YBMSM.

Rabelo, Miriam. 2015. Moving between Religions in Brazil: Space and the Analysis of Religious Trajectories. *Current Anthropology* 56(6). 848–864.
doi:10.1086/684013.

In this paper, the author examines trajectories of religious change in the city Salvador, Northeast Region, Brazil. In doing so, she outlines a set of alternative questions for the study of people's movement between religions on the basis of a discussion of space. She argues that a far more complex picture of the trajectories and of their relation to religious change emerges when space is made an object of explicit reflection. To develop this argument, two important contributions to the debate on space are considered: Mol and Law's topological approach and Ingold's explorations on the links between life and the line. Applying some of their ideas about spatiality to the study of religious trajectories opens new, promising lines of inquiry.

Raghavendra, B. R. & Prashanth Singh. 2016. Immediate effect of yogic visual concentration on cognitive performance. *Journal of Traditional and Complementary Medicine* 6(1). 34–36.
doi:10.1016/j.jtcme.2014.11.030.

The ancient Indian yoga text, Hatha Yoga Pradipika, describes six cleansing techniques. The objective of cleansing techniques is to purify and prepare the body for the practice of yoga postures, breath regulation, and meditation. Yogic visual concentration technique (trataka) is one of these techniques. A previous study showed an increase in critical flicker fusion (CFF) following yogic visual concentration (trataka). The present study planned to assess the immediate effect of trataka on cognitive performance using the Stroop color-word test. Performance on the Stroop color-word test was assessed in 30 healthy male volunteers with ages ranging from 18 years to 31 years old. The participants were tested before and after yogic visual concentration (trataka) and during a control session on two separate days. There was a significant improvement in performance on the Stroop color-word test after trataka compared to the control session. Performance on the Stroop color-word test was better after trataka compared to the control session suggesting that the trataka technique increased the selective attention, cognitive flexibility, and response inhibition.

Rosenstreich, Eyal. 2016. Mindfulness and False-Memories: The Impact of Mindfulness Practice on the DRM Paradigm. *Journal of Psychology* 150(1). 58–71.
doi:10.1080/00223980.2015.1004298.

Mindfulness practice is the cultivation of awareness to the present moment and has been shown in recent years to have beneficial effects on cognition. However, to date, the data regarding the impact of mindfulness on memory-and specifically on memory distortions-is scarce and incomplete. The present study was aimed to examine whether mindfulness practice would have an effect on true and false memories. To this end, the effect of mindfulness meditation practice on memory performance was examined in two experiments in which false memories were provoked using the Deese-Roediger-McDermott (DRM) paradigm. In Experiment 1, college students were randomly divided into either a 5-week mindfulness-practice group (n=29) or a waitlist control group (n=22). In Experiment 2, college students were randomly divided into either a brief mindfulness session (n=21) or a mind-wandering control group (n=19). The results indicated that mindfulness increased the recognition of true memories with no effect on spontaneous false-

memories, yet increased the rate of provoked false-memories. These findings are discussed in terms of memory sensitivity and response bias, and it is argued that mindfulness may have a lesser effect on encoding processes than previously suggested.

Rothstein, Mikael. 2016. The Significance of Rituals in Scientology: A Brief Overview and a Few Examples. *Numen* 63(1). 54–70.
doi:10.1163/15685276-12341408.

Scientology's rituals may be divided into four categories, which are all mentioned in this article: 1) rituals aimed at the spiritual transformation of the individual, most profoundly the auditing procedure; 2) collective, very often calendrical ceremonies, usually termed "Events," where the community of Scientologists, the organization itself, and its exalted founder are celebrated; 3) rites of passage such as weddings, namings, and funerals; and 4) services that to some extent (and probably strategically) emulate their Christian counterparts. In this article the focus is on the auditing procedure and "Events," with a special emphasis on L. Ron Hubbard's obsequies in 1986. On the basis of ritual analysis, it is argued that Scientology, apart from the proclaimed ambition of liberating the entrapped soul (thetan), is best understood as a devotional cult aimed at revering the mythologized founder of the organization.

Schnabel, Landon. 2016. Gender and homosexuality attitudes across religious groups from the 1970s to 2014: Similarity, distinction, and adaptation. *Social Science Research* 55. 31–47.
doi:10.1016/j.ssresearch.2015.09.012.

This study uses General Social Survey data to compare gender and homosexuality across American religious groups from the 1970s to 2014, examining three possible patterns for how evangelical attitudes relate to those of other groups: (1) they are similar; (2) they are different, but move together over time; (3) they are different and converge or diverge over time. Evangelical gender attitudes regarding work and family issues are more conservative than those of all other groups, but are adaptive to broad trends, changing at a rate similar to those of other groups. Evangelical attitudes toward the morality of homosexuality and same-sex marriage are more conservative than those of all other religious groups, and their rate of change is slower over time. Separate trends on the two issues suggest that gender and sexuality attitude change is decoupled, especially among evangelicals who are adapting more on gender while increasingly distinguishing themselves on same-sex relationships. A three-stage process of religious tension appears to characterize evangelical identity-building: (1) similarity, (2) distinction, and (3) adaptation.

Srinivasan, Mahesh, Yarrow Dunham, Catherine M. Hicks & David Barner. 2016. Do attitudes toward societal structure predict beliefs about free will and achievement? Evidence from the Indian caste system. *Developmental Science* 19(1). 109–125.
doi:10.1111/desc.12294.

Intuitive theories about the malleability of intellectual ability affect our motivation and achievement in life. But how are such theories shaped by the culture in which an individual is raised? Researchers addressed this question by exploring how Indian children's and adults' attitudes toward the Hindu caste system - and its deterministic worldview - are related to differences in their intuitive theories. Strikingly, it was found that, beginning at least in middle school and continuing into adulthood, individuals who placed more importance on caste were more likely to adopt deterministic intuitive theories. It was also found that a developmental change in the scope of this relationship, such that in children, caste attitudes were linked only to abstract beliefs about personal freedom, but that by adulthood, caste attitudes were also linked to beliefs about the potential achievement of members of different castes, personal intellectual ability, and personality attributes. These results are the first to directly relate the societal structure in which a person is raised to the specific intuitive theories they adopt.

Tassell-Matamua, Natasha A. & Nicole Lindsay. 2016. "I'm not afraid to die": The loss of the fear of death after a near-death experience. *Mortality* 21(1). 71–87.
doi:10.1080/13576275.2015.1043252.

According to terror management theory, fear of death is one of the most profound of human anxieties. Yet, the near-death experience (NDE) and its associated pattern of after-effects represent an intriguing exception to this theory. Studies indicate the loss of the fear of death is an instantaneous and pervasive after-effect of NDEs. Some theorists propose this elimination of death fear could be related to the sense of disembodiment felt during the NDE. In this article, researchers expand on previous theories by suggesting the combination of four specific elements of the NDE directly influence the loss of the fear of death, including: the sense of disembodiment, positive emotional content, meeting and greeting with deceased others and spiritual beings and exposure to a bright otherworldly light. They conclude by making suggestions for future research endeavors in this area, and their potential beneficial implications for health service delivery, particularly in end-of-life care.

Westbrook, Donald A. 2016. Walking in Ron's Footsteps: "Pilgrimage" Sites of the Church of Scientology. *Numen* 63(1). 71–94.
doi:10.1163/15685276-12341409.

This article contends that a number of ecclesiastical and historical centers associated with the Church of Scientology can be considered and analyzed as pilgrimage sites. Although the notion of pilgrimage is not explicitly taken up by Scientology's founder L. Ron Hubbard (1911–1986), his Bridge to Total Freedom is intended to provide church members with a distinct spiritual path leading to the states of Clear and Operating Thetan (OT). In order to walk this spiritual path, individual Scientologists must physically journey to a series of Scientology churches (organizations) where auditing (spiritual counseling) and auditor training levels are delivered in a gradient fashion. In addition, the church has established L. Ron Hubbard Landmark Sites for members (and interested outsiders) to tour key sites in the development of Dianetics and Scientology. These spaces have no direct soteriological value but are educationally and spiritually significant because they allow visitors to "walk in Ron's footsteps" and retrace the Founder's research into the nature of the mind and spirit as later systematized and streamlined in the Bridge to Total Freedom.

Woodhead, Linda. 2016. Intensified Religious Pluralism and De-differentiation: The British Example. *Society* 53. 41–46.
doi:10.1007/s12115-015-9984-1.

Drawing on surveys of religion and values in Great Britain, this paper suggests that Peter Berger's paradigm of two pluralisms can be usefully supplemented by taking account of a third kind of intensified pluralism. This involves the breakdown of the boundaries between religions, and between the religious and the secular, and is therefore a pluralism of de-differentiation. It helps explain many features of contemporary religion and identity, including the rise of the "nones" and the increasing reluctance of each new generation to identify with religious (and secular) labels and packages.

Zhang, Chun-Qing, Gangyan Si, Yanping Duan, Yaojun Lyu, David A. Keatley & Derwin K. C. Chan. 2016. The effects of mindfulness training on beginners' skill acquisition in dart throwing: A randomized controlled trial. *Psychology of Sport and Exercise* 22. 279–285.
doi:10.1016/j.psychsport.2015.09.005.

The present study was into whether or not mindfulness training, based on the mindfulness-acceptance-commitment approach (MAC), can improve beginners' skill acquisition of dart throwing. A total of 43 first-year college students who had not played darts professionally prior to the study were randomly assigned to either an attention control group (n=21) or a mindfulness training group (n=22) during an eight-week dart training program. Dart throwing and psychological variables were assessed at pre-intervention, post-intervention, and two-week follow-up. Two-way repeated measures ANOVA revealed that the mindfulness group, but not the attention control group had significant improvements in mindfulness, experiential acceptance, and flow at post-intervention and follow-up. Although both groups improved dart throwing performance after the intervention, the improvement of the mindfulness group was statistically higher in comparison to that of the attention control group. It was thus concluded that the MAC approach could improve the performance and adaptive sport experience of beginners in dart throwing.

1.4 SCIENTIFIC STUDY OF RELIGION: METHOD & THEORY

Bogdan, Henrik. 2016. The Babalon Working 1946: L. Ron Hubbard, John Whiteside Parsons, and the Practice of Enochian Magic. *Numen* 63(1). 12–32.
doi:10.1163/15685276-12341406.

In the spring of 1946 L. Ron Hubbard and John W. Parsons performed a series of magical rituals with the aim of incarnating the Thelemic goddess Babalon in a human being. Hubbard's cooperation with Parsons, known as the Babalon Working, remains one of the most controversial events in Hubbard's pre-Scientology days. This article sets out to describe the content of the magical rituals, as well as their purpose. It is argued that in order to fully understand these events, it is necessary to approach the Babalon Working from the study of Western esotericism in general, and the study of Enochian magic in particular.

Hanley, Adam W., Neil Abell, Debra S. Osborn, Alysia D. Roehrig & Angela I. Canto. 2016. Mind the Gaps: Are Conclusions About Mindfulness Entirely Conclusive? *Journal of Counseling & Development* 94(1). 103–113.
doi:10.1002/jcad.12066.

Mindfulness has emerged as an important construct in the mental health field. Although evidence suggests benefits, it also appears that excitement over the clinical applications of mindfulness has largely suspended concentrated efforts to clarify fundamental elements of the construct. This article explores conceptual confusion and contrasts primary mindfulness-based techniques before investigating attrition factors, adverse effects of mindfulness practices, and populations contraindicated for mindfulness-based techniques. Implications for practice are provided.

Lane, Jonathan D., E. Margaret Evans, Kimberly A. Brink & Henry M. Wellman. 2016. Developing concepts of ordinary and extraordinary communication. *Developmental Psychology* 52(1). 19–30.
doi:10.1037/dev0000061.

Researchers examine how understandings of ordinary and extraordinary communication develop. Three- to 10-year-old children and adults (n=183) were given scenarios in which a protagonist wanted help from a human (their parent) or from God. Scenarios varied in whether protagonists expressed their desires aloud (by asking) or silently (by hoping), whether (for human scenarios) parents were nearby or far away, and whether (for God scenarios) protagonists expressed desires through ordinary means (asking or hoping) or more extraordinary means (praying). Following each scenario, participants were asked whether the recipient (either the parent or God) was aware of the protagonist's desire. Children as young as 3 to 4 years old understood that both loudness and distance limit the effectiveness of human communication, reporting that humans would most likely be aware of desires when they were expressed both aloud and nearby. As well, by this age, children reported that God would more often be aware of desires than would humans, but children of all ages often reported that God (like humans) would be more aware of desires expressed aloud (rather than silently). These concepts of ordinary and extraordinary communication continued to be refined through middle childhood. Children's performance on standard theory-of-mind tasks and participants' religious background predicted whether they attributed awareness to God.

Norenzayan, Ara. 2016. Theodiversity. *Annual Review of Psychology* 67. 465–488.
doi:10.1146/annurev-psych-122414-033426.

Humanity is teeming with breathtaking theodiversity-in religious beliefs, behaviors, and traditions, as well as in various intensities and forms of disbelief. Yet the origins and consequences of this diversity have received limited attention in psychology. The author first describes how evolved psychological processes that influence and respond to cultural evolutionary trajectories generate and channel religious diversity. Next, he explores how theodiversity in turn shapes human psychology, and discuss three cultural dimensions of religious diversity in relation to psychological processes: (a) the cultural shift from small foraging bands and their local religious practices and beliefs to large and complex groups and their world religions, (b) cultural variability among world religions, and (c) secularization and

the ensuing cultural divide between religious and nonreligious societies and subcultures. The contributions of psychology to the scientific study of religion will increase with a deeper understanding of theodiversity.

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

Cavalera, Cesare, Francesco Pagnini, Marco Rovaris, Laura Mendozzi, Luigi Pugnetti, Massimo Garegnani & Enrico Molinari. 2016. A telemedicine meditation intervention for people with multiple sclerosis and their caregivers: Study protocol for a randomized controlled trial. *Trials* 17(1). 4.
doi:10.1186/s13063-015-1136-9.

Mindfulness-based interventions, modified and shortened versions of meditation teachings, have proved to be effective in the improvement of quality of life in many clinical conditions, including chronic diseases. This randomized controlled trial will investigate the impact of a multiple sclerosis (MS) specific telemedicine meditation intervention on the quality of life of people with multiple sclerosis and their caregivers. This trial will recruit 120 patients, men and women, with a diagnosis of relapsing-remitting or secondary progressive MS and their caregivers to participate in a 2-month intervention. Patients will undergo assessments of quality of life, anxiety, depression, quality of sleep, mindfulness and fatigue levels conducted at baseline, at week 8 (conclusion of the intervention) and at week 27 (6 month follow-up). Caregivers will complete assessments conducted at the same time for the same areas, plus caregiver burden. The intervention condition will consist of 2 hours/week of online meditation in a group setting led by a trainer, plus 1 hour/week of individual exercises. The control condition will incorporate a psycho-education online program and will require the same contact time commitment as the intervention condition. Primary outcome measures will consist of assessments of quality of life, anxiety, and depression level. Assessments of mindfulness level, quality of sleep and fatigue level will be considered secondary outcome measures. This investigation will increase understanding of the role of meditation as part of a treatment plan for people with MS and their caregivers. Overall, this study design has the potential to lead to effective meditation intervention strategies for this population and improve their quality of life.

Cramer, H., WL Wu, TY Lin, IH Chu & JM Liang. 2016. The acute effects of yoga on cognitive measures for women with premenstrual syndrome. *Deutsche Zeitschrift für Akupunktur* 59(1). 30–31.
doi:10.1016/S0415-6412(16)30009-1. Objectives

Recently, yoga classes specifically for women with premenstrual syndrome (PMS) have increased, but there is little research about the efficacy of these classes. The primary aims of this study were to evaluate the effect of yoga exercise on women with PMS and to evaluate the immediate change of attention performance after yoga classes. Eleven women with PMS and 9 women without PMS were recruited. The PMS group took the tests before and immediately after the yoga class both in the luteal and follicular phase of one menstrual cycle, while the control group took the tests only twice: once in the luteal phase and once in the follicular phase. Both groups were required to finish resting electroencephalography (EEG) and cognitive task of the 2-back task with EEG recording. The alpha brain wave percentage was higher immediately after yoga exercise in the PMS group. This suggests that the participants felt more relaxed or were in a more peaceful mental condition after yoga exercise. In the 2-back task, the PMS group needed a longer reaction time to respond to the target stimulus in the luteal phase and performed better with higher accuracy and shorter reaction time after yoga exercise. The event-related potentials of the EEG recording displayed a significant variability at the P3 amplitude throughout the menstrual cycle in the PMS group, but the P3 amplitude was unchanged throughout the menstrual cycle in the control group.

Crowe, Marie, Jennifer Jordan, Beverley Burrell, Virginia Jones, Deborah Gillon & Shirley Harris. 2016. Mindfulness-based stress reduction for long-term physical conditions: A systematic review. *Australian and New Zealand Journal of Psychiatry* 50(1). 21–32.
doi:10.1177/0004867415607984.

The objective of this project was to identify whether mindfulness-based stress reduction is effective in improving physical health outcomes for long-term physical conditions utilizing a systematic review of the literature. Fifteen studies were included in the review. None of the studies assessed as having a low risk of bias demonstrated significant improvements in physical health status although there was some emerging evidence that mindfulness-based stress reduction may be useful in pain conditions. There was some preliminary evidence that it may also be effective in improving primary insomnia and irritable bowel syndrome. Small to moderate effect sizes were also found for asthma, pain, tinnitus, fibromyalgia and somatization disorders.

- Glatstein, Miguel M., Ayelet Rimon, Dana Danino & Dennis Scolnik. 2016. Severe Allergic Contact Dermatitis from Temporary “Black Henna” Coloring of the Hair During Religious Cultural Celebrations: Three Different Cases, Same History. *American Journal of Therapeutics* 23(1). e292–294. doi:10.1097/MJT.0b013e318296f141.

Contact dermatitis after the application of temporary, paint-on, henna tattoos represents a well-known, potentially serious problem of active sensitization. Researchers here describe 3 cases involving 3 children of the same age who developed a severe contact dermatitis with massive face and neck swelling after application of black henna to their hair during “Purim” celebrations. All 3 cases had a history of having applied henna tattoos in the previous year with mild local reactions. Their reactions are presumed to be due to sensitization to para-phenylenediamine. Although reactions to henna are being increasingly reported, reactions of this severity seem to be rare and could lead to permanent skin changes.

- Goldstein, Michael R., Gregory F. Lewis, Ronnie Newman, Janice M. Brown, Georgiy Bobashev, Lisa Kilpatrick, Emma M. Seppälä, Diana H. Fishbein & Sreelatha Meleth. 2016. Improvements in well-being and vagal tone following a yogic breathing-based life skills workshop in young adults: Two open-trial pilot studies. *International Journal of Yoga* 9(1). 20–26. doi:10.4103/0973-6131.171718.

While efficacy of Sudarshan Kriya Yoga (SKY) has been demonstrated in a number of prior studies, little is known about the effects of SKY taught as part of the Your Enlightened Side (YES+) workshop designed for college students and other young adults. This study aimed to assess the effects of YES+, a yogic breathing-based life skills workshop, on multiple measures of well-being and physiological stress response. Two nonrandomized open-trial pilot studies were conducted with a total of 74 young adults. Study 1 collected a variety of self-report questionnaires at baseline, post-workshop, and 1-month follow-up. Study 2 collected self-report questionnaires in addition to electrocardiography with a stationary cycling challenge at baseline and 1-month follow-up. In Study 1 improvements in self-reported depression, perceived stress, life satisfaction, social connectedness, and gratitude were observed post-workshop and 1-month after workshop relative to baseline. In Study 2 improvements in self-reported emotion regulation were observed at 1-month follow-up relative to baseline. Positive and Negative Affect Schedule-Expanded Form positive affect increased, while fatigue and sadness decreased. During the stationary cycling challenge, rate to recovery of electrocardiography inter-beat interval also increased from baseline to 1-month follow-up. These findings suggest that a life skills workshop integrating yogic breathing techniques may provide self-empowering tools for enhancing well-being in young adults. Future research is indicated to further explore these effects, particularly in regards to vagal tone and other aspects of stress physiology.

- Huang, Fukai, Ying Shang, Yuandai Luo, Peng Wu, Xue Huang, Xiaohui Tan, Xingyi Lu, Lifang Zhen & Xianda Hu. 2016. Lower Prevalence of Alzheimer’s Disease among Tibetans: Association with Religious and Genetic Factors. *Journal of Alzheimer’s disease: JAD* 50(3). 659–667. doi:10.3233/JAD-150697.

The prevalence of dementia differs among racial groups, the highest prevalence being in Latin America (8.5%) compared to sub-Saharan African regions (2.4%). The most common type of dementia is Alzheimer’s disease (AD). The objective of this study was to estimate the prevalence of AD in the Qinghai-Tibet plateau and to

investigate the related factors. The study revealed that the prevalence of AD among Tibetan individuals aged >60 years was 1.33%. The CLU haplotypes AA+GA of rs2279590 was correlated with AD. The CLU haplotypes GG+GC of rs9331888 and kowtow were negatively correlated with AD. Thus a low prevalence of AD was found in Tibetans from the Qinghai-Tibet plateau. Multivariate analysis might suggest that regular “mind-body” religious meditative activities may be negatively associated with AD in this population, as well as the CLU genotype at rs9331888.

- Jalal, Baland. 2016. How to Make the Ghosts in my Bedroom Disappear? Focused-Attention Meditation Combined with Muscle Relaxation (MR Therapy)-A Direct Treatment Intervention for Sleep Paralysis. *Frontiers in Psychology* 7. 28.
doi:10.3389/fpsyg.2016.00028.

Sleep paralysis (SP) is a common state of involuntary immobility occurring at sleep onset or offset. It can include terrifying hypnogogic or hypnopompic hallucinations of menacing bedroom intruders. Unsurprisingly, the experience is associated with great fear and horror worldwide. To date, there exist no direct treatment intervention for SP. In this article, the author proposes for the first time a type of focused inward-attention meditation combined with muscle relaxation as a direct intervention to be applied during the attack, to ameliorate and possibly eliminate it (what could be called, meditation-relaxation or MR therapy for SP). The intervention includes four steps: (1) reappraisal of the meaning of the attack; (2) psychological and emotional distancing; (3) inward focused-attention meditation; (4) muscle relaxation. The intervention promotes attentional shift away from unpleasant external and internal stimuli (i.e., terrifying hallucinations and bodily paralysis sensations) unto an emotionally pleasant internal object (e.g., a positive memory). It may facilitate a relaxed meditative state characterized by a shift from sympathetic to parasympathetic dominance, associated with greater levels of alpha activity (which may lead to drowsiness and potentially sleep). The procedure may also reduce the initial panic and arousal that occur when realizing one is paralyzed. In addition, a novel Panic-Hallucination (PH) Model of Sleep Paralysis is presented, describing how through escalating cycles of fear and panic-like autonomic arousal, a positive feedback loop is created that worsens the attack (e.g., leading to longer and more fearful episodes), drives content of hallucinations, and causes future episodes of SP. Case examples are presented to illustrate the feasibility of MR therapy for SP.

- Koenig, Harold G., Bruce Nelson, Sally F. Shaw, Salil Saxena & Harvey Jay Cohen. 2016. Religious Involvement and Telomere Length in Women Family Caregivers. *Journal of Nervous and Mental Disease* 204(1). 36–42.
doi:10.1097/NMD.0000000000000443.

Telomere length (TL) is an indicator of cellular aging associated with longevity and psychosocial stress. RESEARCHERS examine here the relationship between religious involvement and TL in 251 stressed female family caregivers recruited into a 2-site study. Religious involvement, perceived stress, caregiver burden, depressive symptoms, and social support were measured and correlated with TL in whole blood leukocytes. Results indicated a U-shaped relationship between religiosity and TL. Those scoring in the lowest 10% on religiosity tended to have the longest telomeres. However, among the 90% of caregivers who were at least somewhat religious, religiosity was significantly and positively related to TL after controlling for covariates. Whereas nonreligious caregivers have relatively long telomeres, the researchers found a positive relationship between religiosity and TL among those who are at least somewhat religious.

- McNeil, Sharon B. 2016. Spirituality in Adolescents and Young Adults With Cancer: A Review of Literature. *Journal of Pediatric Oncology Nursing* 33(1). 55–63.
doi:10.1177/1043454214564397.

Spirituality and religion have been found to have a positive impact on adults with cancer, but these concepts have not been well examined in adolescents and young adults (AYA) with cancer. AYA often question and struggle with their religious and spiritual beliefs, so it is not clear if spirituality and religion have the same positive impact

on this age group. The purpose of this review of literature was to examine the research that has been conducted in spirituality in AYA with cancer. The review covered the years from 1980 to present. The terms cancer, adolescents, and young adults as well as the phrases spirit and relig* were used to capture the different variations of words. Nine articles were found that explored spirituality and religiosity in AYA with cancer. This review highlighted the need for clarifying the terms used in describing the concept. This lack of continuity in terms makes it difficult to compare the studies. The methods used to measure spirituality are varied.*

Naoroibam, Rosy, Kashinath G. Metri, Hemant Bhargav, R. Nagaratna & H. R. Nagendra. 2016. Effect of Integrated Yoga (IY) on psychological states and CD4 counts of HIV-1 infected patients: A randomized controlled pilot study. *International Journal of Yoga* 9(1). 57–61. doi:10.4103/0973-6131.171723.

Human immunodeficiency virus (HIV) infected individuals frequently suffer from anxiety and depression. Depression has been associated with rapid decline in CD4 counts and worsened treatment outcomes in HIV-infected patients. Yoga has been used to reduce psychopathology and improve immunity. The aim of this article was to study the effect of 1-month integrated yoga (IY) intervention on anxiety, depression, and CD4 counts in patients suffering from HIV-1 infection. HIV-1 infected individuals (n=44) from two HIV rehabilitation centers of Manipur State of India were randomized into two groups: Yoga (n=22; 12 males) and control (n=22; 14 males). Yoga group received IY intervention, which included physical postures (asanas), breathing practices (pranayama), relaxation techniques, and meditation. IY sessions were given 60 min/day, 6 days a week for 1 month. Control group followed daily routine during this period. All patients were on anti-retroviral therapy (ART) and dosages were kept stable during the study. There was no significant difference in age, gender, education, CD4 counts, and ART status between the two groups. Hospital anxiety and depression scale was used to assess anxiety and depression, CD4 counts were measured by flow cytometry before and after intervention. Within group comparison showed a significant reduction in depression scores and non-significant reduction in anxiety scores along with non-significant increment in CD4 counts in the yoga group. In the control group, there was a non-significant increase in anxiety and depression scores and reduction in CD4 counts. Between-group comparison revealed a significant reduction in depression scores and significant increase in CD4 counts in the yoga group as compared to the control.

Pagliaro, Gioacchino, Paolo Pandolfi, Natalina Collina, Giovanni Frezza, Alba Brandes, Margherita Galli, Federica Marzocchi Avventuroso, et al. 2016. A Randomized Controlled Trial of Tong Len Meditation Practice in Cancer Patients: Evaluation of a Distant Psychological Healing Effect. *EXPLORE: The Journal of Science and Healing* 12(1). 42–49. doi:10.1016/j.explore.2015.10.001.

Tong Len meditation is an important therapeutic tool in the Tibetan medicine, and it can be used for self-healing and/or to heal others. Currently, in the West, there is no scientific study concerning the efficacy of a Tong Len distant healing effect on psychological disorders in cancer patients. The objective of this research was to evaluate a distant healing effect of Tong Len meditation on stress, anxiety, depression, fatigue, and self-perceived quality of life in cancer patients. These psychological objectives were chosen as a consequence of the limited scientific literature of present day. The researchers performed a double-blind randomized controlled trial on 103 cancer patients with tumors. Overall, 12 meditators used Tong Len in aid of 52 patients randomly selected as experimental group, while the remaining 51 patients constituted the control group. Patients and meditators did not know each other. All patients completed profile of mood states (POMS) and European Quality of Life-5 dimensions (EQ-5D) questionnaires before treatment (T0), after two (T1) and three months of treatment (T2), and one month after treatment cessation (T3). Following intervention, with regard to the parameters related to depression, a statistically significant improvement was observed in the treatment group compared to controls. On the other hand, the vigor/activity parameter saw significant improvements in the control group. Both groups exhibited significant improvements in the other factors assessed in the POMS and EQ-5D questionnaires. The authors conclude that this study did not provide sufficient evidence supporting an efficacy of Tong Len meditation in distant psychological

healing as compared to a control condition. The research highlighted some psychological improvements through Tong Len distant meditation in a group of patients unknown to meditators. Therefore, the enhancement detected in most parameters in both treatment and control groups raises interest on in-depth analysis and evaluation of distant meditation on cancer patients to mitigate psychological problems caused by the disease.

- Papp, Marian E., Petra Lindfors, Malin Nygren-Bonnier, Lennart Gullstrand & Per E. Waendell. 2016. Effects of High-Intensity Hatha Yoga on Cardiovascular Fitness, Adipocytokines, and Apolipoproteins in Healthy Students: A Randomized Controlled Study. *Journal of Alternative and Complementary Medicine* 22(1). 81–87.
doi:10.1089/acm.2015.0082.

Yoga exercises are often used as a form of body and mind exercise to increase performance. However, knowledge about the physiologic effects of performing high-intensity Hatha yoga exercises over a longer time period remains limited. The objective of this study was to investigate the effects of high-intensity yoga (HIY) on cardiovascular fitness (maximal oxygen consumption, estimated from the Cooper running test), ratings of perceived exertion (RPE), heart rate (HR), heart rate recovery (HRR), blood pressure (BP), adipocytokines, apolipoprotein A1 (ApoA1), apolipoprotein B (ApoB), and glycosylated hemoglobin (HbA1c) in healthy students. Methods: The 44 participants (38 women and 6 men; median age, 25 years [range, 20-39 years]) were randomly assigned to an HIY or a control group. The HIY program was held for 6 weeks (60 minutes once a week). Following intervention, it was found that HIY had no significant effects on cardiovascular fitness, HR, HRR, BP, or any of the blood parameters. However, ApoA1 and adiponectin levels increased significantly in the HIY group after 6 weeks. The authors conclude that six weeks of HIY did not significantly improve cardiovascular fitness. However, ApoA1 and adiponectin levels increased significantly in the HIY group. This finding suggests that HIY may have positive effects on blood lipids and an anti-inflammatory effect.

- Prinds, Christina, Dorte Hvidtjørn, Axel Skytthe, Ole Mogensen & Niels Christian Hvidt. 2016. Prayer and meditation among Danish first time mothers A questionnaire study. *BMC Pregnancy and Childbirth* 16(1). 8.
doi:10.1186/s12884-016-0802-6.

Mothers' existential dimensions in the transition to motherhood have not been described thoroughly. They might experience disruption and new perspectives in existential ways and this may especially be the case in preterm birth. The aim of this study was twofold. First the researchers investigated the existential dimension of motherhood transition in a secularized context, through practices of prayer and meditation. Second, they described the relationship between time of birth (term/preterm) and the prayer/meditation practices of the mothers. Data were gathered from a nationwide questionnaire survey among first time mothers conducted during the summer 2011. All Danish women who gave birth before the 32(nd) pregnancy week (n=255), and double the number of mothers who gave birth at full term (n=658) in 2010 were included (total n=913). The questionnaire consisted of 46 overall items categorized in seven sections, which independently cover important aspects of existential meaning-making related to becoming a mother. The respondent rate was 57 % (n=517). Moments of praying or meditation 6-18 months post-partum were reported by 65 %, and mothers who responded affirmatively, practiced prayer (n=286) more than meditation (n=89). No differences in affirmative responses to prayer or meditation were observed between mothers of full term or preterm born children, not even after controlling for perinatal or post-partum loss, mode of birth, age, status of cohabiting or education.

- Quintana-Hernandez, Domingo J., Maria T. Miro-Barrachina, Ignacio J. Ibanez-Fernandez, Angelo Santana-del Pino, Maria P. Quintana-Montesdeoca, Bienvenida Rodriguez-de Vera, David Morales-Casanova, Maria del Carmen Perez-Vieitez, Javier Rodriguez-Garcia & Noelia Bravo-Caraduje. 2016. Mindfulness in the Maintenance of Cognitive Capacities in Alzheimer's Disease: A Randomized Clinical Trial. *Journal of Alzheimers Disease* 50(1). 217–232.

doi:10.3233/JAD-143009.

The Canary Islands longitudinal study on non-pharmacological treatments showed the overall effectiveness of mindfulness in Alzheimer's disease (AD). However, no specific data on the maintenance of cognitive capacities were presented. The objective here was to determine whether the practice of mindfulness modifies the course of cognitive impairment in AD. Experimental design consisted of longitudinal, non-inferiority and equivalence, randomized clinical trial, repeated-measures design, with three experimental groups and one control group. Participants were patients with AD who voluntarily attended the Lidia Garcia Foundation (n=502). Only those who were treated with donepezil and MMSE ≥ 18 were included (n=120). Over a two-year period, each group carried out three weekly sessions of stimulation based on mindfulness, cognitive stimulation therapy, and progressive muscle relaxation. Following intervention, the mindfulness group showed significant scores compared with the control and muscle relaxation groups, while mindfulness and cognitive stimulation therapy were equivalent. Group cognitive stimulation evolved better than the control group but not better than the muscle relaxation group. The effect size compared over two years was large for the mindfulness group, moderate for the relaxation group, and low for the cognitive stimulation group.

- Ruscio, Aimee C., Christine Muench, Emily Brede & Andrew J. Waters. 2016. Effect of Brief Mindfulness Practice on Self-Reported Affect, Craving, and Smoking: A Pilot Randomized Controlled Trial Using Ecological Momentary Assessment. *Nicotine & Tobacco Research* 18(1). 64–73.

doi:10.1093/ntr/ntv074.

Despite efficacious pharmacological and behavioral treatments, most smokers attempt to quit without assistance and fail to quit. Mindfulness practice may be useful in smoking cessation. This ecological momentary assessment (EMA) study was a pilot parallel group randomized controlled trial of a brief mindfulness practice (Brief-MP) intervention on self-reported smoking behavior delivered to smokers on a Personal Digital Assistant (PDA) in the field. Adult community smokers (n=44) were randomly assigned to a Brief-MP (n=24) or Control (sham meditation; n=20) group. Participants were instructed to smoke as much or as little as they liked. Participants carried a PDA for 2 weeks and were instructed to initiate 20 minutes of meditation (or control) training on the PDA daily, completing an assessment of cognitive and affective processes immediately afterwards. Additionally, they completed assessments at random times up to four times per day. Primary outcome variables were negative affect, craving, and cigarettes smoked per day, all self-reported. Thirty-seven participants provided EMA data totaling 1874 assessments. Linear Mixed Model analyses on EMA data revealed that Brief-MP (vs. Control) reduced overall negative affect; reduced craving immediately post-meditation; and reduced cigarettes smoked per day over.

- Tan, Joyce Y. S., Haikel A. Lim, Nicole M. Y. Kuek, Ee Heok Kua & Rathi Mahendran. 2015. Caring for the caregiver while caring for the patient: Exploring the dyadic relationship between patient spirituality and caregiver quality of life. *Supportive Care in Cancer* 23(12). 3403–3406.

doi:10.1007/s00520-015-2920-5.

Caregivers of cancer patients experience much psychological stress due to the heavy responsibility of caregiving. Dyadic studies on the patient-caregiver relationship have shown that caregivers' quality of life (QOL) are affected by their care recipients' psychological variables. In this exploratory study, focus is placed on spirituality in patients-an emerging area of interest-and its impact on their caregivers' QOL. Because of spirituality's links with optimism and resilience, they were also investigated as possible mediators in the dyadic relationship. Patients completed measures of spirituality (FACIT-Sp-12), optimism (LOT-R), and resilience (RAS); their family caregivers completed a measure of QOL (CQOLC). Both patients and family caregivers completed a sociodemographic survey. Regression analyses were used to analysis the data. Regression analyses following Baron and Kenny's (1986) mediation framework was carried out. Results indicated that spirituality as a whole did not predict caregiver QOL. However, further analyses showed that while the meaning-making aspect of spirituality did predict caregiver QOL, the faith

aspect did not. Mediator analyses indicated that both optimism and resilience were not mediators; hence, confirmatory Sobel's tests which had been originally planned were not conducted. Nonetheless, optimism and resilience were correlated with meaning-making. Patients who make meaning of their cancer illness exert a positive influence on their caregivers' well-being. This provides support for interventions that encourage patients to reappraise their illness situation, as such interventions not only benefit patients but also enhance the quality of life for their caregivers.

- Trivedi, Surbhi C., Alka A. Subramanyam, Ravindra M. Kamath & Charles Pinto. 2016. Study of Spirituality in Elderly with Subjective Memory Complaints. *Journal of Geriatric Psychiatry and Neurology* 29(1). 38–46.
doi:10.1177/0891988715598235.

Subjective memory complaints are very common among elderly. They can be due to depression, cognitive decline, or be a part of normal aging process. Spirituality is another important dimension in elderly, and it is believed to help them cope with various adversities. This study was done to find out whether any relation exists between these 2 variables in elderly. A total of 120 elderly individuals, presenting with subjective memory complaints, were divided into 3 groups: controls, elderly with depression, and elderly with mild cognitive impairment (MCI). Spirituality in them was studied by dividing it into the subdomains of self-transcendence, presence of meaning in life, search for meaning in life, and locus of control. Spirituality was the highest in controls, followed by MCI group, and then depression group. Spirituality had a direct negative relationship with severity of depression, while relationship of spirituality with severity of cognitive decline was more complex. Relationship of spirituality with mental health status in elderly patients seemed bidirectional, that is, cause as well as effect relationship.

- Vinay, A. V., D. Venkatesh & V. Ambarish. 2016. Impact of short-term practice of yoga on heart rate variability. *International Journal of Yoga* 9(1). 62–66.
doi:10.4103/0973-6131.171714.

Yoga is a science that facilitates homeostasis, an ancient way of life intended to improve the quality of life of an individual. Practice of yoga is proposed to alter the autonomic nervous system and affect the cardiovascular functioning. This study was intended to assess the influence of short-term practice of yoga for a month on heart rate variability (HRV). Healthy male volunteers (n=40) in the age group of 30-60 years willing to practice yoga for a month were included in the study. HRV was assessed using HRV device (RMS Vagus, India). Pre-interventional assessment of HRV was done in these subjects. Practice of yoga that included a set of physical postures (asanas), breathing techniques (pranayama), and meditation (dhyana) were performed for an hour daily for 1 month under the guidance of a certified yoga instructor. Post-interventional assessment of HRV was done. Thirty-two of 40 subjects recruited for yoga practice completed the study protocol. Analysis of HRV revealed that in time domain parameters, SDNN increased from 33.60 to 42.11, RMSSD increased from 22.00 to 25.6, and PNN50 increased from 2.45 to 7.35 after intervention. In the frequency domain parameters, the low-frequency (LF) power spectrum reduced from 39.30 to 30.40 and LF/high-frequency ratio was reduced from 2.62 to 2.28 after 1 month practice of yoga.

- Youkhana, Sabrina, Catherine M. Dean, Moa Wolff, Catherine Sherrington & Anne Tiedemann. 2016. Yoga-based exercise improves balance and mobility in people aged 60 and over: a systematic review and meta-analysis. *Age and Ageing* 45(1). 21–29.
doi:10.1093/ageing/afv175.

Researchers conducted a systematic review with meta-analysis to determine the impact of yoga-based exercise on balance and physical mobility in people aged 60+ years. Trials were included if they evaluated the effect of physical yoga (excluding meditation and breathing exercises alone) on balance in people aged 60+ years. Researchers extracted data on balance and the secondary outcome of physical mobility. Standardized mean differences and 95% confidence intervals (CI) were calculated using random-effects models. Methodological quality of trials was assessed using the 10-point Physiotherapy Evidence Database (PEDro) Scale. Six trials of relatively high methodological

quality, totaling 307 participants, were identified and had data that could be included in a meta-analysis. Overall, yoga interventions had a small effect on balance performance and a medium effect on physical mobility.

2.2 SPIRITUALITY & HEALTH: MENTAL HEALTH

Abu-Raiya, Hisham, Kenneth I. Pargament, Andra Weissberger & Julie Exline. 2016. An Empirical Examination of Religious/Spiritual Struggle Among Israeli Jews. *International Journal for the Psychology of Religion* 26(1). 61–79.
doi:10.1080/10508619.2014.1003519.

The current investigation examined the prevalence, predictors, and psychological implications of religious and spiritual (r/s) struggles among a sample of Israeli-Jewish university students. R/s struggle was assessed by the Religious and Spiritual Struggles (RSS) Scale. This is a newly constructed scale that assesses a wide array of r/s struggles. The RSS is composed of six factors of struggles: Divine, Doubt, Demonic, Interpersonal, Moral, and Ultimate Meaning. Confirmatory factor analysis of the RSS in this study confirmed this six-factor structure. Of the 164 Jewish participants, between 1.2% and 30.5% experienced various r/s struggles. Beliefs in a cruel God and distant God, religious participation, and fundamentalism predicted higher levels of different types of struggle. All six forms of struggle were correlated with greater psychological distress. In regression equations including r/s struggles and demographic and religious variables, Moral struggles predicted lower life satisfaction, Divine struggles predicted depressive symptoms, and both Divine and Doubt struggles predicted generalized anxiety. Possible explanations and implications of the findings are offered. The authors conclude by pointing to the limitations of the study and suggesting a few directions for future research.

Barnes, Vernon A., Andrea Monto, Jennifer J. Williams & John L. Rigg. 2016. Impact of Transcendental Meditation on Psychotropic Medication Use Among Active Duty Military Service Members With Anxiety and PTSD. *Military Medicine* 181(1). 56–63.
doi:10.7205/milmed-d-14-00333.

The purpose of the study was to determine whether the regular practice of Transcendental Meditation (TM) decreased the need for psychotropic medications required for anxiety and post-traumatic stress disorder (PTSD) management and increased psychological wellbeing. The sample included 74 military Service Members with documented PTSD or anxiety disorder not otherwise specified (ADNOS), 37 that practiced TM and 37 that did not. At 1 month, 83.7% of the TM group stabilized, decreased, or ceased medications and 10.8% increased medication dosage; compared with 59.4% of controls that showed stabilizations, decreases, or cessations; and 40.5% that increased medications. A similar pattern was observed after 2, 3, and 6 months. Notably, there was a 20.5% difference between groups in severity of psychological symptoms after 6 months; that is, the control group experienced an increase in symptom severity compared with the group practicing TM. These findings provide insight into the benefits of TM as a viable treatment modality in military treatment facilities for reducing PTSD and ADNOS psychological symptoms and associated medication use.

Beheshtipour, Nooshin, Parisa Nasirpour, Shahrzad Yektatalab, Mehran Karimi & Najaf Zare. 2016. The Effect of Educational-Spiritual Intervention on the Burnout of the Parents of School Age Children with Cancer: A Randomized Controlled Clinical Trial. *International Journal of Community Based Nursing and Midwifery* 4(1). 90–97.

Parents of children with cancer experience high levels of stress and discomfort. Religious beliefs are important sources of comfort and support for many cancer patients and their families. The present study aimed to assess the effect of educational-spiritual intervention on burnout of the parents of the children with cancer. In this randomized clinical trial, 135 parents of children with cancer were randomly assigned into intervention and control groups. Data were collected through SMBQ from both groups, before, immediately after and one month after the intervention. Educational-spiritual programs were held for six weeks, one session every week. The data were analyzed by SPSS

using independent *t*-test, and repeated measure ANOVA. The results showed that the mean burnout score before the intervention in the intervention group was 4.28 ± 0.61 and in the control group it was 4.23 ± 0.50 ; most of the parents reported moderate to high burnout. But, there was a significant difference between the intervention and control groups immediately after and one month after the intervention. The mean burnout score in the intervention group was less than the control group. Results also showed that there was a significant difference between the two groups in terms of parental burnout in three times of measurements. This study indicated that educational-spiritual intervention was effective on reduction of the burnout of the parents of the children with cancer. Due to high burnout of most of the parents, offering such a program could be beneficial for them. More studies in this regard are recommended.

Bravo, Adrian J., Matthew R. Pearson & Leah E. Stevens. 2016. Making religiosity person-centered: A latent profile analysis of religiosity and psychological health outcomes. *Personality and Individual Differences* 88. 160–169.
doi:10.1016/j.paid.2015.08.049.

Although variable-centered analyses predominate the religiosity-health literature, they are limited in that they tend to focus on the (unique) associations between a single facet of religiosity and outcomes. Person-centered analyses allow the identification of distinct subpopulations defined by individuals' full response profiles on facets of religiosity. The present study used latent profile analysis to identify distinct subgroups defined by their scores on the Religious Life Inventory-Revised. Using the Lo–Mendell–Rubin Likelihood Ratio Test, researchers found that a four-class solution fits optimally in two samples of Christian college students, including questioning (high quest, low intrinsic/extrinsic), intrinsically motivated (high intrinsic), high religiosity (high on all religious orientations), and low religiosity (low on all religious orientations) groups. Across both studies, researchers found, that the high religiosity, low religiosity and questioning groups reported significantly lower levels of psychological well-being compared to the "Intrinsically Motivated" group. These results corroborate studies suggesting that intrinsic religiosity is a protective factor associated with good psychological well-being among religious students and that personal religious struggles (i.e., quest religiosity) are associated with poorer psychological well-being. These results point to the utility of person-centered analyses to examine religiosity in unique ways.

Brewster, Melanie E., Brandon L. Velez, Aasha Foster, Jessica Esposito & Matthew A. Robinson. 2016. Minority stress and the moderating role of religious coping among religious and spiritual sexual minority individuals. *Journal of Counseling Psychology* 63(1). 119–126.
doi:10.1037/cou0000121.

In prior research with primarily heterosexual religious and spiritual individuals, positive and negative forms of religious coping have been posited to moderate the links between minority stressors and psychological outcomes. With a sample of 143 sexual minority people, the present study extended these hypotheses by examining the moderating roles of positive and negative religious coping in the link of 2 sexual minority-specific minority stress variables (heterosexist discrimination, internalized heterosexism) with psychological distress and well-being. In partial support of the study hypotheses, researchers found that positive religious coping moderated the relation of internalized heterosexism and psychological well-being such that greater positive religious coping weakened the deleterious impact of internalized heterosexism on psychological well-being. Negative religious coping did not moderate any links. As the first test of the moderating roles of religious coping styles in the sexual minority stress-psychological distress link, the present study yields important findings for research and practice with religious and spiritual sexual minority individuals.

Broderick, Julie, Abigail Knowles, Jonathan Chadwick & Davy Vancampfort. 2016. Yoga vs standard care for schizophrenia. *Schizophrenia Bulletin* 42(1). 15–17.
doi:10.1093/schbul/sbv165.

This article is a review of Yoga vs standard care for schizophrenia. Yoga is an ancient spiritual practice that originated in India and is currently accepted in the Western world as a form of relaxation and exercise. It has been

of interest for people with schizophrenia to determine its efficacy as an adjunct to standard-care treatment. Even though authors found some positive evidence in favor of yoga over standard-care control, this should be interpreted cautiously in view of outcomes largely based each on 1 study with limited sample sizes and short-term follow-up. Overall, many outcomes were not reported and evidence presented in this review is of low to moderate quality-too weak to indicate that yoga is superior to standard-care control for the management of schizophrenia. Details are fully reported in the Cochrane review.

- Graser, Johannes, Volkmar Höfling, Charlotte Weßlau, Adriana Mendes & Ulrich Stangier. 2016. Effects of a 12-Week Mindfulness, Compassion, and Loving Kindness Program on Chronic Depression: A Pilot Within-Subjects Wait-List Controlled Trial. *Journal of Cognitive Psychotherapy* 30(1). 35–49.
doi:10.1891/0889-8391.30.1.35.

In this pilot study, n=11 patients suffering from chronic depression were treated in a 12-week group program consisting of basic mindfulness exercises from Mindfulness-Based Cognitive Therapy and compassion exercises from Compassion Focused Therapy and Loving Kindness Meditation. In a 3-month waiting period prior to treatment, depression symptoms both in self-report and clinician rating did not change significantly. After treatment, depression severity was significantly reduced. After a 3-month follow-up, the symptoms further improved, with almost large effect sizes being observed in primary outcome measures. Changes in emotion regulation styles reflected by a significant increase in acceptance and significant decrease in suppression of emotions were observed at follow-up. Rumination about oneself was also significantly reduced at follow-up. Compassionate love and mindfulness were increased at follow-up, no effects were found on the Self-Compassion Scale and the Rosenberg Self-Esteem Scale. Given further confirming studies for this approach, it might improve treatment options for patients suffering from chronic depression.

- Harris, J. Irene, Crystal L. Park, Joseph M. Currier, Timothy J. Usset & Cory D. VoECKs. 2015. Moral injury and psycho-spiritual development: Considering the developmental context. *Spirituality in Clinical Practice* 2(4). 256–266.
doi:10.1037/scp0000045.

In this pilot study, n=11 patients suffering from chronic depression were treated in a 12-week group program consisting of basic mindfulness exercises from Mindfulness-Based Cognitive Therapy and compassion exercises from Compassion Focused Therapy and Loving Kindness Meditation. In a 3-month waiting period prior to treatment, depression symptoms both in self-report and clinician rating did not change significantly. After treatment, depression severity was significantly reduced. After a 3-month follow-up, the symptoms further improved, with almost large effect sizes being observed in primary outcome measures. Changes in emotion regulation styles reflected by a significant increase in acceptance and significant decrease in suppression of emotions were observed at follow-up. Rumination about oneself was also significantly reduced at follow-up. Compassionate love and mindfulness were increased at follow-up, no effects were found on the Self-Compassion Scale and the Rosenberg Self-Esteem Scale. Given further confirming studies for this approach, it might improve treatment options for patients suffering from chronic depression.

- Hawthorne, Dawn M., JoAnne M. Youngblut & Dorothy Brooten. 2016. Parent Spirituality, Grief, and Mental Health at 1 and 3 Months After Their Infant's/Child's Death in an Intensive Care Unit. *Journal of Pediatric Nursing-Nursing Care of Children & Families* 31(1). 73–80.
doi:10.1016/j.pedn.2015.07.008.

The death of an infant/child is one of the most devastating experiences for parents and immediately throws them into crisis. Research on the use of spiritual/religious coping strategies is limited, especially with Black and Hispanic parents after a neonatal (NICU) or pediatric intensive care unit (PICU) death. The purpose of this longitudinal study was to test the relationships between spiritual/religious coping strategies and grief, mental health (depression and post-traumatic stress disorder) and personal growth for mothers and fathers at 1 (T1) and 3 (T2) months after the infant's/child's death in the NICU/PICU, with and without control for race/ethnicity and religion. Bereaved

parents' greater use of spiritual activities was associated with lower symptoms of grief, mental health (depression and post-traumatic stress), but not post-traumatic stress in fathers. Use of religious activities was significantly related to greater personal growth for mothers, but not fathers. Spiritual strategies and activities helped parents cope with their grief and helped bereaved mothers maintain their mental health and experience personal growth.

- Hodge, David R., Tarek Zidan & Altaf Husain. 2016. Depression among Muslims in the United States: Examining the Role of Discrimination and Spirituality as Risk and Protective Factors: Table 1: *Social Work* 61(1). 45–52.
doi:10.1093/sw/swv055.

Depression is a widespread challenge that affects people in all cultures. Yet, despite the growth of the Muslim population in the United States, little research has been conducted on this topic with members of this cultural group. To address this gap in the literature, the present study examines the effect of discrimination and spirituality on depression with a sample of self-identified Muslims (n=269). Consistent with expectations, discrimination was a risk factor and spirituality was a protective factor. For instance, Muslims who reported being called offensive names were more likely to report clinically significant levels of depressive symptoms compared with those who were not called offensive names, whereas saying daily prayers was associated with a lower likelihood of reporting elevated levels of symptoms. The article concludes with a discussion of the implication of the results as they intersect social work practice and of avenues for future research.

- Kimura, Tomoaki, Tetsuya Sakuma, Hiroko Isaka, Seiya Uchida & Kiyoshi Yamaoka. 2016. Depressive symptoms and spiritual wellbeing in Japanese university students. *International Journal of Culture and Mental Health* 9(1). 14–30.
doi:10.1080/17542863.2015.1074261.

A scale was developed to broadly assess spirituality and to examine the association between depressive symptoms and spiritual attitudes of Japanese university students. In 2011, students in two universities (n=527) participated in the study by completing the Self-Rating Questionnaire for Depression (SRQ-D), the 25-Item Sky Spirituality Scale (SS-25) and responding to questions on lifestyle and religiosity. The reliability and validity of the SS-25 were verified using the Cronbach's alpha coefficient and factor analysis. Results indicated that female students had higher total SS-25 scores. Moreover, there was a weak negative correlation between the SRQ-D and SS-25. The multiple linear regression model with gender and age as covariates also indicated that the life satisfaction domain was strongly associated with depression and that the social connections domain was weakly associated with depression. Results of an analysis of covariance adjusted for gender and age indicated that students who believed in religion had higher total SS-25 scores and higher scores on the pious mind domain of SS-25. These results demonstrated that multi-dimensionality of spirituality overlaps with mental health. Moreover, the results suggested that the SS-25 is a valid instrument for assessing spirituality in university students.

- Lawrence, Ryan E., Maria A. Oquendo & Barbara Stanley. 2016. Religion and Suicide Risk: A Systematic Review. *Archives of Suicide Research: Official Journal of the International Academy for Suicide Research* 20(1). 1–21.
doi:10.1080/13811118.2015.1004494.

Although religion is reported to be protective against suicide, the empirical evidence is inconsistent. Research is complicated by the fact that there are many dimensions to religion (affiliation, participation, doctrine) and suicide (ideation, attempt, completion). The present researchers systematically reviewed the literature on religion and suicide over the last 10 years (89 articles) with a goal of identifying what specific dimensions of religion are associated with specific aspects of suicide. They found that religious affiliation does not necessarily protect against suicidal ideation, but does protect against suicide attempts. Whether religious affiliation protects against suicide attempts may depend on the culture-specific implications of affiliating with a particular religion, since minority religious groups can feel socially isolated. After adjusting for social support measures, religious service attendance is not especially protective

against suicidal ideation, but does protect against suicide attempts, and possibly protects against suicide. Future qualitative studies might further clarify these associations.

- Segal, Zindel V. & Kathleen M. Walsh. 2016. Mindfulness-based cognitive therapy for residual depressive symptoms and relapse prophylaxis. *Current Opinion in Psychiatry* 29(1). 7–12.
doi:10.1097/YCO.0000000000000216.

The article reviews the recent evidence for mindfulness-based cognitive therapy (MBCT) for patients with residual depressive symptoms or in remitted patients at increased risk for relapse. Randomized controlled trials have shifted focus from comparing MBCT with treatment-as-usual to comparing MBCT against interventions. These studies have provided evidence for the efficacy of MBCT on par with maintenance antidepressant pharmacotherapy and leading to a relative reduction of risk on the order of 30-40%. Perhaps fueled by these data, recent efforts have focused on extending MBCT to novel populations, such as acutely depressed patients, those diagnosed with health anxiety, social anxiety, fibromyalgia, or multiple chemical sensitivities as well migrating MBCT to online platforms so that it is more widely available. Neuroimaging studies of patients in structured therapies which feature mindfulness meditation, have reported findings that parallel behavioral changes, such as increased activation in brain regions subserving self-focus and emotion regulation (prefrontal cortex) and interoceptive awareness (insula). The current evidence base for MBCT is strongest for its application as a prophylactic intervention or for residual depressive symptoms, with early data suggesting additional indications outside the mood disorders. Future work will need to address dose-effect relationships between mindfulness practice and clinical benefits, as well as establishing the rates of uptake for online MBCT so that its benefits can be compared to in-person groups. Additionally, validating current or novel neural markers of MBCT treatment response will allow for patient matching and optimization of treatment response.

- Tait, Rhondie, Joseph M. Currier & J. Irene Harris. 2016. Prayer Coping, Disclosure of Trauma, and Mental Health Symptoms Among Recently Deployed United States Veterans of the Iraq and Afghanistan Conflicts. *International Journal for the Psychology of Religion* 26(1). 31–45.
doi:10.1080/10508619.2014.953896.

U.S. military veterans of the Iraq and Afghanistan conflicts are at risk for developing adverse mental health symptoms. This study was conducted to examine the associations between prayer coping, attitudes toward trauma disclosure, and mental health symptoms (posttraumatic stress disorder [PTSD] and depression) among 110 U.S. veterans who had returned from deployments in Operation Enduring Freedom and Operation Iraqi Freedom within the previous 6 months. Bivariate analyses revealed that prayer coping was positively correlated with an urge to talk about potentially traumatic experiences. When controlling for combat exposure, social support, and disclosure attitudes, multivariate regression analyses indicated that two of the prayer functions—praying for assistance and for calm and focus—were each uniquely linked with less PTSD and depressive symptomatology. In addition, a reliance on avoidant prayer was uniquely correlated with greater depressive symptomatology. These findings support emerging ideas about prayer as a form of trauma disclosure and highlight the relevance of this approach to coping for veterans as they readjust to civilian life.

2.3 SPIRITUALITY & HEALTH: METHOD AND THEORY

- Birdee, Gurjeet S., Stephanie J. Sohl & Ken Wallston. 2016. Development and Psychometric Properties of the Yoga Self-Efficacy Scale (YSES). *BMC Complementary and Alternative Medicine* 16(1). 3.
doi:10.1186/s12906-015-0981-0.

Yoga is a behavioral practice that uses physical movement, breathing, and meditation to improve health and promote personal transformation. Ancient yoga philosophy proposed that an individual's confidence about yoga, a concept similar to self-efficacy, will affect the likelihood of improved health from yoga practice. The purpose of this study was

to develop and examine the psychometric properties of a self-efficacy measure for yoga practice (the Yoga Self-Efficacy Scale; YSES). Yoga practitioners were recruited to evaluate the psychometric properties of YSES via a secure online survey. Researchers collected data on additional measures to further examine construct validity. After two weeks, participants were invited to complete YSES items again to assess test-retest reliability. A majority of participants (n=309) were White (85%), female (82%), and yoga instructors (56%). The 12-item YSES is unidimensional with a Cronbach's alpha of 0.93. Test-retest reliability is $r=0.79$ (n=170). YSES scores are positively correlated with health competence, health-related quality of life, and years practicing yoga, supporting construct validity. Also, yoga teachers scored significantly higher on the YSES than non-teachers. Non-significant relationships with education, income and sex supported discriminant validity. YSES maintained internal consistency and construct validity for all yoga styles surveyed.

Broadhurst, Kathleen & Ann Harrington. 2016. A mixed method thematic review: The importance of hope to the dying patient. *Journal of Advanced Nursing* 72(1). 18–32.
doi:10.1111/jan.12765.

The aim of this study was to review the literature and investigate the meaning of hope to patients receiving palliative care and to examine the themes that foster hope in those patients. Twelve qualitative articles were thematically analyzed using Braun and Clarke's (2006) steps to ascertain major themes and sub-themes. On analysis, the remaining three mixed method studies were found to reflect the themes generated by the qualitative studies. Seven key themes that increased hope were found: disease status; positive personal relationships; positive character traits; quality of life; setting and achieving goals; spirituality/religion; and hope after death. The importance of hope to dying patients was thus established. Hope is a very complex and personal phenomena requiring hope-enhancing strategies to be individualized. More research is needed with groups whose culture, youth or type of illness may affect their ability to foster and maintain hope.

Chin, John J. & Torsten B. Neilands. 2016. Chinese Immigrant Religious Institutions' Variability in Views on Preventing Sexual Transmission of HIV. *American Journal of Public Health* 106(1). 110–118.
doi:10.2105/AJPH.2015.302924.

Researchers examined Chinese immigrant religious institutions' views on teaching about preventing sexual transmission of HIV and the consistency of their views with public health best practices in HIV prevention. Survey data from 712 members of 20 New York City-based Chinese immigrant religious institutions was used to analyze their views on (1) teaching adolescents about condoms, (2) discussing homosexuality nonjudgmentally, and (3) promoting abstinence until marriage. Religion type was a significant predictor of views in the 3 domains, with Evangelical Protestants in least agreement with public health best practices, Buddhists in most agreement, and mainline Protestants between them. Greater HIV knowledge was significantly associated with agreement with best practices in all 3 domains. The frequency of prayer, meditation, or chanting and the level of acculturation were significant predictors of views on teaching adolescents about condoms and promoting abstinence until marriage.

De Jesus, Maria. 2016. How religiosity shapes health perceptions and behaviors of Latina immigrants: is it an enabling or prohibitive factor? *Psychology, Health & Medicine* 21(1). 128–133.
doi:10.1080/13548506.2015.1040031.

The study examines how religiosity shapes the health perceptions and health-related behaviors of 50 Latina immigrants from El Salvador, Guatemala, Mexico and Bolivia. Between May and August 2011, focus groups were conducted with participants representing each country of origin. Qualitative content analysis was the analytic strategy adopted in the study. The meta-theme, Religiosity Contributes to Positive Perceptions of Health and Health-Promoting Behaviors, is associated with six emerging themes: (1) Religiosity promotes a sense of personal responsibility for one's health; (2) Religiosity promotes a holistic view of health; (3) Religiosity promotes the view that health is a priority; (4) Religiosity promotes the view that health enables one to perform necessary tasks; (5)

Religiosity promotes health-seeking behavior; and (6) Religiosity provides intrinsic health benefits. Findings do not follow the clear-cut dichotomy of the health locus of control model and challenge simplified notions that Latinas hold a purely external health locus of control toward their health and health care. Latinas rely on both God and themselves in managing their health and engaging in health-promoting actions, which are prompted in large part by their religiosity.

- Dodds, Sally E., Thaddeus W. W. Pace, Melanie L. Bell, Mallorie Fiero, Lobsang Tenzin Negi, Charles L. Raison & Karen L. Weihs. 2015. Feasibility of Cognitively-Based Compassion Training (CBCT) for breast cancer survivors: a randomized, wait list controlled pilot study. *Supportive Care in Cancer* 23(12). 3599–3608.
doi:10.1007/s00520-015-2888-1.

This study assessed the feasibility of a meditation-based program called Cognitively-Based Compassion Training (CBCT) with breast cancer survivors. Enrollment and participant satisfaction with a novel intervention, adherence to program requirements, and differences between the intervention group and wait list controls on self-report measures were also assessed. Additionally, cortisol, a stress-related endocrine biomarker, was assessed. Participants (n=33) were randomly assigned to CBCT or the wait list. CBCT provided eight weekly, 2-h classes and a “booster” CBCT session 4 weeks later. CBCT participants were expected to attend classes and meditate between classes at least three times per week. Pre-/post-intervention and follow-up questionnaires measured symptom change (depression, intrusive thoughts, perceived stress, fear of cancer recurrence, fatigue/vitality, loneliness, and quality of life). Saliva samples were collected at the same periods to assess the slope of diurnal cortisol activity. Enrollment, class attendance, home practice time, and patient satisfaction exceeded expectations. Compared to controls, post-intervention, the CBCT group showed suggestions of significant improvements in depression, avoidance of intrusive thoughts, functional impairment associated with fear of recurrence, mindfulness, and vitality/fatigue. At follow-up, less perceived stress and higher mindfulness were also significant in the CBCT group. No significant changes were observed on any other measure including diurnal cortisol activity. Within the limits of a pilot feasibility study, results suggest that CBCT is a feasible and highly satisfactory intervention potentially beneficial for the psychological well-being of breast cancer survivors. However, more comprehensive trials are needed to provide systematic evidence. CBCT may be very beneficial for improving depression and enhancing well-being during breast cancer survivorship.

- Harrington, Ann. 2016. The importance of spiritual assessment when caring for older adults. *Ageing & Society* 36(1). 1–16.
doi:10.1017/S0144686X14001007.

There is a growing body of literature documenting the positive effects of both religiousness and spirituality on human health, particularly among those who are ageing or diagnosed with a life-limiting illness. These positive effects provide buffers to life’s stressors such as those associated with mental illness, care-giver burden, substance abuse and social disruption resulting from war. An important aspect of health care for individuals of all ages involves completion of a spiritual assessment. This paper explores the concept of spirituality and spiritual assessment, which has many definitions in the literature, and also provides examples of assessment tools from theology, nursing, social work and medicine.

- Karimi-Moonaghi, Hossein, Akram Gazerani, Saeed Vaghee, Hassan Gholami, Amir Reza Salehmoghaddam & Raheleh Gharibnavaz. 2015. Relation between spiritual intelligence and clinical competency of nurses in Iran. *Iranian Journal of Nursing and Midwifery Research* 20(6). 665–669.
doi:10.4103/1735-9066.170002.

Clinical competency is one of the most important requirements in nursing profession, based on which nurses are assessed. To obtain an effective and improved form of clinical competency, several factors are observed and monitored by the health educational systems. Among these observed factors, spiritual intelligence is considered as one of the most

significant factors in nurses' success and efficacy. In this study, it is aimed to determine the spiritual intelligence status and its relationship with clinical competency. The descriptive-correlational research was carried out on 250 nurses in Mashhad educational hospitals, selected by multi-stage sampling. Demographic, clinical competency, and spiritual intelligence questionnaires were used for data collection and 212 questionnaires were analyzed. About 53.3% of nurses obtained above average scores in spiritual intelligence. Clinical competency was evaluated by both self-evaluation and head nurse evaluation methods. Most nurses (53.8%) were having good level of clinical competency based on self-evaluation, 48.2% were at average level based on head nurse evaluation, and 53.3% were at average level based on overall score. A significant correlation was found between spiritual intelligence and clinical competency.

Kelley, Thomas M., Jack Pransky & Eric G. Lambert. 2015. Realizing improved mental health through understanding three spiritual principles. *Spirituality in Clinical Practice* 2(4). 267–281.
doi:10.1037/scp0000077.

A new psychospiritual understanding commonly known as the Three Principles proposes that people can realize and sustain improved mental health via insights gained through understanding the spiritual principles of Universal Mind, Consciousness, and Thought. Researchers test this proposition for people exposed to the Three Principles as an intervention. The results appear to support the prediction that insights regarding "thought recognition" and/or "innate mental health via a clear mind," gained through Three Principles understanding, will show a significant positive relationship with nonattachment, regulating negative emotions, and less rumination, and a significant inverse relationship with depression and anxiety.

Kinghorn, Warren A. 2016. American Christian Engagement with Mental Health and Mental Illness. *Psychiatric Services (Washington, D.C.)* 67(1). 107–110.
doi:10.1176/appi.ps.201400542.

Although religious belief and practice are relevant to mental health outcomes, many clinicians lack knowledge of particular religious traditions required to make informed judgments about referral to and collaboration with faith-based organizations and clinicians. This Open Forum examines five diverse American Christian approaches to mental health and mental illness—pastoral care and counseling, biblical counseling, integrationism, Christian psychology, and the work of the Institute for the Psychological Sciences—that are relevant for contemporary mental health service delivery. Each of these movements is briefly described and placed in historical, conceptual, and organizational context. Knowledge of the diverse and varied terrain of American Christian engagement with mental health care can inform clinicians' interactions with faith-based providers, clarify opportunities for responsible collaboration, and provide important insight into religious subcultures with faith-based concerns about contemporary psychiatric care.

Lee, Geok Ling, Gilbert Kam Tong Fan & Sally Wai Chi Chan. 2015. Validation of Chinese and English versions of the Holistic Well-being Scale in patients with cancer. *Supportive Care in Cancer* 23(12). 3563–3571.
doi:10.1007/s00520-015-2736-3.

The study aims to examine the psychometric properties of the Holistic Well-Being Scale (HWS), a new instrument developed on the Eastern concepts of affliction, and equanimity in a new sample involving patients with cancer. A cross-sectional survey was conducted with 300 patients with cancer in Singapore. The patients completed the HWS, WHO-5 Well-Being Index (WHO-5), and Hospital Anxiety and Depression Scale (HADS). Thirty-two patients participated in the 2-week retest. Mixed findings were obtained from the original seven-factor model in the sample: six factors had acceptable internal reliabilities (Cronbach's alpha; range, 0.657-0.809), and construct validities were partially supported. Factor analysis suggested three factors: Blissful-self (alpha=0.874), Disturbed-self (alpha=0.885) and Embittered-others (alpha=0.709). The novel factors demonstrated good test-retest reliability (ICC; range, 0.894-0.930) and construct validities, which were shown by significant correlations with

HADS and WHO-5 in the predicted directions. The present study is the first step taken to validate a scale that is essential in the development of culturally appropriate psychosocial interventions to support and promote personal well-being of cancer patients. The findings suggest that the three-factor model may be more applicable to the Singapore context, but it does not necessarily invalidate the original HWS. The results were discussed in terms of the meaning of the original HWS factors and cultural differences in coping behaviors between Singapore and Hong Kong, though both are Asian countries. The HWS could be further tested in other Asian populations as achieving holistic well-being is a common goal for patients in many cultures.

Lin, Kuan-Han, Yih-Sharnng Chen, Nai-Kuan Chou, Sheng-Jean Huang, Chau-Chung Wu & Yen-Yuan Chen. 2016. The Associations Between the Religious Background, Social Supports, and Do-Not-Resuscitate Orders in Taiwan: An Observational Study. *Medicine* 95(3). e2571. doi:10.1097/MD.0000000000002571.

Prior studies have demonstrated important implications related to religiosity and a do-not-resuscitate (DNR) decision. However, the association between patients' religious background and DNR decisions is vague. In particular, the association between the religious background of Buddhism/Daoism and DNR decisions has never been examined. The objective of this study was to examine the association between patients' religious background and their DNR decisions, with a particular focus on Buddhism/Daoism. The medical records of the patients who were admitted to the 3 surgical intensive care units (SICU) in a university-affiliated medical center located at Northern Taiwan from June 1, 2011 to December 31, 2013 were retrospectively collected. Researchers compared the clinical/demographic variables of DNR patients with those of non-DNR patients using the Student t test or χ test depending on the scale of the variables. They used multivariate logistic regression analysis to examine the association between the religious backgrounds and DNR decisions. A sample of 1909 patients was collected: 122 patients had a DNR order; and 1787 patients did not have a DNR order. Old age, unemployment, admission diagnosis of "non-operative, cardiac failure/insufficiency," and severe acute illness at SICU admission were significantly associated with signing of DNR orders. Patients' religious background of Buddhism/Daoism, married marital status, and admission diagnosis of "postoperative, major surgery" were less likely to have a DNR order written during their SICU stay. Furthermore, patients with poor social support, as indicated by marital and working status, were more likely to consent to a DNR order during SICU stay. This study showed that the religious background of Buddhism/Daoism was significantly associated with a lower likelihood of consenting to a DNR, and poor social support was significantly associated with a higher likelihood of having a DNR order written during SICU stay.

Medlock, Morgan M. 2015. A light pierces the darkness: A reflection on spirituality and suicide. *Spirituality in Clinical Practice* 2(4). 282–284. doi:10.1037/scp0000081.

In this reflection, the author presents the case of a 48-year-old man in the throes of a major depressive episode and crisis of faith, who survives an attempt to take his own life. His Christian religion proved critical to his recovery, as the treatment team delved into spiritual issues of guilt, shame, and the meaning of life. This article reveals the author's approach to addressing spiritual distress in psychiatric patients, a valuable resource for clinicians desiring a better understanding of how to relate to individuals with strong religious backgrounds.

Millegan, Jeffrey, Bernard Manschot, Monica Dispenzieri, Benjamin Marks, Ayesha Edwards, Vanessa Raulston, Yojana Khatiwoda & Marlo Narro. 2015. Leveraging iPads to introduce meditation and reduce distress among cancer patients undergoing chemotherapy: a promising approach. *Supportive Care in Cancer* 23(12). 3393–3394. doi:10.1007/s00520-015-2891-6.

Distress is common among cancer patients. Regular meditation practice has the potential to mitigate this distress and improve quality of life for this population. Introducing meditation to cancer patients can be particularly

challenging given the demands on patients' time from treatment and normal life events. This internal process improvement study examined the potential benefit of utilizing iPads during chemotherapy sessions to introduce meditation and reduce distress. Patients undergoing chemotherapy infusion were offered iPads with various meditation videos and audio files during the session. Levels of distress were measured using the distress thermometer at the beginning of chemotherapy and at the conclusion of chemotherapy. Seventy-three patients accepted the meditation iPads during the chemotherapy session. Among those who accepted the iPads, average distress dropped 46 % by the end of the session.

Mustafa, Ghulam, Nadir Bashir & Muhammad Aslam. 2016. Parental beliefs and practice of spiritual methods for their sick children at a tertiary care hospital of Pakistan: A cross sectional questionnaire study. *BMC Complementary and Alternative Medicine* 16(1). 14.
doi:10.1186/s12906-016-0986-3.

This study investigated the parental beliefs and practices for use of spiritual methods in the treatment and early recovery of their children. Researchers performed a cross-sectional, descriptive study with convenience sampling of parents/caregivers of sick children who were admitted to the Children's Hospital in Multan. A trained interviewer collected the data. A total of 1280 forms were analyzed. The majority of respondents were mothers (1053, 82.4 %), they resided in Multan (817, 63.8 %), and were not educated (754, 58.9 %). A total of 420 (32.8 %) respondents had a low socioeconomic background, 601 (47 %) were middle class, and 259 (20.2 %) were upper class. Grandmothers/mothers advised spiritual methods in the majority of respondents (605, 85.9 %). The parents used a variety of spiritual methods in 704 (55 %) children. Economic status and education showed an inverse relation with the use of CAM. A total of 809 (63.2 %) respondents believed that only a drug would heal the disease, while 575 (44.9 %) believed that spiritual methods have a 25 %-50 % role in healing. A total of 1269 (99.1 %) respondents believed that allopathic drugs are needed for healing, while only 0.9 % considered otherwise.

Nolan, Steve. 2016. "He Needs to Talk!": A Chaplain's Case Study of Nonreligious Spiritual Care. *Journal of Health Care Chaplaincy* 22(1). 1–16.
doi:10.1080/08854726.2015.1113805.

Chaplains have always worked with nonreligious people, but it is not always clear what is distinctive about their contribution. This case describes an episode of nonreligious spiritual care in order to explore the value of chaplaincy work with people who regard themselves as nonreligious. This case reports on work with a dying man and his family-wife, daughter, sister, and son-in-law-whose religion is secularized, but whose secularism is touched by the sacred.

Pekala, Ronald J. 2016. The "Mysteries of Hypnosis:" Helping Us Better Understand Hypnosis and Empathic Involvement Theory (EIT). *American Journal of Clinical Hypnosis* 58(3). 274–285.
doi:10.1080/00029157.2015.1101679.

Wickramasekera II (2015) has penned a comprehensive and thoughtful review article demonstrating how empathy is intimately involved in the psychology and neurophysiology of hypnosis and the self. Hypnosis is a very "mental" or subjective phenomenon for both the client and the research participant. To better assess the mind of the client/participant during hypnosis, the author believes that researchers need to generate more "precise" phenomenological descriptors of the mind during hypnosis and related empathic conditions, as Wickramasekera II (2015) has suggested in his article. Although any phenomenological methodology will have its limits and disadvantages, noetics (as defined in the article below) can facilitate a better understanding of hypnosis, empathic involvement theory, and the brain/mind/behavior interface. By quantifying the mind in a comprehensive manner, just as the brain is comprehensively quantified via fMRI and qEEG technologies, noetic analysis can help more precisely assess the mind and relate it to the brain and human behavior and experience.

- Pflugisen, Bethann Mangel, Dike Drummond, Drew Ebersole, Kate Mundell & David Chen. 2016. Brief Video-Module Administered Mindfulness Program for Physicians: A Pilot Study. *EXPLORE: The Journal of Science and Healing* 12(1). 50–54.
doi:10.1016/j.explore.2015.10.005.

The purpose of this study was to evaluate the feasibility of implementing a video-module-based mindfulness pilot program intended to reduce stress, improve well-being, and develop mindfulness skills in physicians in a community hospital setting. Preliminary findings are presented. Using a single-sample, pre-post study design, Researchers administered an eight-week mindfulness training offered as part of a wellness initiative for medical staff in a suburban community hospital. Participants enrolled on a first-come, first-served basis. Participants engaged in three 90-min in-person trainings, weekly online video-module trainings, and weekly teleconference coaching calls. Video-module trainings were available at all times, to be accessed at the participants' convenience. Journals and a guided meditation audio library were also provided. Physician stress, well-being (emotional exhaustion, depersonalization of patients, and sense of personal accomplishment), and mindfulness skills (observing, describing, acting with awareness, and accepting without judgment) were evaluated at baseline, end-of-program, and eight weeks post-intervention using well-validated instruments. A total of 23 physicians enrolled and 19 completed the program. Compared to baseline, statistically significant decreases in stress, personal accomplishment, and emotional exhaustion were observed at end-of-program and eight weeks post-intervention. Significant increases in all mindfulness skills were observed at end-of-program; these increases persisted for describing, acting with awareness, and accepting without judgment at eight weeks post-intervention.

- Riklikiene, Olga, Inga Vozgirdiene, Laima M. Karosas & Mark Lazenby. 2016. Spiritual care as perceived by Lithuanian student nurses and nurse educators: A national survey. *Nurse Education Today* 36. 207–213.
doi:10.1016/j.nedt.2015.10.018.

The aim of this paper is to describe Lithuanian nursing educators' and students' perception of spiritual care in a post-Soviet context. A cross-sectional study was carried out among student nurses and nursing educators at three universities and six colleges in Lithuania. The questionnaire developed by Scott (1959) and supplemented by Martin Johnson (1983) was distributed to 316 nursing students in the 3rd and 4th years of studies and 92 nurse educators (n=408). Results indicated that student nurses and their educators rated general and professional values of religiousness equally; although students tended to dislike atheistic behavior more than educators. Four main categories associated with perceptions of spirituality in nursing care emerged from the student nurses: attributes of spiritual care, advantages of spiritual care, religiousness in spiritual care, and nurse-patient collaboration and communication. Themes from nurse educators paralleled the same first three themes but not the last one. Student nurses and nurse educators acknowledged the importance of spiritual care for patients as well as for care providers. In many cases spiritual care was defined by nursing students and nurse educators as faith and religiousness. Being a religious person, both for students and educators, or having spiritual aspects in students' personal lives influenced the perception of religious reflection.

- Ross, Linda, Tove Giske, René van Leeuwen, Donia Baldacchino, Wilfred McSherry, Aru Narayanasamy, Paul Jarvis & Annemiek Schep-Akkerman. 2016. Factors contributing to student nurses'/midwives' perceived competency in spiritual care. *Nurse Education Today* 36. 445–451.
doi:10.1016/j.nedt.2015.10.005.

The spiritual part of life is important to health, well-being and quality of life. Spiritual care is expected of nurses/midwives, but it is not clear how students can achieve competency in spiritual care at point of registration as required by regulatory bodies. The aim of this study was to explore factors contributing to undergraduate nurses'/midwives' perceived competency in giving spiritual care. Questionnaires were completed by 86% (n=531) of a convenience sample of 618 undergraduate nurses/midwives from six universities in four countries in 2010.

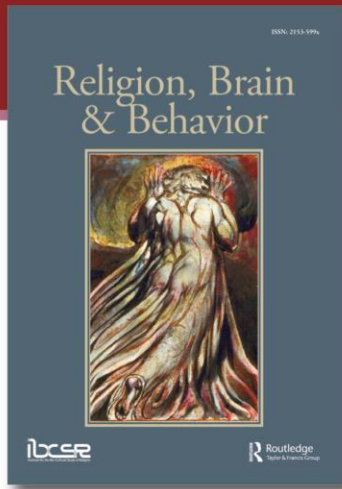
Bivariate and multivariate analyses were performed. Differences between groups were small. Two factors were significantly related to perceived spiritual care competency: perception of spirituality/spiritual care and student's personal spirituality. Students reporting higher perceived competency viewed spirituality/spiritual care broadly, not just in religious terms. This association between perceived competency and perception of spirituality is a new finding not previously reported. Further results reinforce findings in the literature that own spirituality was a strong predictor of perceived ability to provide spiritual care, as students reporting higher perceived competency engaged in spiritual activities, were from secular universities and had previous healthcare experience. They were also religious, practiced their faith/belief and scored highly on spiritual well-being and spiritual attitude/involvement.

Simão, Talita Prado, Erika de Cássia Lopes Chaves, Emília Campos de Carvalho, Denismar Alves Nogueira, Camila Csizmar Carvalho, Ya-Li Ku & Denise Hollanda Iunes. 2016. Cultural adaptation and analysis of the psychometric properties of the Brazilian version of the Spiritual Distress Scale. *Journal of Clinical Nursing* 25(1-2). 231–239.
doi:10.1111/jocn.13060.

The aim of this study is to culturally adapt and test the psychometric properties of the Brazilian version of the Spiritual Distress Scale. Cultural adaptation of the Spiritual Distress Scale was performed using translation and back-translation stages, evaluation of cultural equivalence, committee review and pretesting. An interview using the Brazilian version of the scale was conducted with 170 patients in a cancer treatment unit of a charitable general hospital (not state funded). The following psychometric properties were evaluated: construct validity (divergence and factor analysis) and internal consistency/reliability (Cronbach's α and Kappa). Reliability analysis in the intra- and inter-rater phase showed that more than half of the items had Kappa values > 0.75 . A correlation between the Spiritual Well-Being Scale and the Spiritual Distress Scale was found. Overall, the Spiritual Distress Scale showed a Cronbach's α of 0.87, with three of its four domains showing significant parameters. The Brazilian version of the Spiritual Distress Scale proved to be a reliable, valid and efficient instrument that is capable of assessing spiritual distress. The Brazilian Spiritual Distress Scale presented reliability and validity parameters that correspond to the original English version of the scale.

Stella, Maria. 2016. Befriending death: A mindfulness-based approach to cultivating self-awareness in counselling students. *Death Studies* 40(1). 32–39.
doi:10.1080/07481187.2015.1056566.

The importance of self-awareness in counselling education is widely recognized; however, strengthening this vital aspect is often left to educators' discretion. The author addresses this deficiency by first exploring four theoretical constructs: mindfulness, emotional regulation, death anxiety, and relationship dynamics. Then, she outlines a practical learning activity on the topic of death. The main exercise involves a guided meditation in which students imagine both a worst-case and best-case scenario of their own death, while practicing mindfulness, followed by a debriefing period and a written self-reflection. This activity can be used by educators to promote greater self-awareness in master's level counselling students.



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PART 3: BOOKS

3.1 SCIENTIFIC STUDY OF RELIGION, BRAIN, AND BEHAVIOR

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