

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 1,108 articles, 122 articles have been retained from 95 journals. There are 65 pre-publication citations from 42 journals.

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PART 1: ARTICLES IN RELIGION, BRAIN, AND BEHAVIOR

1.1 SCIENTIFIC STUDY OF RELIGION: COGNITIVE NEUROSCIENCE

Berkovich-Ohana, Aviva, Michal Harel, Avital Hahamy, Amos Arieli & Rafael Malach. 2016. Data for default network reduced functional connectivity in meditators, negatively correlated with meditation expertise. *Data in Brief* 8. 910–914.
doi:10.1016/j.dib.2016.07.015.

Data taken from fMRI was recorded during resting-state in Mindfulness Meditators (MM) and control participants. MM participants were also scanned during meditation. Analyses focused on functional connectivity within and between the default mode network (DMN) and visual network (Vis). Here researchers show data demonstrating that functional connectivity within the DMN and the Visual networks were higher in the control group than in the meditators. Second, data show an increase for the functional connectivity between the DMN and the Visual networks in the meditators compared to controls. Third, data demonstrate that functional connectivity both within and between networks reduces during meditation, compared to the resting-state. Finally, a significant negative correlation was found between DMN functional connectivity and meditation expertise.

Creswell, J. David, Adrienne A. Taren, Emily K. Lindsay, Carol M. Greco, Peter J. Gianaros, April Fairgrieve, Anna L. Marsland, et al. 2016. Alterations in Resting-State Functional Connectivity Link Mindfulness Meditation with Reduced Interleukin-6: A Randomized Controlled Trial. *Biological Psychiatry* 80(1). 53–61.
doi:10.1016/j.biopsych.2016.01.008.

Mindfulness meditation training interventions have been shown to improve markers of health, but the underlying neurobiological mechanisms are not known. Building on initial cross-sectional research showing that mindfulness meditation may increase default mode network (DMN) resting-state functional connectivity (rsFC) with regions important in top-down executive control (dorsolateral prefrontal cortex [dlPFC]), researchers here test whether

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mindfulness meditation training increases DMN-dlPFC rsFC and whether these rsFC alterations prospectively explain improvements in interleukin (IL)-6 in a randomized controlled trial. Stressed job-seeking unemployed community adults (n=35) were randomized to either a 3-day intensive residential mindfulness meditation or relaxation training program. Participants completed a 5-minute resting-state scan before and after the intervention program. Participants also provided blood samples at pre-intervention and at 4-month follow-up, which were assayed for circulating IL-6, a biomarker of systemic inflammation. Researchers tested for alterations in DMN rsFC using a posterior cingulate cortex seed-based analysis and found that mindfulness meditation training, and not relaxation training, increased posterior cingulate cortex rsFC with left dlPFC. These pre-training to post-training alterations in posterior cingulate cortex-dlPFC rsFC statistically mediated mindfulness meditation training improvements in IL-6 at 4-month follow-up. Specifically, these alterations in rsFC statistically explained 30% of the overall mindfulness meditation training effects on IL-6 at follow-up. The authors conclude that these results provide the first evidence that mindfulness meditation training functionally couples the DMN with a region known to be important in top-down executive control at rest (left dlPFC), which, in turn, is associated with improvements in a marker of inflammatory disease risk.

Doll, Anselm, Britta K. Hölzel, Satja Mulej Bratec, Christine C. Boucard, Xiyao Xie, Afra M. Wohlschläger & Christian Sorg. 2016. Mindful attention to breath regulates emotions via increased amygdala-prefrontal cortex connectivity. *NeuroImage* 134. 305–313.
doi:10.1016/j.neuroimage.2016.03.041.

Mindfulness practice is beneficial for emotion regulation; however, the neural mechanisms underlying this effect are poorly understood. The current study focuses on effects of attention-to-breath (ATB) as a basic mindfulness practice on aversive emotions at behavioral and brain levels. A key finding across different emotion regulation strategies is the modulation of amygdala and prefrontal activity. It is unclear how ATB relevant brain areas in the prefrontal cortex integrate with amygdala activation during emotional stimulation. The present researchers proposed that, during emotional stimulation, ATB down-regulates activation in the amygdala and increases its integration with prefrontal regions. To address this hypothesis, 26 healthy controls were trained in mindfulness-based attention-to-breath meditation for two weeks and then stimulated with aversive pictures during both attention-to-breath and passive viewing while undergoing fMRI. Data were controlled for breathing frequency. Results indicate that (1) ATB was effective in regulating aversive emotions. (2) Left dorso-medial prefrontal cortex was associated with ATB in general. (3) A fronto-parietal network was additionally recruited during emotional stimulation. (4) ATB down regulated amygdala activation and increased amygdala-prefrontal integration, with such increased integration being associated with mindfulness ability. Results suggest amygdala-dorsal prefrontal cortex integration as a potential neural pathway of emotion regulation by mindfulness practice.

Fingelkurts, Andrew A., Alexander A. Fingelkurts & Tarja Kallio-Tamminen. 2016. Trait lasting alteration of the brain default mode network in experienced meditators and the experiential selfhood. *Self and Identity* 15(4). 381–393.
doi:10.1080/15298868.2015.1136351.

Based on the finding in novices that four months of meditation training significantly increases frontal default mode network (DMN) module/subnet synchrony while decreasing left and right posterior DMN modules synchrony, the current study tested the prediction whether experienced meditators (those who are practicing meditation intensively for several years) had a change in the DMN 'trinity' of modules as a baseline trait characteristic and whether this change is in a similar direction as in the novice trainees who practiced meditation for only four months. Comparison of functional connectivity within DMN subnets (measured by electroencephalogram operational synchrony in the three separate DMN modules) between five experienced meditators and 10 naïve participants (who were about to start the meditation training) fully support the prediction. Interpretation that links such DMN subnets changes to the three-dimensional components of the experiential selfhood was proposed.

- Gotink, Rinske A., Rozanna Meijboom, Meike W. Vernooij, Marion Smits & M. G. Myriam Hunink. 2016. 8-week Mindfulness Based Stress Reduction induces brain changes similar to traditional long-term meditation practice - A systematic review. *Brain and Cognition* 108. 32–41. doi:10.1016/j.bandc.2016.07.001.

The objective of the current study was to systematically review the evidence of the effect of secular mindfulness techniques on function and structure of the brain. Based on areas known from traditional meditation neuroimaging results, researchers aimed to explore a neuronal explanation of the stress-reducing effects of the 8-week Mindfulness Based Stress Reduction (MBSR) and Mindfulness Based Cognitive Therapy (MBCT) program. The research team assessed the effect of MBSR and MBCT (n=11, all MBSR), components of the programs (n=15), and dispositional mindfulness (n=4) on brain function and/or structure as assessed by (functional) magnetic resonance imaging. Twenty-one fMRI studies and seven MRI studies were included (two studies performed both). These studies indicated that the prefrontal cortex, the cingulate cortex, the insula and the hippocampus showed increased activity, connectivity, and volume in stressed, anxious and healthy participants. Additionally, the amygdala showed decreased functional activity, improved functional connectivity with the prefrontal cortex, and earlier deactivation after exposure to emotional stimuli. The authors explain that demonstrable functional and structural changes in the prefrontal cortex, cingulate cortex, insula and hippocampus are similar to changes described in studies on traditional meditation practice. In addition, MBSR led to changes in the amygdala consistent with improved emotion regulation. These findings indicate that MBSR-induced emotional and behavioral changes are related to functional and structural changes in the brain.

- Hölzel, Britta K., Vincent Brunsch, Tim Gard, Douglas N. Greve, Kathrin Koch, Christian Sorg, Sara W. Lazar & Mohammed R. Milad. 2016. Mindfulness-Based Stress Reduction, Fear Conditioning, and The Uncinate Fasciculus: A Pilot Study. *Frontiers in Behavioral Neuroscience* 10. 124. doi:10.3389/fnbeh.2016.00124.

Mindfulness has been suggested to impact emotional learning, but research on these processes is scarce. The classical fear conditioning/ extinction/ extinction retention paradigm is a well-known method for assessing emotional learning. The present study tested the impact of mindfulness training on fear conditioning and extinction memory and further investigated whether changes in white matter fiber tracts might support such changes. The uncinate fasciculus (UNC) was of particular interest in the context of emotional learning. In this pilot study, 46 healthy participants were quasi-randomized to a Mindfulness-Based Stress Reduction (MBSR, n=23) or waitlist control (n=23) group and underwent a two-day fear conditioning, extinction learning, and extinction memory protocol before and after the course or control period. Skin conductance response (SCR) data served to measure the physiological response during conditioning and extinction memory phases. Diffusion tensor imaging (DTI) data were analyzed with probabilistic tractography and analyzed for changes of fractional anisotropy in the UNC. During conditioning, participants were able to maintain a differential response to conditioned vs. not conditioned stimuli following the MBSR course (i.e., higher sensitivity to the conditioned stimuli), while controls dropped the response. Extinction memory results were not interpretable due to baseline differences. MBSR participants showed a significant increase in fractional anisotropy in the UNC, while controls did not (group by time interaction missed significance). Pre-post changes in UNC were correlated with changes in the response to the conditioned stimuli. The findings suggest effects of mindfulness practice on the maintenance of sensitivity of emotional responses and suggest underlying neural plasticity.

- Lutz, J., A. B. Brühl, H. Scheerer, L. Jäncke & U. Herwig. 2016. Neural correlates of mindful self-awareness in mindfulness meditators and meditation-naïve subjects revisited. *Biological Psychology* 119. 21–30. doi:10.1016/j.biopsycho.2016.06.010.

Mindful self-awareness is central to mindfulness meditation and plays a key role in its salutary effects. It has been related to decreased activation in cortical midline structures (CMS) and amygdala, and increased activation in

somatosensory regions. However, findings in untrained individuals are contradictory, and scarce in experienced meditators. Using fMRI, researchers investigated experienced mindfulness meditators (LTM, n=21, average 4,652 practice-hours) and matched meditation-naïve participants (MNP, n=19) during short periods of mindful self-awareness (FEEL) and self-referential thinking (THINK). The present researchers report somatosensory activations and decreases in CMS during FEEL for both groups, but significantly stronger decreases in prefrontal CMS in LTM. LTM further showed decreases in language-related and amygdala regions, but the latter was not significantly different between groups. Overall, higher activations in amygdala and mid-line regions during FEEL were related to levels of depressiveness. Neural patterns of mindful self-awareness emerge already in MNP but more pronounced in LTM. Specifically, meditation training might reduce self-reference and verbalization during mindful awareness. The researchers further corroborate the suggested link between mindfulness and healthy self-related functions on the neural level.

Morgan, Jonathan, Dustin Clark, Yorghos Tripodis, Christopher S. Halloran, April Minsky, Wesley J. Wildman, Raymon Durso & Patrick McNamara. 2016. Impacts of religious semantic priming on an intertemporal discounting task: Response time effects and neural correlates. *Neuropsychologia* 89. 403–413.

doi:10.1016/j.neuropsychologia.2016.07.020.

The purpose of this study is to test the hypothesis that religious primes would influence intertemporal discounting behaviors in neurotypical older adults, but not in participants with Parkinson's disease (PD). Furthermore, the researchers predicted that this priming effect would be related to functional connectivity within neural networks mediating religious cognition, decision-making, reward valuing, and prospection processes. Contrary to past research with young adults, the present researchers found a significant positive relationship between religiosity and discounting rates. Religious semantic primes did not reliably shift individual discounting rates. But religious controls did respond more quickly to intertemporal decisions under the religious priming condition than the neutral condition, compared to response time differences among the participants with PD. Differences in response time were significantly associated with functional connectivity between the nucleus accumbens and various regions, including the left anterior cingulate cortex and Brodmann areas 10 and 46 in the right dorsolateral prefrontal cortex. These results suggest that religious primes influence discounting behavior via dopaminergic meso-limbic and right dorsolateral prefrontal supporting cognitive valuation and prospection processes.

Panda, Rajanikant, Rose D. Bharath, Neeraj Upadhyay, Sandhya Mangalore, Srivas Chennu & Shobini L. Rao. 2016. Temporal Dynamics of the Default Mode Network Characterize Meditation-Induced Alterations in Consciousness. *Frontiers in Human Neuroscience* 10. 372.

doi:10.3389/fnhum.2016.00372.

Current research suggests that human consciousness is associated with complex, synchronous interactions between multiple cortical networks. In particular, the default mode network (DMN) of the resting brain is thought to be altered by changes in consciousness, including the meditative state. However, it remains unclear how meditation alters the fast and ever-changing dynamics of brain activity within this network. Here researchers addressed this question using simultaneous electroencephalography (EEG) and functional magnetic resonance imaging (fMRI) to compare the spatial extents and temporal dynamics of the DMN during rest and meditation. Using fMRI, the researchers identified key reductions in the posterior cingulate hub of the DMN, along with increases in right frontal and left temporal areas, in experienced meditators during rest and during meditation, in comparison to healthy controls (HCs). Researchers employed the simultaneously recorded EEG data to identify the topographical microstate corresponding to activation of the DMN. Analysis of the temporal dynamics of this microstate revealed that the average duration and frequency of occurrence of DMN microstate was higher in meditators compared to HCs. Both these temporal parameters increased during meditation, reflecting the state effect of meditation. In particular, the researchers found that the alteration in the duration of the DMN microstate when meditators entered the meditative state correlated negatively with their years of meditation experience. This reflected a trait effect of meditation,

highlighting its role in producing durable changes in temporal dynamics of the DMN. Taken together, these findings shed new light on short and long-term consequences of meditation practice on this key brain network.

- Sandler, H., S. Tamm, U. Fendel, M. Rose, B. F. Klapp & R. Boesel. 2016. Positive Emotional Experience: Induced by Vibroacoustic Stimulation Using a Body Monochord in Patients with Psychosomatic Disorders: Is Associated with an Increase in EEG-Theta and a Decrease in EEG-Alpha Power. *Brain Topography* 29(4). 524–538.
doi:10.1007/s10548-016-0480-8.

Relaxation and meditation techniques are generally characterized by focusing attention, which is associated with an increase of frontal EEG Theta. Some studies on music perception suggest an activation of Frontal Midline Theta during emotionally positive attribution, others display a lateralization of electro-cortical processes in the attribution of music induced emotion of different valence. The present study examined the effects of vibroacoustic stimulation using a Body Monochord and the conventional relaxation music from an audio CD on the spontaneous EEG of patients suffering from psychosomatic disorders (n=60). Each treatment took about 20 minutes and was presented to the patients in random order. Subjective experience was recorded via self-rating scale. EEG power spectra of the Theta, Alpha-1 and Alpha-2 bands were analyzed and compared between the two treatment conditions. There was no lateralization of electrocortical activity in terms of the emotional experience of the musical pieces. A reduction in Alpha-2 power occurred during both treatments. An emotionally positive attribution of the experience of the vibroacoustically induced relaxation state is characterized by a more pronounced release of control. In the context of focused attention this is interpreted as flow experience. The spontaneous EEG showed an increase in Theta power, particularly in the frontal medial and central medial area, and a greater reduction in Alpha-2 power. The intensity of positive emotional feelings during the CD music showed no significant effect on the increase in Theta power.

1.2 SCIENTIFIC STUDY OF RELIGION: EVOLUTION

- Boucher, Helen C. & Mary A. Millard. 2016. Belief in foreign supernatural agents as an alternate source of control when personal control is threatened. *International Journal for the Psychology of Religion* 26(3). 193–211.
doi:10.1080/10508619.2015.1092847.

Across four studies (n=460), researchers examined whether foreign supernatural agents (i.e., ones outside one's own religious tradition) can serve as sources of secondary control (by hearing and responding to requests) and compensatory control (by imbuing the world with order and structure) when personal control is threatened. In Study 1, non-Buddhist control-threat participants believed in the Buddha as a source of secondary control more than nontreat participants. In Study 2, control-threat participants believed in the Buddha as a source of compensatory control, but this effect was found only among those indicating a religious affiliation. Studies 3 and 4 clarified this finding, demonstrating that religious individuals with a strong quest orientation responded to control threat with greater belief in the Buddha (Study 3) and Shamanic ancestral spirits (Study 4) as sources of both secondary and compensatory control. Researchers discuss discrepancies between our findings and extant research and offer directions for future research.

- Du, Hongfei & Peilian Chi. 2016. War, worries, and religiousness. *Social Psychological and Personality Science* 7(5). 444–451.
doi:10.1177/1948550616644296.

Terror management theory posits that death-related threats increase people's investment in religious activity, dedication, and belief. Given that war usually results in deaths, the authors hypothesized that war, as a death-related threat, would be associated with greater religiousness. The present research assessed this hypothesis with a large worldwide sample (n=86,272). Using the Global Peace Index and World Value Survey, the authors found that people were more religious (i.e., religious practice, religious identity, and belief in God) when their countries and

districts suffered from more wars/conflicts. The positive relationship between war and religiousness was partially explained by worries about war. That is, people in countries with existing war/conflict experienced higher levels of worries about war and, in turn, showed increased religiousness.

Fieder, Martin & Susanne Huber. 2016. The association between religious homogamy and reproduction. *Proceedings. Biological Sciences / The Royal Society* 283(1834). doi:10.1098/rspb.2016.0294.

Individuals more strongly affiliated to religion have on average more children than less religious ones. Here, based on census data of 3,658,650 women aged 46-60 years from 32 countries provided by IPUMS International and data from the Wisconsin Longitudinal Study (n=2400 women, aged 53-57 years), researchers show that religious homogamy is also associated with higher reproduction in terms of a higher number of children and a lower chance of remaining childless. The authors argue that, together with the relationship between general religious intensity and number of children, religious homogamy has reproductive consequences. These may impact future demographic developments and could have also played a role in the biological evolution of humans.

Hansen, Ian Grant & Andrew Ryder. 2016. In search of “religion proper”: Intrinsic religiosity and coalitional rigidity make opposing predictions of intergroup hostility across religious groups. *Journal of Cross-Cultural Psychology* 47(6). 835–857. doi:10.1177/0022022116644983.

In two cross-cultural studies, RESEARCHERS examined the relationship between intrinsic religiosity (IR; inwardly held religious devotion), coalitional rigidity (CR; a rigid adherence to the superiority of the norms and beliefs of one’s own group), and intergroup hostility (IH; morally impugning or wishing persecution on members of other groups). For Study 1, researchers analyzed a number of single-item interview questions in a data set collected from 10,068 people in 10 nations. For Study 2, researchers conducted surveys in two multicultural samples: Vancouver, Canada, and Kuala Lumpur, Malaysia. In all 18 religious subsamples from both studies, there were null or negative independent relationships between IR and some form of IH, and null or positive independent relationships between CR and such hostility. The results suggest that this pattern of prediction, which has previously been found in North American Christian samples, generalizes cross-culturally.

Krátký, Jan, Martin Lang, John H. Shaver, Danijela Jerotijević & Dimitris Xygalatas. 2016. Anxiety and ritualization: Can attention discriminate compulsion from routine? *Communicative & Integrative Biology* 9(3). e1174799. doi:10.1080/19420889.2016.1174799.

Despite the wide occurrence of ritual behavior in humans and animals, much of its causal underpinnings, as well as evolutionary functions, remain unknown. A prominent line of research focuses on ritualization as a response to anxiogenic stimuli. By manipulating anxiety levels, and subsequently assessing their motor behavior dynamics, a recent study investigated this causal link in a controlled way. Researchers here discuss two theoretical explanations of rituals—ritualized behavior and automated behavior—and their link to anxiety. The authors propose that investigating participant’s locus of attention can discriminate between these two models.

Rufi, Sergi, Anna Wlodarczyk, Darío Páez & Federico Javaloy. 2016. Flow and emotional experience in spirituality: Differences in interactive and coactive collective rituals. *Journal of Humanistic Psychology* 56(4). 373–393. doi:10.1177/0022167815571597.

This study seeks to compare flow and emotional experience in interactive and coactive collective rituals. For such purpose, a correlational study was performed collecting self-report measures of flow, positive emotions, and social identity in three different social collective gatherings: the Sunday celebration of a Catholic mass (n=57), a Zen Buddhist meditation practice (n=50), and secular Sunday group activities (n=37). Results show the presence of

flow in all three contexts, being higher in the interactive social situations (the Catholic mass and other Sunday group activities) than in the coercive one (the Zen meditation practice). Positive emotions are also higher in the interactive situations than in the coercive one. Regarding self-transcendent emotions, there is more inspiration in the Zen meditation practice and more hope in the Catholic mass. Flow and positive emotions are positively correlated in all three contexts. Specifically, in the Zen meditation practice, flow, positive emotions, loss of self-consciousness, and social identity are positively correlated.

Timming, Andrew R. & David Perrett. 2016. Trust and mixed signals: A study of religion, tattoos and cognitive dissonance. *Personality and Individual Differences* 97. 234–238.
doi:10.1016/j.paid.2016.03.067.

This paper examines trust judgements in the context of “mixed signals,” whereby the medium through which a signal is projected suggests untrustworthiness, but the signal itself suggests trustworthiness. Under conditions of “mixed signals,” those who trust are left in a potential state of cognitive dissonance. The results of the research suggest that the presence of a tattoo lowers evaluations of trust across the board, but that Christian respondents rated faces with a Christian-themed tattoo significantly higher than non-Christian respondents. Nevertheless, among Christian respondents, there was no significant difference on trustworthiness ratings between a Christian-themed tattoo and non-Christian-themed tattoo. The results of the research have implications in relation to the psychological study of trust, religion and body art.

Wisman, Arnaud & Nathan A. Heflick. 2016. Hopelessly mortal: The role of mortality salience, immortality and trait self-esteem in personal hope. *Cognition and Emotion* 30(5). 868–889.
doi:10.1080/02699931.2015.1031643.

Do people lose hope when thinking about death? Based on Terror Management Theory, researchers predicted that thoughts of death (i.e., mortality salience) would reduce personal hope for people low, but not high, in self-esteem, and that this reduction in hope would be ameliorated by promises of immortality. In Studies 1 and 2, mortality salience reduced personal hope for people low in self-esteem, but not for people high in self-esteem. In Study 3, mortality salience reduced hope for people low in self-esteem when they read an argument that there is no afterlife, but not when they read “evidence” supporting life after death. In Study 4, this effect was replicated with an essay affirming scientific medical advances that promise immortality. Together, these findings uniquely demonstrate that thoughts of mortality interact with trait self-esteem to cause changes in personal hope, and that literal immortality beliefs can aid psychological adjustment when thinking about death.

1.3 SCIENTIFIC STUDY OF RELIGION: PSYCHOLOGY AND CULTURE

Alam, Muhammad A. & Nadeem Talib. 2016. Islamic work ethics and individualism in managing a globalized workplace: Does religiosity and nationality matter? *Journal of Management & Organization* 22(4). 566–582.
doi:10.1017/jmo.2015.54.

The integration of work ethic theories with religious beliefs and Hofstede’s national culture typology implies that Islamic work ethics peculiarly support social symbiosis and collectivism. On the contrary, present globalized workplace is pragmatically driven by individualism. To sort out these concerns, this cross-cultural study links Islamic work ethics to individualism at globalized workplace and examines the moderating influence of employee religiosity and nationality. A stratified sample of 307 employees from leading multinational corporations operating in United States, Saudi Arabia, United Kingdom and Pakistan participated in the study. The study found a strong positive relationship between Islamic work ethics and individualism, and no significant interaction effect of employee nationality and religiosity was observed. Together, the findings suggest that Islamic work ethics advocate a great deal of individualism.

Brenner, Philip S. 2016. Cross-National Trends in Religious Service Attendance. *Public Opinion Quarterly* 80(2). 563–583.
doi:10.1093/poq/nfw016.

The nature of religious change and the future of religion have been central questions of social science since its inception. But empirical research on this question has been quite American-centric, encouraged by the conventional wisdom that the United States is an outlier of religiosity in the developed world, and, more pragmatically, by the availability of survey data. The dramatic growth in the number and reach of cross-national surveys over the past two decades has offered a corrective. These data have allowed research on religious trends in the United States, Canada, and Europe, putting American trends into comparative relief. This research synthesis reviews the past quarter century of cross-national comparative survey research on religious behavior, focusing on religious service attendance as a commonly measured behavior that is arguably more equivalent across societies and cultures than other measures of religiosity. The lack of evidence for religious revival is highlighted, noting instead declining rates of attendance in the United States and Canada, and either declining rates or low “bottomed-out” stability in Western Europe, most of Eastern Europe, and Australia and New Zealand. Finally, countries in Latin America, Africa, and Asia are discussed to the extent that research allows, before a call for future research, in these places in particular, is made in order to correct for the Western and Christian focus of much of the research on cross-national religious trends.

Callaghan, Tonya D. 2016. Young, queer, and Catholic: Youth resistance to homophobia in Catholic schools. *Journal of LGBT Youth* 13(3). 270–287.
doi:10.1080/19361653.2016.1185758.

Drawing from the author’s 5-year, multimethod qualitative study, this article argues that lesbian, gay, bisexual, transgender, and queer students in Canadian Catholic schools are not inherently mentally ill, passive victims in need of special Catholic pastoral care. Instead, they are activists who strongly resist homophobic oppression in school. This article concentrates on three youth activists, whose stories are analyzed through narrative inquiry and are contextualized in the larger study’s methodology. The article concludes that anti-homophobia education efforts should not overlook potential student leaders in Catholic schools.

Chapman, Madeleine. 2016. Veil as stigma: Exploring the role of representations in Muslim women’s management of threatened social identity. *Journal of Community & Applied Social Psychology* 26(4). 354–366.
doi:10.1002/casp.2269.

This study extends research on the relations between social representations and social identities through an exploration of how Muslim women manage the stigma of veiling. Based on analysis of individual and group interviews among Muslim women in Denmark and the UK, the study highlights the dialectical nature of social identity as constructed through and against others’ representations of social groups and the norms of valuing they impose. It shows how, for the women here, the reinforcement of a shared sense of Muslim identity goes together with re-evaluation of aspects of that identity, principally in response to representations of the veil that deny Muslim women agency and cast them as oppressed. It shows how norms of gender and agency are in this process variously resisted and affirmed, resulting in the reframing of gendered religious values. Theoretically, the study argues that an account of the role of representations in the construction of identity challenges the inter-group framework of existing approaches to threatened social identity and sheds light on intersectional dynamics of identity.

Dimitrova, Radosveta & Arzu Aydinli-Karakulak. 2016. Acculturation orientations mediate the link between religious identity and adjustment of Turkish-Bulgarian and Turkish-German adolescents. *SpringerPlus* 5(1). 1024.
doi:10.1186/s40064-016-2688-1.

There is a growing recognition of the need to examine religiousness and conduct research on its influence on acculturation and adjustment among ethnic minorities. The present study compares Turkish minority youth in Bulgaria and Germany by examining relationships among religious identity, acculturation orientations (i.e., cultural maintenance and adoption) and acculturation outcomes (i.e., life satisfaction and socio-cultural adjustment to the Turkish and mainstream cultures). Participants were 161 youth in Bulgaria and 155 in Germany who completed measures on religious identity, acculturation orientations and adjustment. Results revealed that religious identity and Turkish culture maintenance are more important for Turkish-German, than for Turkish-Bulgarian youth. A multi-group path model showed that for both samples acculturation orientations partially mediated the link between religious identity and adjustment to the Turkish culture, whereas religious identity was directly related both to adjustment to the mainstream culture and to life satisfaction. Findings highlight the centrality of religious identity and Turkish domains of acculturation for positive adjustment outcomes for Turkish youth in Bulgaria and Germany.

Ferrari, Joseph R. 2016. Men in ministry: Comparing deacons and candidates on religiosity, leadership, personality, and worship-work behaviors. *Journal of Spirituality in Mental Health* 18(3). 185–199.
doi:10.1080/19349637.2016.1150230.

In the present study, 424 men in formation (“candidates”) and a random sample of 424 ordained deacons reported their religious and spiritual attitudes, leadership styles, personality dimensions, and worship- and work-related behaviors. There were no significant differences between candidates and deacons on religiosity, personality, and most leadership styles. Candidates reported significantly higher worship-related behaviors than deacons, who expressed significantly higher personal-life desires. Candidates over time did not report significantly greater religiosity, personality, or leadership skills during their formation years. Results suggest that Catholic deacons and men in diaconate formation are similar as they start and continue their life as permanent ministers.

Freier, Ronny, Benny Geys & Joshua Holm. 2016. Religious heterogeneity and fiscal policy: Evidence from German reunification. *Journal of Urban Economics* 94. 1–12.
doi:10.1016/j.jue.2016.05.001.

Theoretical work based on social identity theory predicts that population diversity undermines redistributive public policies. This article tests this proposition exploiting an exogenous shock in diversity due to Germany’s reunification. In contrast to previous work on ethno-linguistic or racial heterogeneity, researchers specifically analyze religious diversity, which is an increasingly relevant social cleavage in many countries. The main results corroborate that increasing religious diversity leads to a change in fiscal policies in Bavarian municipalities over the 1983–2005 period. Moreover, researchers find some evidence of declining individual-level local identification over the post-reunification period, which suggests that the observed fiscal effects are indeed linked to the theoretical mechanism of individuals’ social identification. Finally, the authors highlight an important mediating role for the democratic process, since the observed fiscal effects strengthen considerably following Bavarian municipalities’ first local elections after the reunification migration wave (March 1996) and a legal change allowing local referenda on public policies (October 1995).

Gubkin, Rut. 2016. An exploration of spirituality and the traumatizing experiences of combat. *Journal of Humanistic Psychology* 56(4). 311–330.
doi:10.1177/0022167814563142.

The complex experiences of combat demand significant levels of adaptation and resilience. An individual’s spirituality may be challenged by these experiences, and as a result, he or she may be left both psychologically and spiritually wounded. Incorporating spirituality into the healing process may help mend the wounds of combat soldiers, especially within an integrative treatment framework. In this article, spirituality and the impact of traumatizing combat experiences are discussed from a cultural perspective, using the experiences of an Israeli soldier as an example.

Halgunseth, Linda C., Alexander C. Jensen, Kari-Lyn Sakuma & Susan M. McHale. 2016. The role of mothers' and fathers' religiosity in African American adolescents' religious beliefs and practices. *Cultural Diversity & Ethnic Minority Psychology* 22(3). 386–394.
doi:10.1037/cdp0000071.

To advance understanding of youth religiosity in its sociocultural context, this study examined the associations between parents' and adolescents' religious beliefs and practices and tested the roles of parent and youth gender and youth ethnic identity in these linkages. The sample included 130 two-parent, African American families. Adolescents (49% female) averaged 14.43 years old. Mothers, fathers, and adolescents were interviewed in their homes about their family and personal characteristics, including their religious beliefs. In a series of 7 nightly phone calls, adolescents reported on their daily practices, including time spent in religious practices (e.g., attending services, prayer), and parents reported on their time spent in religious practices with their adolescents. Findings indicated that mothers' beliefs were linked to the beliefs of sons and daughters, but fathers' beliefs were only associated with the beliefs of sons. Mothers' practices were associated with youths' practices, but the link was stronger when mothers' held moderately strong religious beliefs. Fathers' practices were also linked to youth practices, but the association was stronger for daughters than for sons.

Hanslmaier, Michael & Dirk Baier. 2016. Re-examining the relationship between religion and punitiveness: Evidence from Germany. *European Journal of Criminology* 13(4). 473–490.
doi:10.1177/1477370815626459.

Research has shown that punitive attitudes are influenced by denominational affiliation, religious participation, and images of God. However, most of the research so far has been conducted in the United States, which is very different compared with most European states with respect to the importance of religion. The paper analyses the relationship between religion and punitiveness outside the United States in a European context based on a German-wide representative survey (n=2,265). Respondents who perceive God as loving are less punitive and support the death penalty less. The same holds for the frequency of praying and church attendance. Protestants and Catholics are also less supportive of the death penalty compared with non-affiliated individuals.

Kreis, Maria Clara, Joanna Crammond & Marcia Lunz. 2016. Motivational factors across three generations of women committed to religious life. *Journal of Spirituality in Mental Health* 18(3). 163–184.
doi:10.1080/19349637.2015.1088427.

This interdisciplinary (spirituality/psychology/sociology) study explores the motivation of women entering and remaining in religious life from 1,116 Roman Catholic Sisters who responded to an open-ended questionnaire. A noteworthy pattern was the tendency to cite inner call, which increased in recent generations while the tendency to cite Sisters example decreased. The vast majority of Sisters cited their commitment to God and their religious community as motivation to remain in religious life. The results indicate the importance for Sisters to live out their mission (nationally/internationally) through public service, faith formation, and as advocates by providing role models and inspiration for future Sisters.

Lindeman, Marjaana & Jari Lipsanen. 2016. Diverse Cognitive Profiles of Religious Believers and Nonbelievers. *International Journal for the Psychology of Religion* 26(3). 185–192.
doi:10.1080/10508619.2015.1091695.

The factors that make people religious or atheistic are currently much debated, and empirical evidence is limited. Further, the possibility that both religious believers and nonbelievers comprise diverse subtypes with different characteristics has seldom been considered. In this study, characteristics of religious believers (n= 984) and nonbelievers (n= 1,000) were analyzed with latent class analyses. These analyses identified five religious subgroups and five nonbeliever subgroups that differed in analytical thinking, empathizing, mechanistic cognition (i.e.,

systemizing), and autistic and schizotypal traits. The results highlight the strengths and limitations of current theoretical arguments about religious beliefs.

- Okun, Barbara S. 2016. An investigation of the unexpectedly high fertility of secular, native-born Jews in Israel. *Population Studies* 70(2). 239–257.
doi:10.1080/00324728.2016.1195913.

Secular, native-born Jews in Israel enjoy the socio-economic status of many affluent populations living in other democratic countries, but have above-replacement period and cohort fertility. This study revealed a constellation of interrelated factors which together characterize the socio-economic, cultural, and political environment of this fertility behavior and set it apart from that of other advanced societies. The factors are: a combination of state and family support for childbearing; a dual emphasis on the social importance of women's employment and fertility; policies that support working mothers within a conservative welfare regime; a family system in which parents provide significant financial and caregiving aid to their adult children; relatively egalitarian gender-role attitudes and household behavior; the continuing importance of familist ideology and of marriage as a social institution; the role of Jewish nationalism and collective behavior in a religious society characterized by ethno-national conflict; and a discourse which defines women as the biological reproducers of the nation.

- Rhodes, Claire D. & Craig O. Stewart. 2016. Debating LGBT Workplace Protections in the Bible Belt: Social Identities in Legislative and Media Discourse. *Journal of Homosexuality* 63(7). 904–924.
doi:10.1080/00918369.2015.1116341.

This article reports a case study of the legislative and media discourse surrounding the addition of sexual orientation and gender identity language to the employment nondiscrimination ordinance of a city in the heart of the Bible Belt. The purpose of the study is to uncover how different identities were constructed and contested at city council meetings and in the news media on the way to passing legal protection for LGBT city employees in a region that is often characterized by anti-gay prejudice. This debate over the nondiscrimination ordinance centered on the question of whether LGBT identities are equivalent to identity categories based on race, gender, or religious belief, and it was shaped by various intergroup communication dynamics, specifically between members of the LGBT minority and the straight majority, between LGBT and Christian identities, and between “true” and “false” Christian identities.

- Safavifar, Farnoosh, Mehrdad Eftekhar, Kaveh Alavi, Reza Negarandeh, Amir Hossein Jalali & Maryam Eftekhar. 2016. Religious experiences of Iranian transgenders: A qualitative study. *Medical Journal of the Islamic Republic of Iran* 30. 385.

Gender identity disorder and its treatment with sex reassignment surgery is a profound experience, which can affect the mental, interpersonal, social and religious aspects of one's life. This was a qualitative content analysis study focusing on the various dimensions of the experiences of seven patients suffering from gender identity disorder in a female-to-male subgroup. This study presents a report concerning the religious aspects of their experience. The findings of this study were categorized into the four following conceptual categories: sense of guilt; accomplishing a sense of submission to God's will as well as God's pleasing; practical commitment to religion; and rejection by the religious communities. Diminishing religion to spirituality comprised the core experiences of these patients having intimate relations with such concepts as secularism, stigma, and technocracy.

- Stankov, Lazar. 2016. Major psychological dimensions of cross-cultural differences: Nastiness, Social Awareness/Morality, Religiosity and broad Conservatism/Liberalism. *Learning and Individual Differences* 49. 138–150.
doi:10.1016/j.lindif.2016.06.003.

This paper presents the findings from a study based on 8,883 participants from 33 countries. The Big Six measures of personality, and factor scores from studies of social attitudes, social axioms and social norms were analyzed in order to arrive at the main dimensions of cross-cultural differences. In the outcome, three factors captured the major

proportion of variance at the pan-cultural level of analysis: Nastiness/Social Dominance, Social Awareness/Morality and Religiosity. At the between-countries' level, a broad Conservatism/Liberalism factor was identified. The largest cross-cultural differences were found on the Religiosity dimension. Cross-cultural differences on Social Awareness/Morality were negligible, and Nastiness/Social Dominance were in the middle. Overall, South Asian, South East Asian and African regions scored high on Religiosity and Nastiness/Social Dominance dimensions while Western and Eastern Europe and Anglo regions scored low. Three regions (Latin America, Middle East/North Africa and East Asia) were in the middle.

Stavrova, Olga, Daniel Ehlebracht & Detlef Fetchenhauer. 2016. Belief in scientific–technological progress and life satisfaction: The role of personal control. *Personality and Individual Differences* 96. 227–236.

doi:10.1016/j.paid.2016.03.013.

While numerous studies have examined the positive association between religious beliefs and subjective well-being, there is a notable absence of research addressing the potential role of secular beliefs as a source of happiness and life satisfaction. Drawing from literature on compensatory control, the present research fills this void by exploring the association between belief in scientific–technological progress and life satisfaction, investigating its underlying mechanism and examining cross-cultural moderators. The results showed that belief in scientific–technological progress is a stronger predictor of life satisfaction than religious beliefs in a nationally representative sample of the Dutch population (Study 1) and across 69 out of 72 countries (Study 2). Additional analyses highlighted the role of personal control beliefs as the mechanism driving this effect: a strong belief in scientific–technological progress was associated with an enhanced sense of personal control, which in turn contributed to higher life satisfaction. Consistent with previous research on “shared reality” and person–culture fit, the beneficial consequences of an individual’s belief in scientific–technological progress were enhanced when this belief was widely held within a specific culture.

Tongeren, Daryl R. Van, Sabrina Hakim, Joshua N. Hook, Kathryn A. Johnson, Jeffrey D. Green, Timothy L. Hulsey & Don E. Davis. 2016. Toward an understanding of religious tolerance: Quest religiousness and positive attitudes toward religiously dissimilar others. *International Journal for the Psychology of Religion* 26(3). 212–224.

doi:10.1080/10508619.2015.1039417.

People interact frequently with individuals with religious beliefs that vary from their own. Although some may naturally prefer interacting with religiously similar others, individuals vary in their attitudes toward religiously dissimilar others. In the present set of studies, researchers examined how variability in quest religiousness affects religious tolerance. In Study 1 (n=159), researchers found that quest religiousness in Christian undergraduates was associated with positive attitudes toward both non-Christian religious groups and atheists. In Study 2, 118 Christian undergraduates evaluated vignettes regarding a devout moral or an average morality Christian (ingroup) or Muslim (outgroup). Participants preferred moral targets relative to less moral targets. However, when rating moral targets, participants high in quest religiousness preferred the Muslim target (religious outgroup member), whereas those low in quest religiousness preferred the Christian target (religious ingroup member).

Wimmer, Lena, Silja Bellingrath & Lisa von Stockhausen. 2016. Cognitive Effects of Mindfulness Training: Results of a Pilot Study Based on a Theory Driven Approach. *Frontiers in Psychology* 7. 1037.

doi:10.3389/fpsyg.2016.01037.

The present paper reports a pilot study which tested cognitive effects of mindfulness practice in a theory-driven approach. Thirty-four fifth graders received either a mindfulness training which was based on the mindfulness-based stress reduction approach (experimental group), a concentration training (active control group), or no treatment (passive control group). Based on the operational definition of mindfulness by Bishop et al. (2004), effects on sustained attention, cognitive flexibility, cognitive inhibition, and data-driven as opposed to schema-based

information processing were predicted. These abilities were assessed in a pre-post design by means of a vigilance test, a reversible figures test, the Wisconsin Card Sorting Test, a Stroop test, a visual search task, and a recognition task of prototypical faces. Results suggest that the mindfulness training specifically improved cognitive inhibition and data-driven information processing.

Zarzycka, Beata. 2016. Prevalence and social-cognitive predictors of anger toward god in a Polish sample. *International Journal for the Psychology of Religion* 26(3). 225–239.
doi:10.1080/10508619.2015.1048660.

Based on empirical studies, researchers may assume religion is an important source of support, consolation, and a sense of life for many individuals. However, notwithstanding the psychological benefits religion provides, it is also a reason for discomfort and struggle. The research presented in this article is an attempt at analyzing one of religious struggle types: anger toward God. This study addresses the following issues: (a) prevalence of anger toward God in a national Polish sample; (b) predictors of anger toward God (religious attributions and God concepts); and (c) moderation of relationships between religious attributions, God concepts and anger toward God by centrality of religiosity. Researchers applied the social-cognitive perspective for explaining the phenomenon of anger toward God. The results showed that anger toward God is frequently a reaction to negative experiences, and its intensity is low, lower than the intensity of positive emotions toward God. Anger toward God correlated positively with assigning negative intentions and the responsibility for suffering to God. A moderating effect of centrality on the relation between attributions and perception of God and anger toward God was observed.

1.4 SCIENTIFIC STUDY OF RELIGION: METHOD & THEORY

Ausloos, Marcel & Roy Cerqueti. 2016. Religion-based urbanization process in Italy: Statistical evidence from demographic and economic data. *Quality & Quantity* 50(4). 1539–1565.
doi:10.1007/s11135-015-0220-2.

This paper analyzes some economic and demographic features of Italians living in cities containing a Saint name in their appellation (hagiotoponyms). Demographic data come from the surveys done in the 15th (2011) Italian Census, while the economic wealth of such cities is explored through their recent (2007-2011) aggregated tax income (ATI). This cultural problem is treated from various points of view. First, the exact list of hagiotoponyms is obtained through linguistic and religiosity criteria. Next, it is examined how such cities are distributed in the Italian regions. Demographic and economic perspectives are also offered at the Saint level, i.e. calculating the cumulated values of the number of inhabitants and the ATI “per Saint,” as well as the corresponding relative values taking into account the Saint’s popularity. On one hand, frequency-size plots and cumulative distribution function plots, and on the other hand, scatter plots and rank-size plots between the various quantities are shown and discussed in order to find the importance of correlations between the variables. It is concluded that rank-rank correlations point to a strong Saint effect, which explains what actually Saint-based toponyms imply in terms of comparing economic and demographic data.

Himelfarb, Igor & Neli Esipova. 2016. Commitment to Islam in Kazakhstan and Kyrgyzstan: An Item Response Theory Analysis. *International Journal for the Psychology of Religion* 26(3). 252–267.
doi:10.1080/10508619.2015.1033899.

Worthington conceptualized a model of religiosity assessment. The dimensions of the model include Religious Norms, Religious Doctrine, and Authority of Leaders. A 10-item scale for Islamic religious assessment was constructed and administered in Kazakhstan and Kyrgyzstan. First-order factor analysis conducted on the 10 items of the religiosity scale revealed factorial structure corresponding to Worthington’s model. A second-order factor analysis assured one underlying latent trait. Two-parameter logistic item response theory models were fit to responses collected in Kazakhstan and Kyrgyzstan. Results supported psychometric soundness of the instrument. The items on the scale

revealed excellent discrimination properties between the populations of high and low religious commitment. The study offers a short, practical scale for assessment of commitment to Islam in Central Asian countries.

- Putra, Idhamsyah Eka. 2016. Taking Seriously Ingroup Self-Evaluation, Meta-Prejudice, and Prejudice in Analyzing Interreligious Relations. *The Spanish Journal of Psychology* 19. E46. doi:10.1017/sjp.2016.48.

The present study aims to understand the conditions where prejudice can be predicted by ingroup and outgroup meta-prejudice. The data collecting was disseminated toward Muslim and Christian participants (n=362) living in Maumere, Flores Island, Indonesia. In Flores, Christianity is the largest religion and Islam is the second. Across two samples, the effects of ingroup and outgroup meta-prejudice on prejudice were found to be moderated by ingroup self-evaluation. It shows that at high level (but not low) of positive ingroup self-evaluation, ingroup and outgroup meta-prejudice were found to predict prejudice. The results suggest that it is important to consider how group members evaluate their own group and how group members think what others are thinking, in the study pertaining to intergroup relations.

- Vago, David R. & Fadel Zeidan. 2016. The brain on silent: Mind wandering, mindful awareness, and states of mental tranquility. *Annals of the New York Academy of Sciences* 1373(1). 96–113. doi:10.1111/nyas.13171.

Mind wandering and mindfulness are often described as divergent mental states with opposing effects on cognitive performance and mental health. Spontaneous mind wandering is typically associated with self-reflective states that contribute to negative processing of the past, worrying/fantasizing about the future, and disruption of primary task performance. On the other hand, mindful awareness is frequently described as a focus on present sensory input without cognitive elaboration or emotional reactivity, and is associated with improved task performance and decreased stress-related symptomology. Unfortunately, such distinctions fail to acknowledge similarities and interactions between the two states. Instead of an inverse relationship between mindfulness and mind wandering, a more nuanced characterization of mindfulness may involve skillful toggling back and forth between conceptual and non-conceptual processes and networks supporting each state, to meet the contextually specified demands of the situation. In this article, the authors present a theoretical analysis and plausible neurocognitive framework of the restful mind, in which we attempt to clarify potentially adaptive contributions of both mind wandering and mindful awareness through the lens of the extant neurocognitive literature on intrinsic network activity, meditation, and emerging descriptions of stillness and nonduality. A neurophenomenological approach to probing modality-specific forms of concentration and nonconceptual awareness is presented that may improve our understanding of the resting state.

PART 2: ARTICLES IN SPIRITUALITY & HEALTH RESEARCH

2.1 SPIRITUALITY & HEALTH: GENERAL HEALTH & WELL-BEING

Arrey, Agnes Ebotabe, Johan Bilsen, Patrick Lacor & Reginald Deschepper. 2016. Spirituality/Religiosity: A Cultural and Psychological Resource among Sub-Saharan African Migrant Women with HIV/AIDS in Belgium. *PloS One* 11(7). e0159488. doi:10.1371/journal.pone.0159488.

Spirituality/religion serves important roles in coping, survival and maintaining overall wellbeing within African cultures and communities, especially when diagnosed with a chronic disease like HIV/AIDS that can have a profound effect on physical and mental health. However, spirituality/religion can be problematic to some patients and cause caregiving difficulties. The objective of this paper was to examine the role of spirituality/religion as a source of strength, resilience and wellbeing among sub-Saharan African (SSA) migrant women with HIV/AIDS. A qualitative study of SSA migrant women was conducted between April 2013 and December 2014. Participants were recruited through purposive sampling and snowball techniques from AIDS Reference Centres and AIDS workshops in Belgium, if they were 18 years and older, French or English speaking, and diagnosed HIV positive more than 3 months beforehand. Researchers conducted semi-structured interviews with patients and did observations during consultations and support groups attendances. Thematic analysis was used to analyze the data. Forty-four women were interviewed, of whom 42 were Christians and 2 Muslims. None reported religious/spiritual alienation, though at some point in time many had felt the need to question their relationship with God by asking "why me?" A majority reported being more spiritual/religious since being diagnosed HIV positive. Participants believed that prayer, meditation, regular church services and religious activities were the main spiritual/religious resources for achieving connectedness with God. They strongly believed in the power of God in their HIV/AIDS treatment and wellbeing. Spiritual/religious resources including prayer, meditation, church services, religious activities and believing in the power of God helped them cope with HIV/AIDS. These findings highlight the importance of spirituality in physical and mental health and wellbeing among SSA women with HIV/AIDS that should be taken into consideration in providing a caring and healthy environment.

Bruce, Marino A., Bettina M. Beech, Derek M. Griffith & Roland J. Thorpe. 2016. Spirituality, Religiosity, and Weight Management Among African American Adolescent Males: The Jackson Heart KIDS Pilot Study. *Behavioral Medicine* 42(3). 183–189. doi:10.1080/08964289.2015.1121133.

Spirituality and religion have been identified as important determinants of health for adults. However, the impact of faith-oriented factors on health behaviors and outcomes among African American adolescent males has not been well studied. The purpose of this study is to examine the relationship between religiosity and spirituality and obesity-related behaviors among 12- to 19-year-old African American males (n=105) in the Jackson Heart KIDS Pilot Study. Key variables of interest are church attendance, prayer, daily spirituality, weight status, attempts to lose weight, nutrition, physical activity, and stress. Daily spirituality is associated with whether an individual attempts to lose weight. The results from logistic regression models suggest that daily spirituality increases the odds that African American male adolescents attempt to lose weight and have a history of diet-focused weight management.

Buser, Juleen K. & Sandy Gibson. 2016. Attachment to God/higher power and bulimic symptoms among college women. *Journal of College Counseling* 19(2). 124–137. doi:10.1002/jocc.12036.

The authors examined the relationship between avoidant and anxious attachment to God/Higher Power and bulimia symptoms among 599 female college student participants. After controlling for body mass index, the authors found a positive association between both attachment variables and bulimia. When entered together in a regression,

anxious attachment to God/Higher Power had a stronger relationship with bulimia than did avoidant attachment to God/Higher Power.

Carlson, Linda E., Rie Tamagawa, Joanne Stephen, Elaine Drysdale, Lihong Zhong & Michael Speca. 2016. Randomized-controlled trial of mindfulness-based cancer recovery versus supportive expressive group therapy among distressed breast cancer survivors (MINDSET): Long-term follow-up results. *Psycho-Oncology* 25(7). 750–759. doi:10.1002/pon.4150.

Mindfulness-based cancer recovery (MBCR) and supportive expressive group therapy (SET) are two well-validated psychosocial interventions, but they have not been directly compared, and little is known about long-term outcomes. This comparative effectiveness study measured the effects of these two interventions immediately following the groups and for 1 year thereafter in distressed breast cancer survivors. Two hundred fifty-two distressed Stage I-III breast cancer survivors were randomized into either MBCR or SET. Women completed questionnaires addressing mood, stress symptoms, quality of life, social support, spirituality and post-traumatic growth before and after the interventions, and 6 and 12 months later. Immediately following the intervention, women in MBCR reported greater reduction in mood disturbance (primarily fatigue, anxiety and confusion) and stress symptoms including tension, sympathetic arousal and cognitive symptoms than those in SET. They also reported increased emotional and functional quality of life, emotional, affective and positive social support, spirituality (feelings of peace and meaning in life) and post-traumatic growth (appreciation for life and ability to see new possibilities) relative to those in SET, who also improved to a lesser degree on many outcomes. Effect sizes of the time × group interactions were small to medium, and most benefits were maintained over 12 months of follow-up. The authors hold that this study is the first and largest to demonstrate sustained benefits of MBCR in distressed breast cancer survivors relative to an active control. MBCR was superior to SET for improving psychological well-being with lasting benefits over 1 year, suggesting these women gained long-lasting and efficacious tools to cope with cancer.

Carneiro, Élide Mara, Giselle Vanessa Moraes & Guilherme Azevedo Terra. 2016. Effects of Isha Hatha Yoga on Core Stability and Standing Balance. *Advances in Mind-Body Medicine* 30(3). 4–10.

The coexistence of affective disorders, especially anxiety and depression, with medical illness is a topic of considerable clinical and research interest. Complementary biofield modalities are therapies that involve touch or placement of the hands in or through biofields. Spiritual healing, or Spiritist passe (SP), is a kind of laying on of hands (LOH), and therefore is a biofield therapy. The current study intended to evaluate the effects of SP on psychological parameters such as anxiety and depression and on the perceptions of muscle tension and wellness as well as physiological parameters, such as pain intensity, heart rate (HR), and oxygen saturation (SpO₂). This study was a randomized, controlled trial at the medical clinic of the clinical hospital of the Federal University of Triângulo Mineiro (HC/UFTM) in Uberaba, Brazil. The participants were patients aged ≥18 y who had been hospitalized in the clinic between August 2014 and June 2015. Participants in the no-SP and SP groups were instructed to direct their thoughts to Jesus with wishes to heal during the intervention. In the SP group, the patients underwent application of the SP, and in the no-SP group, workers, students, or volunteers at the Clinical Hospital of Uberaba practiced a kind of LOH in a nonspiritual therapy with intention to healing emitting sincere wishes of improvement to the patients by thought. All procedures in those groups were carried out during a 10-min period on 3 consecutive days. In the control group, the patients lay for 10 min during the same periods on the 3 days, with no intervention occurring. Seventy-two patients consented to participate in the study. The SP group showed statistically significant reductions in anxiety and depression between baseline and post-intervention, with perceptions of muscle tension significantly decreasing on day 1 (D1) and day 3 (D3) of the study after the interventions and wellness significantly increasing between baseline and post-intervention and when compared with the control and no-SP groups. The current research team thus concludes that the SP was effective in promoting a state of muscle relaxation, reducing anxiety and depression, decreasing muscle tension, and, consequently, raising the perceptions of wellness in hospitalized patients.

Chang, Sun Ju, Eun Young Kwak, Bong-Jin Hahm, Se Hee Seo, Da Woon Lee & Sun Joo Jang. 2016. Effects of a Meditation Program on Nurses' Power and Quality of Life. *Nursing Science Quarterly* 29(3). 227–234.

doi:10.1177/0894318416647778.

This study evaluated the effects of meditation programs on nurses' power and quality of life. In this study, Barrett's power theory derived from Rogers' unitary human being science was used as a theoretical framework. A randomized controlled design with 50 recruited and randomly allocated participants was used. The results demonstrated that the eight-week meditation program significantly improved nurses' power and quality of life. These results suggest that meditation has positive effects on power and quality of life.

Costa, Rui M., Tânia F. Oliveira, José Pestana & David Costa. 2016. Self-transcendence is related to higher female sexual desire. *Personality and Individual Differences* 96. 191–197.

doi:10.1016/j.paid.2016.02.078.

One facet of self-transcendence is creative self-forgetfulness (CSF; tendency to be attentionally absorbed in mind-altering experiences). Proneness to mind-altering attentional absorption and other aspects of self-transcendence were previously related to vaginal intercourse frequency, sexual arousability, and female coital orgasm. Given that sexual responsiveness is enhanced by focused attention, it was tested whether CSF correlates with sexual responsiveness, and if maladaptive defenses, openness to experience, and testosterone explain the hypothesized relationships. One hundred thirty-nine Portuguese (98 women) provided saliva samples for testosterone determination by luminescence immunoassays before and after a romantic movie scene and reported how intensely they felt sexual desire and arousal during the movie. Female desire and arousal during the movie were independently predicted by CSF, openness to experience, and testosterone, but not by immature defenses. Female past month desire was independently predicted by CSF, testosterone, and less immature defenses.

Foster, Dawn W., Chelsie M. Young, Jennifer L. Bryan & Michelle C. Quist. 2016. Compounding risk: An examination of associations between spirituality/religiosity, drinking motives, and alcohol-related ambivalence among heavy drinking young adults. *Addictive Behaviors* 63. 1–11.

doi:10.1016/j.addbeh.2016.06.026.

The present study assessed combinations of spirituality/religiosity (S/R), a known protective factor against heavy drinking, with drinking motives, and alcohol-related ambivalence to better understand how these factors interrelate and are associated with drinking and alcohol-related problems. Participants were 241 heavy drinking undergraduate students (81.74% female) who completed study questionnaires online. Coping, enhancement, and conformity drinking motives were associated with greater alcohol use and problems. However, there were no main effects of either ambivalence or S/R on alcohol outcomes. S/R interacted with ambivalence with respect to drinking and problems. S/R also interacted with conformity drinking motives with respect to drinking and problems. Further, ambivalence interacted with conformity drinking motives regarding problems. Three-way interactions emerged between ambivalence, S/R, and drinking motives (social, coping, and enhancement motives) regarding drinking and problems. Results show that individuals at highest risk for problematic drinking are those who more strongly endorse drinking motives, are low in S/R, and high in ambivalence.

Iqbal, Fareed, Omar Kujan, Douglas M. Bowley, Michael R. B. Keighley & Carolynne J. Vaizey. 2016. Quality of Life After Ostomy Surgery in Muslim Patients: A Systematic Review of the Literature and Suggestions for Clinical Practice. *Journal of Wound, Ostomy, and Continence Nursing* 43(4). 385–391.

doi:10.1097/won.000000000000235.

Researchers sought to determine factors that influence health-related quality of life (HRQOL) after ostomy surgery in Muslim patients. A systematic literature review of published data was carried out using MeSH terms ("Muslim"

OR “Islam”) AND (“stoma” OR “ostomy” OR “colostomy” OR “ileostomy”) AND “quality of life” AND “outcomes.” Twelve studies enrolling 913 subjects were deemed suitable for inclusion in the review. HRQOL was found to be particularly impaired in Muslims; this impairment went beyond that experienced by non-Muslim patients. Factors associated with this difference included psychological factors, social isolation, underreporting of complications, and sexual dysfunction leading to breakdown of marital relations as well as diminished religious practices. The authors conclude that Muslims requiring ostomies should receive preoperative counseling by surgeons and ostomy nurses. These discussions should also include faith leaders and/or hospital chaplains. Ongoing support after surgery can be extended into the community and encompass family doctors and faith leaders.

Jong, Marasha de, Sara W. Lazar, Kiran Hug, Wolf E. Mehling, Britta K. Hölzel, Alexander T. Sack, Frenk Peeters, Heidi Ashih, David Mischoulon & Tim Gard. 2016. Effects of Mindfulness-Based Cognitive Therapy on Body Awareness in Patients with Chronic Pain and Comorbid Depression. *Frontiers in Psychology* 7. 967.
doi:10.3389/fpsyg.2016.00967.

Body awareness has been proposed as one of the major mechanisms of mindfulness interventions, and it has been shown that chronic pain and depression are associated with decreased levels of body awareness. Researchers investigated the effect of Mindfulness-Based Cognitive Therapy (MBCT) on body awareness in patients with chronic pain and comorbid active depression compared to treatment as usual (TAU; n=31). Body awareness was measured by a subset of the Multidimensional Assessment of Interoceptive Awareness (MALA) scales deemed most relevant for the population. These included: Noticing, Not-Distracting, Attention Regulation, Emotional Awareness, and Self-Regulation. In addition, pain catastrophizing was measured by the Pain Catastrophizing Scale (PCS). These scales had adequate to high internal consistency in the current sample. Depression severity was measured by the Quick Inventory of Depressive Symptomatology-Clinician rated (QIDS-C16). Increases in the MBCT group were significantly greater than in the TAU group on the “Self-Regulation” and “Not Distracting” scales. Furthermore, the positive effect of MBCT on depression severity was mediated by “Not Distracting.” These findings provide preliminary evidence that a mindfulness-based intervention may increase facets of body awareness as assessed with the MALA in a population of pain patients with depression. Furthermore, they are consistent with a long hypothesized mechanism for mindfulness and emphasize the clinical relevance of body awareness.

Klein, P. J., Roger Schneider & C. J. Rhoads. 2016. Qigong in cancer care: A systematic review and construct analysis of effective Qigong therapy. *Supportive Care in Cancer* 24(7). 3209–3222.
doi:10.1007/s00520-016-3201-7.

This review (a) assesses the strength of evidence addressing Qigong therapy in supportive cancer care and (b) provides insights for definition of effective Qigong therapy in supportive cancer care. This mixed-methods study includes (a) a systematic review of randomized clinical trials (RCTs) following PRISMA guidelines and (b) a constant-comparative qualitative analysis of effective intervention protocols. Eleven published randomized clinical trials were reviewed. A total of 831 individuals were studied. Geographic settings include the USA, Australia, China, Hong Kong, and Malaysia. Qigong therapy was found to have positive effects on the cancer-specific QOL, fatigue, immune function, and cortisol levels of individuals with cancer. Qigong therapy protocols varied supporting a plurality of styles. Qualitative analyses identified common programming constructs. Content constructs included exercise (gentle, integrated, repetitive, flowing, weight-bearing movements), breath regulation, mindfulness and meditation, energy cultivation including self-massage, and emphasis on relaxation. Logistic constructs included delivery by qualified instructors, home practice, and accommodation for impaired activity tolerance.

Leppma, Monica & Mark E. Young. 2016. Loving-kindness meditation and empathy: A wellness group intervention for counseling students. *Journal of Counseling & Development* 94(3). 297–305.
doi:10.1002/jcad.12086.

The effect of a six week loving-kindness meditation (LKM) on the multidimensional empathy of 103 master's-level counseling students was evaluated, in addition to the correlation between reported levels of time spent meditating and empathy. Statistical analyses indicated that participants who received the LKM intervention experienced gains in dimensions of empathy. A significant relationship between quantity of meditation and perspective taking was noted. Implications and suggestions for future research are explored.

- Maley, Christine M., Nicole K. Pagana, Christa A. Velenger & Tamera Keiter Humbert. 2016. Dealing with Major Life Events and Transitions: A Systematic Literature Review on and Occupational Analysis of Spirituality. *The American Journal of Occupational Therapy* 70(4). 7004260010p1–6. doi:10.5014/ajot.2016.015537.

This systematic literature review analyzed the construct of spirituality as perceived by people who have experienced or are experiencing a major life event or transition. The researchers investigated studies that used narrative analysis or a phenomenological methodology related to the topic. Thematic analysis resulted in three major themes: (1) avenues to and through spirituality, (2) the experience of spirituality, and (3) the meaning of spirituality. The results provide insights into the intersection of spirituality, meaning, and occupational engagement as understood by people experiencing a major life event or transition and suggest further research that addresses spirituality in occupational therapy and interdisciplinary intervention.

- Moeini, Mahin, Somaye Sharifi & Zahra Zandiyeh. 2016. Does Islamic spiritual program lead to successful aging? A randomized clinical trial. *Journal of Education and Health Promotion* 5. 2. doi:10.4103/2277-9531.184561.

Successful aging is a pattern of aging that has gained much attention during recent years. One factor that has a negative impact on successful aging variables is hypertension. The phenomenon of aging when accompanied with hypertension promotes spiritual needs. The aim of this randomized clinical trial was to examine the effect of the Islamic spiritual program on successful aging in elderly patients with hypertension who were referred to health centers of Isfahan, Iran, in 2014. The participants (52 elderly patients with hypertension) were randomly divided into experimental and control groups. While the control group received training related to health promotion, the Islamic spiritual program was implemented in the experimental group for eight sessions in two health centers of Isfahan. The data collection tools consisted of the 12-item General Health Questionnaire developed by Goldberg and the satisfaction with life scale developed by Diener. The questionnaires were completed in three steps; pretest, posttest, and follow-up (1-month). Statistical tests showed that the mean score of general health and life satisfaction of the experiment group had a meaningful difference from that of the control group in the posttest stage. This difference was also meaningful in the follow-up stage.

- Moreira, Carmelita Naiara de Oliveira, Camila Barbosa Marques, Marcial Alexandre Pereira da Silva, Fernanda Augusta Marques Pinheiro & Geraldo Magela Salomé. 2016. Association of sociodemographic and clinical factors with spirituality and hope for cure of ostomized people. *Journal of Coloproctology* 36(3). 162–172. doi:10.1016/j.jcol.2016.04.009.

The objective of this study was to evaluate the sociodemographic and clinical factors related to patients with intestinal stoma and correlate them to the health locus of control, spirituality and hope for a cure. This study was conducted at the Polo of Ostomized Patients of the city of Pouso Alegre, Minas Gerais. Participants were 52 patients with intestinal stoma. The scale for Health Locus of Control, the Herth Hope Scale, and the Self-rating Scale for Spirituality were used for data collection. The patients were aged up to 50 years, with the following means: Herth Hope Scale: 17.53; Self-rating Scale for Spirituality: 19.33. With regard to marital status, single people had a mean of 21.00 for the Herth Hope Scale. Retired ostomized patients had a mean of 20.53 for the Herth Hope Scale, of 10.38 for the Self-rating Scale for Spirituality, and of Scale for Health Locus of Control, of 18.79. The patients whose cause of making the stoma was neoplasia attained a mean of 19.43 for the Self-rating Scale for

Spirituality. Regarding the character of the stoma, the mean for the Herth Hope Scale was 18.40. In the ostomized individuals who lived with the stoma for less than four years the means for the Herth Hope Scale, Self-rating Scale for Spirituality, and Scale for Health Locus of Control were 17.39, 20.35, and 23.09, respectively. Patients who did not participate of an association or support had means for the Herth Hope Scale, Self-rating Scale for Spirituality, and Scale for Health Locus of Control of 19.08, 17.25, and 20.63 respectively. The authors conclude that ostomized patients believe they can control their health and that those involved in their care and rehabilitation can contribute to their improvement.

Pandya, Samta P. 2016. Hindu women in religious orders: Understanding their well-being in old age. *Journal of Religion, Spirituality & Aging* 28(3). 219–238.
doi:10.1080/15528030.2015.1133369.

The study aims to understand determinants of well-being of Hindu women in old age who have committed their lives to religious orders. Data was obtained across eight countries from a sample of 12,082 older Hindu women renunciants belonging to two religions orders: Brahmakumaris and Chinmaya Mission. An e-mail questionnaire was administered comprising basic background profile questions and four scales to measure aspects of well-being, satisfaction with life, and happiness. The analysis of variance, logistic regression, and structural equation models showed that religiosity, spirituality, work done in the order, and length of association positively influenced well-being, life satisfaction, and happiness. Internal covariance among the independent variables had further compounding effects. Religiosity and spirituality serve to be protector variables for older Hindu women renunciants, influencing their well-being, life satisfaction, and happiness. Study of older women in religious orders and working with them must form a part of aging studies and practice.

Pilch, Michaela, Sabina Nadine Scharf, Martin Lukanz, Nora Johanna Wutte, Regina Fink-Puches, Monika Glawischnig-Goschnik, Human-Friedrich Unterrainer & Elisabeth Aberer. 2016. Spiritual well-being and coping in scleroderma, lupus erythematosus, and melanoma. *Journal der Deutschen Dermatologischen Gesellschaft / Journal of the German Society of Dermatology: JDDG* 14(7). 717–728.
doi:10.1111/ddg.12715.

Religious/spiritual (R-S) well-being is associated with greater vitality and lower depression scores. In this study, researchers investigated strategies for coping with disease and the role of religiosity/spirituality with respect to improving subjective well-being. One hundred and forty-nine patients (107 women), 44 of whom with systemic sclerosis (SSc), 48 with lupus erythematosus (LE), and 57 with stage I or II malignant melanoma (MM) were surveyed using a self-designed questionnaire, which addressed subjective well-being and disease-related circumstances, as well as the Multidimensional Inventory for Religious/Spiritual Well-Being (MI-RSWB). At the time of diagnosis, disease burden is greater in LE patients than in patients with SSc and MM. Only after several years are SSc and LE patients able to accept their disease. Compared with healthy individuals, the overall score of R-S well-being is significantly lower in LE patients. In LE, photosensitivity and joint pain are inversely correlated with the ability to forgive. SSc patients with facial lesions and pulmonary involvement show greater religiosity. MM patients display significantly higher values for transcendental hope. The authors conclude that talks about the disease and psychological support are the most important needs of patients with SSc, LE, and MM. At present, programs aimed at improving R-S coping skills do not seem to play a significant role, but could be an important resource that should be addressed in the future.

Sharon, Haggai, Adi Maron-Katz, Eti Ben Simon, Yuval Flusser, Talma Hendler, Ricardo Tarrasch & Silviu Brill. 2016. Mindfulness Meditation Modulates Pain Through Endogenous Opioids. *American Journal of Medicine* 129(7). 755–758.
doi:10.1016/j.amjmed.2016.03.002.

Recent evidence supports the beneficial effects of mindfulness meditation on pain. However, the neural mechanisms underlying this effect remain poorly understood. Researchers used an opioid blocker to examine whether mindfulness

meditation-induced analgesia involves endogenous opioids. Fifteen healthy experienced mindfulness meditation practitioners participated in a double-blind, randomized, placebo-controlled, crossover study. Participants rated the pain and unpleasantness of a cold stimulus prior to and after a mindfulness meditation session. Participants were then randomized to receive either intravenous naloxone or saline, after which they meditated again, and rated the same stimulus. A 3 × 2 repeated-measurements analysis of variance revealed a significant time effect for pain and unpleasantness scores as well as a significant condition effect for pain and unpleasantness. Post hoc comparisons revealed that pain and unpleasantness scores were significantly reduced after natural mindfulness meditation and after placebo, but not after naloxone. Furthermore, there was a positive correlation between the pain scores following naloxone vs placebo and participants' mindfulness meditation experience. These findings show, for the first time, that meditation involves endogenous opioid pathways, mediating its analgesic effect and growing resilient with increasing practice to external suggestion.

Teut, Michael, Judith Knilli, Dorothea Daus, Stephanie Roll & Claudia M. Witt. 2016. Qigong or Yoga Versus No Intervention in Older Adults with Chronic Low Back Pain—A Randomized Controlled Trial. *The Journal of Pain* 17(7). 796–805.
doi:10.1016/j.jpain.2016.03.003.

The aim of this study was to assess the effectiveness of the reduction of chronic lower back pain in older adults using either yoga classes or qigong classes compared with no intervention. Older adults (65 years of age and older) with chronic low back pain were enrolled in and randomly allocated to: 1) yoga (24 classes, 45 minutes each, during 3 months), 2) qigong (12 classes, 90 minutes each, during 3 months), or 3) a control group who received no additional intervention. The pain intensity item of the Functional Rating Index after 3 months was used as primary outcome parameter. A total of 176 patients were randomized (n=61 yoga, n=58 qigong, n=57 control). The mean adjusted pain intensity after 3 months was 1.71 for the yoga group, 1.67 for the qigong group, and 1.89 for no intervention. No statistically significant group differences were observed. Possible explanations for this lack of pain relief might include the ineffectiveness of interventions, inappropriate outcomes, or differences in pain perception and processing in older adults.

Thinhuatoey, Benjamard, Praneed Songwathana & Wongchan Petpichetchian. 2016. The Care-Integrated Concentration Meditation Program for Patients with Weaning Difficulty: A Pilot Study. *Holistic Nursing Practice* 30(4). 201–210.
doi:10.1097/HNP.000000000000159.

Because of the multifaceted process of weaning patients with prolonged mechanical ventilation, enhancing weaning success remains a challenge. The Care-Integrated Concentration Meditation Program was developed on the basis of Buddhist philosophy and implemented to determine its procedural feasibility. A qualitative case study with 3 participants was conducted, and the process and initial outcomes were evaluated.

Tomás, J. M., P. Sancho, L. Galiana & A. Oliver. 2016. A double test on the importance of spirituality, the “forgotten factor”, in successful aging. *Social Indicators Research* 127(3). 1377–1389.
doi:10.1007/s11205-015-1014-6.

Rowe and Kahn proposed a model of successful aging, tapping several characteristics of the aging process. However, Rowe and Kahn's model of successful aging has recently been criticized for not incorporating spirituality in the model. Additionally, life satisfaction has long been recognized as a marker of aging well. Taking life satisfaction as a key outcome of successful aging, the aim of this study is to test for the predictive power of spirituality dimensions on life satisfaction, while controlling for the components of successful aging. Data came from a cross-sectional survey design of 224 community-dwelling Spanish elderly. Structural models with two different measures of spirituality were estimated, and the results fully supported the key role of spirituality for a successful aging. The models predicted life satisfaction with several indicators of Rowe and Kahn's model and spirituality dimensions. Overall, life satisfaction of the elderly was strongly related to the indicators, and spirituality strongly aided to the prediction of life satisfaction.

Results of this research agree with recent literature, as spirituality seemed to be a key element when picturing successful aging, and thus, it should be taken into account in future studies addressing this topic.

- Tyagi, Anupama & Marc Cohen. 2016. Yoga and heart rate variability: A comprehensive review of the literature. *International Journal of Yoga* 9(2). 97–113.
doi:10.4103/0973-6131.183712.

Heart rate variability (HRV) has been used as a proxy for health and fitness and indicator of autonomic regulation and therefore, appears well placed to assess the changes occurring with mind-body practices that facilitate autonomic balance. While many studies suggest that yoga influences HRV, such studies have not been systematically reviewed. The present researchers aimed to systematically review all published papers that report on yoga practices and HRV. A comprehensive search of multiple databases was conducted and all studies that reported a measure of HRV associated with any yoga practice were included. Studies were categorized by the study design and type of yoga practice. A total of 59 studies were reviewed involving a total of 2,358 participants. Most studies were performed in India on relatively small numbers of healthy male yoga practitioners during a single laboratory session. Of the reviewed studies, 15 were randomized controlled trials with 6 having a Jadad score of 3. The reviewed studies suggest that yoga can affect cardiac autonomic regulation with increased HRV and vagal dominance during yoga practices. Regular yoga practitioners were also found to have increased vagal tone at rest compared to non-yoga practitioners. It is premature to draw any firm conclusions about yoga and HRV as most studies were of poor quality, with small sample sizes and insufficient reporting of study design and statistical methods. Rigorous studies with detailed reporting of yoga practices and any corresponding changes in respiration are required to determine the effect of yoga on HRV.

- Vancini, Rodrigo Luiz, Claudio Andre Barbosa de Lira, Cássia Regina Vancini-Campanharo, Dulce Aparecida Barbosa & Ricardo Mario Arida. 2016. The Spiritism as therapy in the health care in the epilepsy. *Revista Brasileira De Enfermagem* 69(4). 804–810.
doi:10.1590/0034-7167.2016690425i.

In this article the authors present a brief history of Spiritism, the vision of epilepsy by Spiritism, and the potential of spirituality and religiosity care to act as complementary and coadjutant treatments in epilepsy. The authors also conduct a review of published articles (about religion/spirituality and epilepsy) in the Pubmed and SciELO databases. Following analysis, the authors conclude that the exercise of spirituality and religiosity can be a positive coping strategy to support the traditional therapy of patients with epilepsy and other neurological disorders. However, it is necessary to demystify myths and beliefs about epilepsy and improve knowledge about this important health dimension among professionals, patients, and caregivers to explore their full treatment and supportive potential.

- Wang, Yin-Chih & Chia-Chin Lin. 2016. Spiritual Well-being May Reduce the Negative Impacts of Cancer Symptoms on the Quality of Life and the Desire for Hastened Death in Terminally Ill Cancer Patients. *Cancer Nursing* 39(4). E43–50.
doi:10.1097/NCC.0000000000000298.

Spirituality is a central component of the well-being of terminally ill cancer patients. The aim of this study was to examine the mediating or moderating role of spiritual well-being in reducing the impact of cancer-related symptoms on quality of life and the desire for hastened death in terminally ill cancer patients. Eighty-five terminally ill cancer patients were assessed using the Taiwanese version of the M. D. Anderson Symptom Inventory, the Functional Assessment of Cancer Therapy-General, the Functional Assessment of Chronic Illness Therapy-Spiritual Well-being, the Beck Hopelessness Scale, and the Schedule of Attitudes Toward Hastened Death. Spiritual well-being was significantly negatively correlated with symptom severity. Symptom severity negatively correlated with quality of life and positively correlated with hopelessness and the desire for hastened death. Spiritual well-being was a partial mediator and moderator between symptom severity and quality of life. Spiritual well-being was a partial mediator

between symptom severity and the desire for hastened death. The meaning subscale of spiritual well-being was a more significant predictor of the desire for hastened death and quality of life than the faith subscale was.

Zeidan, Fadel & David R. Vago. 2016. Mindfulness meditation-based pain relief: A mechanistic account. *Annals of the New York Academy of Sciences* 1373(1). 114–127.
doi:10.1111/nyas.13153.

Pain is a multidimensional experience that involves interacting sensory, cognitive, and affective factors, rendering the treatment of chronic pain challenging and financially burdensome. Further, the widespread use of opioids to treat chronic pain has led to an opioid epidemic characterized by exponential growth in opioid misuse and addiction. The staggering statistics related to opioid use highlight the importance of developing, testing, and validating fast-acting nonpharmacological approaches to treat pain. Mindfulness meditation is a technique that has been found to significantly reduce pain in experimental and clinical settings. The present review delineates findings from recent studies demonstrating that mindfulness meditation significantly attenuates pain through multiple, unique mechanisms. This is an important consideration for the millions of chronic pain patients seeking narcotic-free, self-facilitated pain therapy.

2.2 SPIRITUALITY & HEALTH: MENTAL HEALTH

Andó, Bálint, Péter Zoltán Álmos, Viola Luca Németh, Ildikó Kovács, Anna Fehér-Csókás, Ildikó Demeter, Sándor Rózsa, et al. 2016. Spirituality mediates state anxiety but not trait anxiety and depression in alcohol recovery. *Journal of Substance Use* 21(4). 344–348.
doi:10.3109/14659891.2015.1021869.

Twelve-step based interventions promote the recovery from alcohol dependence, support relapse prevention and are associated with improved mental status indices (e.g., depression). This treatment model largely relies on spiritual experience. Researchers tested three different alcohol treatment settings, which differently involve elements of spirituality in order to reveal its possible mediator effect on the level of depressive and anxiety symptoms. Patients were involved from (1) detoxification (n=34); (2) long-term (12-step based) therapeutic community treatment (n=89); (3) Alcoholics Anonymous (AA) groups after at least 3 years of attendance (n=46). Anxiodepressive symptoms and spirituality/transcendence were compared and the potential mediator role of spirituality was assessed in the levels of depressive and anxiety symptoms. Long-term 12-step based rehabilitation and sustained AA attendance was connected to lower levels of anxiodepressive symptoms and to more pronounced spirituality. The spiritual component of the different treatments played a mediator role in the decrease of state anxiety but this mediation was not detected in the case of depressive symptoms and trait anxiety.

Arzy, Shahar & Roey Schurr. 2016. “God has sent me to you”: Right temporal epilepsy, left prefrontal psychosis. *Epilepsy & Behavior* 60. 7–10.
doi:10.1016/j.yebeh.2016.04.022.

Religious experiences have long been documented in patients with epilepsy, though their exact underlying neural mechanisms are still unclear. Here, RESEARCHERS had the rare opportunity to record a delusional religious conversion in real time in a patient with right temporal lobe epilepsy undergoing continuous video-EEG. In this patient, a messianic revelation experience occurred several hours after a complex partial seizure of temporal origin, compatible with postictal psychosis (PIP). Researchers analyzed the recorded resting-state EEG epochs separately for each of the conventional frequency bands. Topographical analysis of the bandpass filtered EEG epochs revealed increased activity in the low-gamma range (30-40Hz) during religious conversion compared with activity during the patient’s habitual state. The brain generator underlying this activity was localized to the left prefrontal cortex. This suggests that religious conversion in PIP is related to control mechanisms in the prefrontal lobe-related processes rather than medial temporal lobe-related processes.

Ata, Abe W. 2016. Mental anxieties, bereavement, and communication with the dead amongst Australian-born. *Journal of Spirituality in Mental Health* 18(3). 239–252.
doi:10.1080/19349637.2015.1133257.

This article is based on survey of 269 households in the state of Victoria, Australia. Sixty-two of these households include an Australian born of a Christian background. This investigation tackles a much neglected, somewhat taboo and difficult area of family life and compares them with other religious and cultural groups: Significant differences were found with regards to health problems, grief expressions and practices, psychosomatic manifestations, communication with the dead, beliefs in the afterlife and interpretation of the meaning of loss. These findings offer a positive care-giving interventions and hopeful understanding of these issues in multicultural societies.

Bachmann, Katharina, Alexandra P. Lam & Alexandra Philipsen. 2016. Mindfulness-Based Cognitive Therapy and the Adult ADHD Brain: A Neuropsychotherapeutic Perspective. *Frontiers in Psychiatry* 7. 117.
doi:10.3389/fpsyt.2016.00117.

Attention-deficit/hyperactivity disorder (ADHD) is a recognized serious mental disorder that often persists into adulthood. The symptoms and impairments associated with ADHD often cause significant mental suffering in affected individuals. ADHD has been associated with abnormal neuronal activity in various neuronal circuits, such as the dorsofrontostriatal, orbitofrontostriatal, and frontocerebellar circuits. Psychopharmacological treatment with methylphenidate hydrochloride is recommended as the first-line treatment for ADHD. It is assumed that medication ameliorates ADHD symptoms by improving the functioning of the brain areas affected in the condition. However, side effects, contraindications, or non-response can limit the effectiveness of a psychopharmacological treatment for ADHD. It is therefore necessary to develop non-pharmacological interventions that target neuronal mechanisms associated with the condition in the same way as pharmacological treatment. The present researchers think that mindfulness meditation employed as a neuropsychotherapeutic intervention could help patients with ADHD to regulate impaired brain functioning and thereby reduce ADHD symptoms. In this paper, the researchers highlight the mechanisms of such mindfulness meditation, and thus provide a rationale for further research and treatment development from a neuropsychotherapeutic perspective.

Bajaj, Badri, Richard W. Robins & Neerja Pande. 2016. Mediating role of self-esteem on the relationship between mindfulness, anxiety, and depression. *Personality and Individual Differences* 96. 127–131.
doi:10.1016/j.paid.2016.02.085.

The current study aimed to examine the mediation effects of self-esteem on the association between mindfulness and anxiety and depression. A sample of 417 undergraduate students completed a packet of questionnaires that assessed mindfulness, self-esteem, anxiety, and depression. Correlation results indicated that mindfulness was associated with self-esteem, anxiety, and depression. Using Structural Equation Modeling (SEM), mediational analyses showed that mindfulness exerted its indirect effect on anxiety and depression through self-esteem. A multi-group analysis showed that the mediational model was not moderated by gender and thus provided a preliminary support for the robustness of the final mediational model. The findings corroborate an important role of self-esteem in mindfulness exerting its beneficial effects on anxiety and depression.

Bob, Petr, Ondrej Pec, Aaron L. Mishara, Tereza Touskova & Paul H. Lysaker. 2016. Conscious brain, metacognition and schizophrenia. *International Journal of Psychophysiology* 105. 1–8.
doi:10.1016/j.ijpsycho.2016.05.003.

Recent findings indicate that the binding and synchronization of distributed neural activities are crucial for cognitive processes and consciousness. In addition, there is increasing evidence that disrupted feature binding is related to experiences of disintegration of consciousness in schizophrenia. These data suggest that the disrupted binding and

disintegration of consciousness could be typically related to schizophrenia in terms of Bleuler's concept of "splitting." In this context, deficits in metacognitive capacity in schizophrenia may be conceptualized as a spectrum from more discrete to more synthetic activities, related to specific levels of neural binding and neurocognitive deficits. This review summarizes the recent research on metacognition and its relationship to deficits of conscious awareness that may be found in schizophrenia patients. Deficits in synthetic metacognition are likely linked to the integration of information during specific processes of neural binding. Those in turn may be related to a range of mental activities including reasoning style, learning potential and insight.

- Clements, Andrea D., Tifani R. Fletcher, Lawrence D. Childress, Robert A. Montgomery & Beth A. Bailey. 2016. Social support, religious commitment, and depressive symptoms in pregnant and postpartum women. *Journal of Reproductive & Infant Psychology* 34(3). 247–259.
doi:10.1080/02646838.2016.1152626.

Social support and religious commitment were examined in relation to antenatal and postpartum depressive symptoms in a prospective, longitudinal study to determine whether religious commitment explained variance in depression scores beyond that accounted for by social support. Social support and religiosity are positively related to good mental/physical health, and depression is related to poor health outcomes in pregnancy and postpartum. It was hypothesized that social support and religious commitment would be inversely related to depressive symptoms, and that religious commitment would predict variance in depression scores over and above social support. In 106 mostly low SES Appalachian pregnant women, social support and religious commitment were measured during the first trimester. First and third trimester (Center for Epidemiological Studies Depression Scale – 10 item version), and 6 weeks and 6 months postpartum (Edinburgh Postnatal Depression Scale) depression symptoms were measured. Hierarchical regression examined relative contributions of social support (Prenatal Psychosocial Profile) and religious commitment (Religious Surrender and Attendance Scale – 3 Item Version) to depressive symptoms at each time point while controlling for education and marital status. Regression results indicated that social support and religious commitment explained 10–18% and 0–3% of the variability in depression scores, respectively.

- Costa, Ana & Thorsten Barnhofer. 2016. Turning Towards or Turning Away: A Comparison of Mindfulness Meditation and Guided Imagery Relaxation in Patients with Acute Depression. *Behavioural and Cognitive Psychotherapy* 44(4). 410–419.
doi:10.1017/S1352465815000387.

Disengaging from maladaptive thinking is an important imperative in the treatment of depression. Mindfulness training is aimed at helping patients acquire relevant skills for this purpose. It remains unclear, however, whether this practice is helpful when patients are acutely depressed. In order to investigate effects of mindfulness on symptoms and self-regulatory capacities in this group, the current study compared a brief training in mindfulness (n=19) to guided imagery relaxation (n=18). Participants were introduced to the respective techniques in a single session, and practiced daily over one week. Self-reported severity of symptoms, difficulties in emotion-regulation, attentional control, the ability to decenter, and mindfulness were assessed pre- and post-intervention, and at a one-week follow-up. Symptoms of depression significantly decreased and self-regulatory functioning significantly increased in both groups, with changes being maintained during follow-up. When controlling for change in depressive symptoms, results showed significantly higher improvements in emotion regulation at follow-up in the mindfulness group. The ability to decenter predicted changes in symptoms from pre- to post-intervention, while mindfulness skills predicted changes in symptoms during the maintenance phase.

- Ganocy, Stephen J., Toyomi Goto, Philip K. Chan, Gregory H. Cohen, Laura Sampson, Sandro Galea, Israel Liberzon, et al. 2016. Association of Spirituality with Mental Health Conditions in Ohio National Guard Soldiers. *The Journal of Nervous and Mental Disease* 204(7). 524–529.
doi:10.1097/NMD.0000000000000519.

Research exploring spirituality in military populations is a relatively new field with limited published reports. This study used the Spiritual Well-Being Scale to examine the association of spiritual well-being with suicidal ideation/behavior, posttraumatic stress disorder (PTSD), and depression and alcohol use disorders in a randomized sample of Ohio Army National Guard soldiers. The participants were 418 soldiers, mostly white and male, with nearly three-quarters indicating that they had been deployed at least once during their careers. Higher spirituality, especially in the existential well-being subscale, was associated with significantly less lifetime PTSD, depression, and alcohol use disorders and with less suicidal ideation over the past year. Future research in this area may benefit from a longitudinal design that can assess spirituality and mental health behaviors in addition to diagnoses at different time points, to begin to explore spirituality in a larger context.

- Glasser, Saralee, Lea Hadad, Rena Bina, Valentina Boyko & Racheli Magnezi. 2016. Rate, risk factors and assessment of a counselling intervention for antenatal depression by public health nurses in an Israeli ultra-orthodox community. *Journal of Advanced Nursing* 72(7). 1602–1615.
doi:10.1111/jan.12938.

To investigate the rate of and risk factors for perinatal depression in an Israeli ultra-orthodox Jewish community and assess the contribution of antenatal nursing intervention to reducing symptoms of postpartum depression. Perinatal depression is recognized globally as a common complication of pregnancy and childbirth, with negative effects on the mother, infant and family. Among Jewish ultra-orthodox women both religion and childbearing play major roles. Depressive symptoms were assessed by the Edinburgh Postnatal Depression Scale. One-hundred-sixty women attending a mother-child healthcare clinic during December 2011-January 2013 completed the Edinburgh Postnatal Depression Scale prenatally and 148 (92.5%) repeated the survey 6 weeks postpartum. Nurses were trained to screen and offer non-directive supportive counselling intervention. Risk factors for antenatal depressive symptoms were analyzed using multivariable logistic regression and analysis of changes in score was performed by 2-way analysis of variance. Nineteen participants (11.9%) scored ≥ 10 on the Edinburgh Postnatal Depression Scale antenatally. Nurses provided intervention for 40 women. Postpartum, only one participant scored ≥ 10 . The decrease in Edinburgh score was greater for those whose antenatal score was ≥ 10 . Although the rate of antenatal depressive symptoms was similar to that in other studies, postpartum symptoms may have been underreported, possible due to culturally-related reticence. This underscores the importance of understanding the context in which the service is offered and the sensitivities of particular groups. The findings indicate that antenatal nursing intervention is a potentially protective measure for perinatal emotional well-being.

- Isacco, Anthony, Ethan Sahker, Elizabeth Krinock, Wonjin Sim & Deanna Hamilton. 2016. How Religious Beliefs and Practices Influence the Psychological Health of Catholic Priests. *American Journal of Men's Health* 10(4). 325–337.
doi:10.1177/1557988314567325.

Roman Catholic diocesan priests are a subgroup of men with unique religious and spiritual roles, beliefs, and practices. This qualitative study of 15 priests from the mid-Atlantic area of the United States focused on how priests' relationship with God and promises of celibacy and obedience influenced their psychological health. Using a consensual qualitative research (CQR) design, the analysis revealed that participants described their relationship with God as central to their health and contributing to positive outcomes (e.g., sense of connection and support). The influence of their promises of celibacy and obedience were linked to both positive outcomes (e.g., decreased stress, improved relationships) and negative outcomes (e.g., internal conflict, depression/loneliness). This study highlighted the central role that priests' relationship with God has on positive psychological health.

- Johnson, Paige Turner, Michelle Cheshire, Felecia G. Wood, Linda L. Dunn & Patrick J. Ewell. 2016. Daily Spiritual Experiences of Nurse Educators and Relationship to Depression and Health. *Journal of Christian Nursing* 33(3). 179–183.
doi:10.1097/CNJ.0000000000000281.

This research describes the first reported assessment of spirituality in nurse educators. Faculty members at a public university in a southern U.S. state participated in a study to investigate the relationship between daily spiritual experiences (DSE), self-reported health, and depression. All participants viewed themselves as spiritual, had a religious affiliation, and recognized a difference between spirituality and religiosity. Many who reported spiritual experiences at least daily rated their health as good or excellent; those reporting less frequent DSE reported more depressive symptoms. Nurse educators' self-awareness of spirituality is important as they prepare future nursing professionals who will integrate spirituality into healthcare.

- Kalmanowitz, Debra & Rainbow T. H. Ho. 2016. Out of our mind. Art therapy and mindfulness with refugees, political violence and trauma. *The Arts in Psychotherapy* 49. 57–65.
doi:10.1016/j.aip.2016.05.012.

Combining art therapy and mindfulness in meeting the needs of refugees and asylum seekers is a novel innovation. This paper presents the integration of these approaches, and draws on examples from a short term art therapy and mindfulness meditation studio group, named Inhabited Studio. Art therapy and mindfulness are demonstrated to complement each other, and where there are points of divergence these are indicated. Consideration is given to how these approaches can be combined to help individuals build strategies for safety, support resilience, and work with multiple levels of loss, after extreme and traumatic experiences. The article considers eleven features of the combination of art therapy and mindfulness meditation. Results of implementation of the treatment approach indicate that, when combined, mindfulness and art therapy address different aspects of the individual experience, and social context, through engagement in processing.

- Kelley, Thomas, Jack Pransky & Eric Lambert. 2016. Understanding spiritual principles or depending on techniques to realize and sustain optimal mental health. *Journal of Spirituality in Mental Health* 18(3). 217–238.
doi:10.1080/19349637.2015.1087361.

The primary goal of positive psychology is understanding and facilitating optimal mental health. However, absent fundamental causal principles that explain human psychological experience, positive psychology is unlikely to achieve this goal. Researchers posit that fundamental causal principles may already have been uncovered, and they offer a study that tests the process from exposure to these principles to improved mental health. The results appear to support the prediction that insights regarding “thought recognition” and/or “innate mental health via a clear mind” gained through understanding these principles will show a significant positive relationship with hedonic well-being, eudaimonic well-being, social well-being, and optimal mental health. Of participants exposed to the understanding grounded in these spiritual principles, 88% were diagnosed as “flourishing.”

- Kushwah, Kuldeep K., Thaiyar M. Srinivasan, Hongasandra R. Nagendra & Judu V. Ilavarasu. 2016. Effect of yoga based techniques on stress and health indices using electro photonic imaging technique in managers. *Journal of Ayurveda and Integrative Medicine* 7(2). 119–123.
doi:10.1016/j.jaim.2015.05.001.

Meditation techniques are known to elicit relaxation response in which moving meditation which combines the practice of yoga postures and guided relaxation is known as Cyclic Meditation reported helpful in reducing the sympathetic arousal and improving health of practitioners. The objective of this study was to investigate the effect of Cyclic Meditation on stress and health indices in managers as measured by Electro Photonic Imaging (EPI) technique. EPI technique was used to assess participants before and after 35 min of Cyclic Meditation (CM) and equal duration of Supine Rest (SR) session. A total of sixty-six male managers, age ranges from 35 to 60 years were included in the study. EPI parameters, including Activation Coefficient, Integral Area left and right and Integral Entropy, left and right were taken for statistical analyses. Cyclic Meditation has produced a highly significant reduction in stress level, whereas this reduction was not found significant within SR group. There was a significant improvement in health index 'Integral Area' values in both left and right sides within the CM group

while only LA right side showed a significant improvement within the CM group. The integral entropy value right side decreased significantly within the CM group, whereas IE left was found deteriorated within the SR group. Moreover, only IE left side has shown a significant difference between the groups.

- Kvillemo, Pia, Yvonne Brandberg & Richard Bränström. 2016. Feasibility and Outcomes of an Internet-Based Mindfulness Training Program: A Pilot Randomized Controlled Trial. *JMIR Mental Health* 3(3). e33.
doi:10.2196/mental.5457.

Interventions based on meditation and mindfulness techniques have been shown to reduce stress and increase psychological well-being in a wide variety of populations. Self-administrated Internet-based mindfulness training programs have the potential to be a convenient, cost-effective, easily disseminated, and accessible alternative to group-based programs. This randomized controlled pilot trial with 90 university students in Stockholm, Sweden, explored the feasibility, usability, acceptability, and outcomes of an 8-week Internet-based mindfulness training program. Participants were randomly assigned to either an intervention (n=46) or an active control condition (n=44). Intervention participants were invited to an Internet-based 8-week mindfulness program, and control participants were invited to an Internet-based 4-week expressive writing program. The programs were automated apart from weekly reminders via email. Main outcomes in pre- and post-assessments were psychological well-being and depression symptoms. To assess the participant's experiences, those completing the full programs were asked to fill out an assessment questionnaire and 8 of the participants were interviewed using a semi-structured interview guide. Descriptive and inferential statistics, as well as content analysis, were performed. In the mindfulness program, 28 out of 46 students (60%) completed the first week and 18 out of 46 (39%) completed the full program. In the expressive writing program, 35 out of 44 students (80%) completed the first week and 31 out of 44 (70%) completed the full program. There was no statistically significantly stronger intervention effect for the mindfulness intervention compared to the active control intervention. Those completing the mindfulness group reported high satisfaction with the program. Most of those interviewed were satisfied with the layout and technique and with the support provided by the study coordinators. More frequent contact with study coordinators was suggested as a way to improve program adherence and completion. Most participants considered the program to be meaningful and helpful but also challenging. The flexibility in performing the exercises at a suitable time and place was appreciated. A major difficulty was, however, finding enough time to practice.

- Mathur, Sonal, Mahendra Prakash Sharma & Srikala Bharath. 2016. Mindfulness-based cognitive therapy in patients with late-life depression: A case series. *International Journal of Yoga* 9(2). 168–172.
doi:10.4103/0973-6131.183711.

Depression is the most common mental illness in the elderly, and cost-effective treatments are required. Therefore, this study is aimed at evaluating the effectiveness of a mindfulness-based cognitive therapy (MBCT) on depressive symptoms, mindfulness skills, acceptance, and quality of life across four domains in patients with late-onset depression. A single case design with pre- and post-assessment was adopted. Five patients meeting the specified inclusion and exclusion criteria were recruited for the study and assessed on the behavioral analysis pro forma, geriatric depression scale, Hamilton depression rating scale, Kentucky inventory of mindfulness skills, Acceptance and Action Questionnaire II, The World Health Organization quality of life Assessment Brief version (WHOQOL-BREF). The therapeutic program consisted of education regarding the nature of depression, training in formal and informal mindfulness meditation, and cognitive restructuring. A total of 8 sessions over 8 weeks were conducted for each patient. The results of this study indicate clinically significant improvement in the severity of depression, mindfulness skills, acceptance, and overall quality of life in all 5 patients. Eight-week MBCT program has led to reduction in depression and increased mindfulness skills, acceptance, and overall quality of life in patients with late-life depression.

Moir, Fiona, Marcus Henning, Craig Hassed, Simon A. Moyes & C. Raina Elley. 2016. A Peer-Support and Mindfulness Program to Improve the Mental Health of Medical Students. *Teaching and Learning in Medicine* 28(3). 293–302.

doi:10.1080/10401334.2016.1153475.

An exploratory study was conducted with 2nd- and 3rd-year medical students at a medical school in New Zealand randomized into 2 groups. In addition to existing mental health resources, intervention participants received a program including peer support and peer-taught mindfulness practice. Study participants not offered the intervention participants could use existing mental health resources. Primary measures included depression (PHQ-9) and anxiety (GAD-7) scores. Secondary measures were quality of life, resilience (15-item resilience scale), academic self-concept, and motivation to learn, assessed at baseline and 6 months. Of the 402 students eligible, 275 (68%) participated and 232 (58%) completed the study. Twelve peer leaders were elected. There was good participation in the intervention. One fourth of the intervention students used the face-to-face peer support and more than half attended a peer social event and/or participated in the mindfulness program. Although improvements in mental health were seen in the intervention group, the difference between the intervention and nonintervention groups did not reach statistical significance.

Mongrain, Myriam, Zahra Komeylian & Ryan Barnhart. 2016. Happiness vs. mindfulness exercises for individuals vulnerable to depression. *The Journal of Positive Psychology* 11(4). 366–377.

doi:10.1080/17439760.2015.1092569.

An online “positivity” exercise involving the practice of discrete positive emotions was pitted against a mindfulness meditation exercise and an active placebo control. The effects of positivity and meditation were examined in relationship to personality variables known to entail vulnerability to depression. Participants (n=741) were randomly assigned to the positivity, mindfulness, or control condition. They completed their exercise for three weeks and were assessed on measures of subjective well-being at baseline, post-test, and one, and two months later. Results indicated that all groups showed significant decreases in depressive symptoms from baseline to two months. The positivity exercise uniquely predicted increases in meaning, pleasure, engagement, and satisfaction in life across follow-ups. Dependent individuals responded favorably to the positivity intervention in the short run, but worsened in the long run for pleasure-related happiness. Self-criticism was associated with significantly greater gains in life satisfaction following exercise completion.

Naja, Wadih J., Michaelangelo P. Aoun, Eliane L. El Khoury, Fabiola J. Bou Abdallah & Ramzi S. Haddad. 2016. Prevalence of depression in Syrian refugees and the influence of religiosity. *Comprehensive Psychiatry* 68. 78–85.

doi:10.1016/j.comppsy.2016.04.002.

In this retrospective study on a sample of Syrian refugees who fled their country after the war, researchers found a substantial emergence of depressive disorders with no meaningful correlation with the level of religiosity. Many surveys have underlined the high levels of distress Syrian refugees have endured since the conflict aroused in their country, yet few have used reliable diagnostic tools for the clinical assessment of resulting mental disorders. The aim of our study is to assess for the onset of new depressive disorders following the Syrian war, and to investigate the correlation of religiosity with depression. Single individual interviews were used, in a sample of 310 Syrian forced migrants, retrospectively assessing for depressive disorders with onset at different timelines of the conflict outbreak. Religiosity was assessed in a cross-sectional design using a reliable, recently developed and tested tool. The prevalence of current depression was 43.9% with no difference across all socio-demographic factors, including gender. The overall mean for religiosity for the current sample was moderate. No substantial correlation was found with religiosity. The prevalence rate for pre-war depression was 6.5% following the global pattern of socio-demographic epidemiological characteristics. Prevalence for past depression was 27.1%; for current dysthymia, 4.5%; for prewar and past dysthymia, 1%.

Quaglia, Jordan T., Sarah E. Braun, Sara P. Freeman, Michael A. McDaniel & Kirk Warren Brown. 2016. Meta-analytic evidence for effects of mindfulness training on dimensions of self-reported dispositional mindfulness. *Psychological Assessment* 28(7). (Assessment of Mindfulness and Closely Related Constructs). 803–818.
doi:10.1037/pas0000268.

Improvements in stable, or dispositional, mindfulness are often assumed to accrue from mindfulness training and to account for many of its beneficial effects. However, research examining these assumptions has produced mixed findings, and the relation between dispositional mindfulness and mindfulness training is actively debated. A comprehensive meta-analysis was conducted on randomized controlled trials (RCTs) of mindfulness training published from 2003–2014 to investigate whether (a) different self-reported mindfulness scale dimensions change as a result of mindfulness training, (b) key aspects of study design (e.g., control condition type, population type, and intervention type) moderate training-related changes in dispositional mindfulness scale dimensions, and (c) changes in mindfulness scale dimensions are associated with beneficial changes in mental health outcomes. Scales from widely used dispositional mindfulness measures were combined into 5 categories for analysis: Attention, Description, Nonjudgment, Nonreactivity, and Observation. A total of 88 studies (n=5,787) were included. Changes in scale dimensions of mindfulness from pre to post mindfulness training produced mean difference effect sizes ranging from small to moderate. Consistent with the theorized role of improvements in mindfulness in training outcomes, changes in dispositional mindfulness scale dimensions were moderately correlated with beneficial intervention outcomes, except for the Observation dimension. Overall, moderation analyses revealed inconsistent results, and limitations of moderator analyses suggest important directions for future research.

Sanko, Jill, Mary Mckay & Scott Rogers. 2016. Exploring the impact of mindfulness meditation training in pre-licensure and post graduate nurses. *Nurse Education Today* 45. 142–147.
doi:10.1016/j.nedt.2016.07.006.

The complex, high stress, technologically laden healthcare environment compromises providers' ability to be fully present in the moment, especially during patient interactions. This "pulling away" of attention (mindlessness) from the present moment creates an environment where decision making can take place in the absence of thoughtful, deliberate engagement in the task at hand. Mindfulness, can be cultivated through a variety of mindfulness practices. Few schools of nursing or hospitals offer mindfulness training, despite study findings supporting its effectiveness in improving levels of mindfulness, and perceived connections with patients and families. A mindfulness program developed for this study and tailored to nursing was used to provide the mindfulness training. Pre- and post-training assessments were completed and included administration of the Freiburg Mindfulness Inventory (FMI) and the Defining Issues Test (DIT) of moral judgment version 2. A statistically significant improvement in the FMI scores was found. The pre-licensure group did not show a statistically significant improvement in their FMI scores pre to post training, however the post graduate group did. Statistically significant pre/post scores were found in two schemas of the DIT-2.

Schindler, Neal & Keely J. Hope. 2016. Commitment and relatedness: How college students use religious coping to manage anxiety. *Journal of College Counseling* 19(2). 180–192.
doi:10.1002/jocc.12040.

Anxiety is a common symptom among college counseling clients. Perhaps because of the unique developmental tasks they face, many later adolescents (ages 18–24 years) use religious coping to manage anxiety. Many counselors are uncertain about how to address religious themes in therapy, if at all. However, most clients of faith do not want counselors to ignore their religious beliefs. In fact, later adolescents may use faith-based coping mechanisms to navigate the challenges of their developmental stage.

2.3 SPIRITUALITY & HEALTH: METHOD AND THEORY

Ataria, Yochai. 2016. Traumatic and mystical experiences: The dark nights of the soul. *Journal of Humanistic Psychology* 56(4). 331–356.
doi:10.1177/0022167814563143.

This article examines the similarity between the mystical experience and the traumatic experience, the latter involving a fundamental threat to life or bodily integrity. Despite the necessary caution and reservations, there are many similarities between these two kinds of experience. Indeed, the resemblance is not restricted to a phenomenological description but is far more deeply rooted: a result of the subject's encounter with nothingness. This comparison provides an opportunity to improve understanding of both the traumatic and the mystical experience as well as phenomena such as Posttraumatic Growth and Spiritual Crisis.

Barmania, Sima & Syed Mohamed Aljunid. 2016. Navigating HIV prevention policy and Islam in Malaysia: contention, compatibility or reconciliation? Findings from in-depth interviews among key stakeholders. *BMC Public Health* 16. 524.
doi:10.1186/s12889-016-3247-y.

Malaysia is a multicultural society, predominantly composed of a Muslim majority population, where Islam is influential. Malaysia has a concentrated HIV epidemic amongst high risk groups, such as Intravenous Drug Users (IVDU), sex workers, transgender women, and Men who have sex with Men (MSM). The objective of this study is to understand how Islam shapes HIV prevention strategies in Malaysia by interviewing the three key stakeholder groups identified as being influential: the Ministry of Health, Religious leaders, and People living with HIV. Thirty-five in-depth semi-structured interviews were undertaken with religious leaders, Ministry of Health staff, and people living with HIV. Interviews adhered to a topic guide, were audiotaped, and transcribed verbatim and analyzed using a framework analysis. The resultant themes included the importance of Islam to health, stakeholder relationships, and opinions on HIV prevention. Islam was seen to play a pivotal role in shaping strategies relating to HIV prevention in Malaysia both directly and indirectly. Stakeholders often held different approaches to HIV prevention, which had to be sensitively considered, with some favoring promotion of Islamic principles, whilst others steering towards a more public health centered approach.

Berger-González, Mónica, Ana Vides-Porras, Sarah Strauss, Michael Heinrich, Simeón Taquirá & Pius Krütli. 2016. Relationships that Heal: Beyond the Patient-Healer Dyad in Mayan Therapy. *Medical Anthropology* 35(4). 353–367.
doi:10.1080/01459740.2016.1141408.

Biomedicine fosters particular styles of interaction and behaviors, with the therapeutic relationship seen as occurring between a doctor and patient. In contrast, where alternative modalities of healing are practiced, relationships go beyond a dyadic interaction and include wider social networks. In this article, researchers propose the existence of a “therapeutic unit” in Maya healing practices in Guatemala that binds healer, wellness seeker, family, and community members, along with the spiritual and natural realms, into a coherent system requiring all of these elements to achieve success. Drawing on interviews with 67 Maya healers, researchers describe healers’ understanding of raxnaq’il nuk’aslemal (well-being), and show how these interactions activate wider networks that play crucial roles during treatments. The authors also highlight how holism is expressed in relationships typical of indigenous healing systems, and how an appreciation of this is important for developing culturally appropriate health care provision systems.

Brems, Christiane, Dharmakaya Colgan, Heather Freeman, Jillian Freitas, Lauren Justice, Margaret Shean & Kari Sulenes. 2016. Elements of yogic practice: Perceptions of students in healthcare programs. *International Journal of Yoga* 9(2). 121–129.
doi:10.4103/0973-6131.183710.

The practice of yoga has a long history as an integrated lifestyle science. Those who have practiced yoga in its full form (including all eight traditional aspects) find that it touches almost every aspect of their inter- and intra-personal lives. Despite this rich history, the West has adopted limited aspects of yoga practice. When understood narrowly as a physical fitness practice, healthful benefits of yoga may be lost, possibly promoting body-consciousness and injury instead. To understand whether students in healthcare programs view yoga from a physical fitness versus holistic perspective, researchers explored perceptions of what constitute yoga's essential practices. The researchers assessed endorsement of the eight limbs of yoga via the acceptability of yoga survey. The sample (n=498) was recruited from programs in 10 healthcare professions at a Northwestern university. Participants were categorized as nonyogis, contemplators, yogis, and superyogis. Across all groups, findings confirmed a narrow definition of yoga as portrayed in popular media and gym-based yoga classes. Breathing and posture practices were the most commonly endorsed practices, even among the sample's most seasoned yoga practitioners. Ethical practices and daily commitments of introspection, disciplined practice, or living with purity were least commonly associated with yoga despite their foundational nature in yoga philosophy. Concentration and meditation practices were only moderately endorsed as essential practices. Super-yogis endorsed a wider variety of limbs than nonyogis, contemplators, and yogis.

Bryden, Gabrielle M. & Matthew Browne. 2016. Development and evaluation of the R-I-CAM-Q as a brief summative measure of CAM utilisation. *Complementary Therapies in Medicine* 27. 82–86. doi:10.1016/j.ctim.2016.05.007.

This study, an online survey with an Australian sample (n=2697), evaluates a revised version of the I-CAM-Q, the R-I-CAM-Q, which is a shorter scale, and suitable for use as a brief, summative measure of CAM utilization. The psychometric properties of the I-CAM-Q were analyzed using Mokken Scaling Analysis and Structural Equation Modelling. A subset of items were identified as having an adequate uni-dimensional structure that can be aggregated to yield a scalar measure of CAM utilization. Certain items, including prayer for health purposes, and chiropractic, were not indicative of general CAM use. The R-I-CAM-Q provides a unitary, aggregate measure of CAM utilisation that provides scope for replicable research into the determinants of CAM use. It is the first quantitative and summative measure of general CAM use, developed and tested using modern psychometric methods.

Caldeira, Sílvia, Fiona Timmins, Emília C. de Carvalho & Margarida Vieira. 2016. Nursing Diagnosis of “Spiritual Distress” in Women with Breast Cancer: Prevalence and Major Defining Characteristics. *Cancer Nursing* 39(4). 321–327. doi:10.1097/NCC.0000000000000310.

Spirituality and spiritual needs of cancer patients are frequently mentioned in the nursing literature, but the most significant defining characteristics of spiritual distress in the context of clinical reasoning and nursing diagnosis are rarely explored. Understanding of these is important for effective spiritual intervention. The aim of this study was to identify the prevalence and the defining characteristics of the nursing diagnosis “spiritual distress,” as classified according to NANDA International, among women with breast cancer. This was a quantitative and cross-sectional study, comprising the third phase of a larger study investigating the clinical validation of spiritual distress in cancer patients undergoing chemotherapy. Febring's clinical diagnostic validation model was used to identify the prevalence and the major defining characteristics of the diagnosis. A convenience sample was used, and data were collected by structured interview. A total of 70 women participated; most were married (62.9%) and had a mean age of 54 years, and 55.7% reported having at least 1 person depending on them. The average length of time since the cancer diagnosis was 30.9 months. Twenty-seven participants were experiencing spiritual distress (38.6%). Eleven defining characteristics were classified as major.

Choi, Y. Joon, Jennifer Elkins & Lindsey Disney. 2016. A literature review of intimate partner violence among immigrant populations: Engaging the faith community. *Aggression and Violent Behavior* 29. 1–9. doi:10.1016/j.avb.2016.05.004.

As the immigrant population grows in the US, the plight of abused immigrant women may present particular challenges to practitioners. Specifically, due to cultural and religious values and other immigrant-specific barriers, abused immigrant women may not seek help from formal resources. This paper discusses the impact of cultural and religious values and other barriers on abused immigrant women's help-seeking behaviors to posit that natural resources in immigrant communities can play important roles in addressing intimate partner violence. An examination of potential roles for the faith community in addressing intimate partner violence in immigrant communities will be followed by suggestions for engaging the faith community in collaborative efforts to address intimate partner violence in immigrant communities.

Christian, Thomas, A. Alexander Beaujean & Weldon Wright. 2016. Individual differences in affective states during meditation. *International Journal for the Psychology of Religion* 26(3). 268–282.
doi:10.1080/10508619.2015.1042334.

Previous research has shown the positive effects of meditation on physical and mental health, but little is known about what psychological processes occur during meditation. The current study investigated experience of affective states in Zen meditation during a 3-day meditation retreat using a single-case design. Researchers used a novel push-button method to measure affective states and multilevel models to analyze the 6 single-case studies. As expected, researchers found that participants were more likely to have a no-self/spiritual or joy/elation experience toward the end of a meditation session than toward the beginning. Contrary to what was expected, there was no relationship between the meditation session variables and having an anguish/suffering experience. Individual differences had a non-negligible influence on the relationships for all 3 affective states, meaning that meditation did not produce the same results in the participants. The authors conclude by discussing how our method can be incorporated into future studies of meditation, or other religious variables.

Evans, Susan & Glenda Devlin. 2016. Client-led spiritual interventions: Faith-integrated professionalism in the context of a Christian faith-based organisation. *Australian Social Work* 69(3). 360–372.
doi:10.1080/0312407X.2016.1196378.

Focused on the professional practice habits of Christian social workers and counsellors, this article explores the question of good practice when working therapeutically with clients asking to discuss spirituality and faith. Interviews with 10 senior practitioners who are practicing Christians as part of a qualitative study revealed several common experiences when working with clients actively seeking to explore faith and spirituality: (1) using flexibility, discernment, and a client-led approach; (2) trust in God and spiritual receptiveness; and (3) managing tensions between professional, personal, and organizational values. The implications of the study highlight the requirement for professional integrity, to include practicing within one's range of competence, and the value of ongoing professional development to support good practices when working with religious clients.

Fradelos, Evangelos C., Foteini Tzavella, Evmorfia Koukia, Konstantinos Tsaras, Ioanna V. Papathanasiou, Adamantia Aroni, Victoria Alikari, Maria Ralli, Jason Bredle & Sofia Zyga. 2016. The Translation, Validation and Cultural Adaptation of Functional Assessment of Chronic Illness Therapy - Spiritual Well-Being 12 (Facit-Sp12) Scale in Greek Language. *Materia Socio-Medica* 28(3). 229–234.
doi:10.5455/msm.2016.28.229-234.

According to the World Health Organization (WHO), spirituality is an important domain of quality of life especially in terminal, life threatens chronic diseases. For many people spirituality and religion are not just very important dimensions of their existence, but also a source of support that contributes to wellbeing and coping with everyday difficulties of life. The aim of this study was the translation of the Facit Spiritual Well Being Scale (Facit-Sp12) in Greek language and the validation of the scale for the Greek population. The Facit-Sp12 questionnaire is an anonymous self-administered questionnaire that contains twelve, four point Likert scale, closed questions

(0=Not at all, 1=A little bit, 2=Somewhat, 3=Quite a bit, 4=Very Much). The questionnaire was translated into Greek language and then back translated in the English in order to be checked for any inconsistencies. The sample of the study was 183 chronic kidney disease patients, undergoing hemodialysis. The final Greek version of the questionnaire includes all of the twelve questions. The Cronbach- α coefficient was 0.77 for the total questionnaire and for each subscale was 0.70 for “meaning”, 0.73 for “peace” and 0.87 for “faith”. Between the three subscales “meaning” had the highest score. The authors conclude that the Facit Spiritual Wellbeing Scale-Facit-Sp12, is a valuable and reliable questionnaire of three dimensions that can be used for assessing spirituality and spiritual wellbeing in a Greek population.

Franz, Berkeley & Daniel Skinner. 2016. Evangelical Protestants and the ACA: An Opening for Community-Based Primary Care? *Social Work in Public Health* 31(4). 231–245.
doi:10.1080/19371918.2015.1099497.

Evangelical Protestants make up the largest religious subgroup in the United States, and previous research has shown that Evangelical churches are disproportionately active in community engagement and efforts toward social change. Although Evangelical Protestant perspectives have been considered with regard to persistent socioeconomic stratification and racial discrimination, less focus has been given to how churches interpret poor health outcomes within the United States. In particular, this research addresses how enduring health disparities are understood within the larger discussion of healthcare reform. Due to the similarity of approaches favored by participants in this study and community-based philosophy, a suggestion is made for future health policy dialogue. Although Evangelical Protestants have been most likely to reject all aspects of the Affordable Care Act, in many ways the findings of this study suggest the potential for successful future health policy collaboration. In particular, community-based primary care might appeal to Evangelicals and health professionals in the ongoing effort to improve population health and the quality of healthcare in the United States.

Frewen, Paul, Heather Hargraves, Jonathan DePierro, Wendy D’Andrea & Les Flodrowski. 2016. Meditation Breath Attention Scores (MBAS): Development and investigation of an internet-based assessment of focused attention during meditation practice. *Psychological Assessment* 28(7). 830–840.
doi:10.1037/pas0000283.

Meditation Breath Attention Scores (MBAS) represent a self-report, state measure of focused attention (FA) during the practice of meditation. The MBAS assessment procedure involves sounding a bell at periodic intervals during meditation practice, at which times participants indicate if they were attending toward breathing (scored 1) or if instead they had become distracted (e.g., by mind wandering; scored 0). Scores are then tallied to yield participants’ MBAS for that meditation. The current study developed and evaluated a fully automated and Internet-based version of MBAS in 1,101 volunteers. Results suggested that: (a) MBAS are internally consistent across bell rings; (b) MBAS total scores exhibit a non-normal distribution identifying subgroups of participants with particularly poor or robust FA during meditation; (c) MBAS decrease linearly with the duration of meditation practices, indicating that participants tend to experience less FA later as opposed to earlier in the meditation; (d) in the case of eyes-open meditation, MBAS are higher when the amount of time between bells is shorter; (e) MBAS correlate with various self-reported subjective experiences occurring during meditation; and (f) MBAS are weakly associated with higher trait mindful “acting with awareness,” lesser ADHD-related symptoms of inattentiveness, and estimated minutes of meditation practiced in the past month. In sum, results provide further support for the construct validity of MBAS and serve to further characterize the dynamics of individual differences in FA during meditation.

Hayward, R. David & Neal Krause. 2016. Classes of Individual Growth Trajectories of Religious Coping in Older Adulthood: Patterns and Predictors. *Research on Aging* 38(5). 554–579.
doi:10.1177/0164027515593347.

For many individuals, religion provides important cognitive resources for coping with stressors, especially in older adulthood. Although older adults are thought to make more use of these coping strategies than those at younger ages, less is known about how patterns of use change during the span of older adulthood. In a largely Christian sample of U.S. older adults, positive and negative religious coping were measured between 2 and 5 times over a period of 11 years (n=1,075). Growth mixture modeling extracted latent classes of growth. The optimal solution for positive coping indicated a five-class structure (high, stable; high, declining moderately; high, declining rapidly; low, increasing; and low, stable) and the optimal negative coping solution had three classes (low, declining; low, increasing; and high, declining). Nominal logistic regression examined the relationship of individual characteristics with latent class. Education, religious commitment, religious attendance, and religious doubt were related to positive coping trajectory class. Only religious doubt was related to negative coping class.

Hecker, Tobias, Eva Barnewitz, Hakon Stenmark & Valentina Iversen. 2016. Pathological spirit possession as a cultural interpretation of trauma-related symptoms. *Psychological Trauma: Theory, Research, Practice and Policy* 8(4). 468–476.
doi:10.1037/tra0000117.

Spirit possession is a phenomenon frequently occurring in war-torn countries. It has been shown to be an idiom of distress entailing dissociative symptoms. However, its association with trauma exposure and trauma-related disorders remains unclear. This study aimed to explore subjective disease models and the relationship between pathological spirit possession and trauma-related disorders in the Eastern Democratic Republic of the Congo. Seventy-three (formerly) possessed persons (74% female), referred by traditional and spiritual healers, were interviewed about their experiences of pathological spirit possession, trauma exposure, posttraumatic stress disorder (PTSD) symptoms, depressive symptoms, shame and guilt, psychotic symptoms, somatic complaints, and the impairment of psychosocial functioning. The most common disease model for pathological spirit possession was another person having sent the spirit, mostly a family member or a neighbor, out of jealousy or conflict over resources. Significant correlations were found between spirit possession over lifetime and PTSD symptom severity, feelings of shame and guilt, depressive symptoms, somatic complaints, and psychotic symptoms. Spirit possession during the preceding 4 weeks was associated with PTSD symptom severity, impairment of psychosocial functioning, and psychotic symptom severity. The results of this study indicate that pathological spirit possession is a broad explanatory framework for various subjectively unexplainable mental and physical health problems, including but not limited to trauma-related disorders. Understanding pathological spirit possession as a subjective disease model for various mental and physical health problems may help researchers and clinicians to develop culturally sensitive treatment approaches for affected individuals.

Kelly, John A., Carol S. May & Scott H. Maurer. 2016. Assessment of the Spiritual Needs of Primary Caregivers of Children with Life-Limiting Illnesses Is Valuable Yet Inconsistently Performed in the Hospital. *Journal of Palliative Medicine* 19(7). 763–766.
doi:10.1089/jpm.2015.0509.

Religion and spirituality influence how many patients and families experience illness, but knowledge of the level of spiritual care provided to caregivers of pediatric patients within the hospital is limited. Researchers evaluated patient caregivers' perceptions of the extent to which their religious and spiritual (R/S) needs were assessed and addressed in the hospital. The researchers surveyed primary caregivers of children referred to palliative care <1-year prior at an urban, pediatric academic medical center. Participants completed a structured questionnaire with quantitative and qualitative measures of the provision of spiritual care in the hospital. Nonparametric tests were used to compare various measures of perceived and desired R/S support. The majority (16/24) of caregivers desired inquiry about R/S needs by the medical team. Fewer than half (12/25) had these needs assessed. No subjects were uncomfortable with questions regarding R/S needs. Only 35% (8/23) specifically wanted a physician to inquire about R/S needs. Subjects whose R/S needs were assessed perceived higher levels of support from the medical team. A significant correlation existed between number of hospital-based R/S resources used and reported R/S-related comfort.

Kim, Seong-Hyeon, Bess J. Martin & Anne T. Nolt. 2016. The factor structure and measurement invariance of the Daily Spiritual Experiences Scale. *International Journal for the Psychology of Religion* 26(3). 240–251.

doi:10.1080/10508619.2015.1029404.

The current study has two main goals: (a) to identify a factor structure of the Daily Spiritual Experiences Scale (DSES) on a large archival data, collected from 1,325 adults in the United States (709 women, 616 men) by the U.S. General Social Survey in 2004 and (b) to examine the measurement invariance of the 16 DSES items between women and men in the same data to see whether any of the items are favoring or biased toward either women or men. The one-factor confirmatory factor analysis (CFA) model fit the data better than the two-factor CFA models because of high correlations between the two factors. The fit of the one-factor CFA to the sample data was improved when researchers specified seven correlated residuals suggested by overlapping item content and large modification indices. The ensuing measurement invariance testing of the one-factor CFA model with seven correlated residuals supported full measurement invariance of factor loadings, thresholds, and residual variances, as well as factor variances between the women and the men. Yet the factor mean for the women was .841 units higher than it was for the men, indicating that higher levels of daily spiritual experiences for women reported in gender comparison studies in the United States are not likely to be an artifact of bias in the questionnaire.

Kruizinga, R., E. Helmich, J. B. a. M. Schilderman, M. Scherer-Rath & H. W. M. van Laarhoven. 2016. Professional identity at stake: a phenomenological analysis of spiritual counselors' experiences working with a structured model to provide care to palliative cancer patients. *Supportive Care in Cancer* 24(7). 3111–3118.

doi:10.1007/s00520-016-3115-4.

Good palliative care requires excellent interprofessional collaboration. However, working in interprofessional teams may be challenging and difficult. The aim of the study is to understand the lived experience of spiritual counselors working with a new structured method in offering spiritual care to palliative patients in relation to a multidisciplinary health care team. Interpretive phenomenological analysis of in-depth interviews, was done using template analysis to structure the data. The research team included nine spiritual counselors who are trained in using the new structured method to provide spiritual care for advanced cancer patients. Although the spiritual counselors were experiencing struggles with structure and iPad, they were immediately willing to work with the new structured method as they expected the visibility and professionalization of their profession to improve. In this process, they experienced a need to adapt to a certain role while working with the new method and described how the identities of the profession were challenged. The authors conclude that there is a need to concretize, professionalize, and substantiate the work of spiritual counselors in a health care setting, to enhance visibility for patients and improve interprofessional collaboration with other health care workers. However, introducing new methods to spiritual counselors is not easy, as this may challenge or jeopardize their current professional identities. Therefore, researchers recommend to engage spiritual counselors early in processes of change to ensure that the core of who they are as professionals remains reflected in their work.

Laming, Eleanor & Angela Stewart. 2016. Parish nursing: An innovative community nursing service. *Nursing Standard (Royal College of Nursing (Great Britain))*: 1987) 30(46). 46–51.

doi:10.7748/ns.2016.e10373.

This article explains the concept of parish nursing and provides a historical perspective of this service. It describes the development of a parish nursing service in Heartsease, Norwich, which complements community nursing practice by focusing on the importance of providing spiritual care alongside physical, psychological and social care. Case studies are provided to illustrate the benefits of a parish nursing service to individuals and the community.

Levin, Jeff. 2016. Partnerships between the faith-based and medical sectors: Implications for preventive medicine and public health. *Preventive Medicine Reports* 4. 344–350.

doi:10.1016/j.pmedr.2016.07.009.

Interconnections between the faith-based and medical sectors are multifaceted and have existed for centuries, including partnerships that have evolved over the past several decades in the U.S. This paper outlines ten points of intersection that have engaged medical and healthcare professionals and institutions across specialties, focusing especially on primary care, global health, and community-based outreach to underserved populations. In a time of healthcare resource scarcity, such partnerships, involving religious congregations, denominations, and communal and philanthropic agencies, are useful complements to the work of private-sector medical care providers and of federal, state, and local public health institutions in their efforts to protect and maintain the health of the population. At the same time, challenges and obstacles remain, mostly related to negotiating the complex and contentious relations between these two sectors. This paper identifies pressing legal/constitutional, political/policy, professional/jurisdictional, ethical, and research and evaluation issues that need to be better addressed before this work can realize its full potential.

Memaryan, Nadereh, Maryam Rassouli & Maryam Mehrabi. 2016. Spirituality Concept by Health Professionals in Iran: A Qualitative Study. *Evidence-based Complementary & Alternative Medicine (eCAM)* 2016. 8913870.
doi:10.1155/2016/8913870.

For years, researchers have sought to provide a clear definition of spirituality and its features and consequences, but the definitions provided of this concept still lack transparency. The present qualitative research was conducted to clarify this concept within the religious-cultural context of Iran. The present conventional qualitative content analysis was conducted with an inductive approach. Data were collected through semi-structured interviews with 17 spiritual health experts and activists selected through purposive sampling. Three themes emerged from the analysis of the data, including (1) the structure of spirituality, (2) defects in the conceptualization of spirituality, and (3) spirituality in practice, which are explained in this paper with their relevant subthemes and codes. The definition which this study proposes for this concept is that “spirituality is the sublime aspect of human existence bestowed on all humans in order for them to traverse the path of transcendence that is closeness to God (Allah). The authors hold that the definition provided by this study is similar to the previous definitions of this concept in its main part (transcendence) and in incorporating a God-centered view of spirituality within the context of an Islamic society. This definition has implications for health services’ education, research, and practice in similar societies.

Morgan, Jessica Kelley, Laurel Hourani, Marian E. Lane & Stephen Tueller. 2016. Help-Seeking Behaviors Among Active-Duty Military Personnel: Utilization of Chaplains and Other Mental Health Service Providers. *Journal of Health Care Chaplaincy* 22(3). 102–117.
doi:10.1080/08854726.2016.1171598.

Military chaplains not only conduct religious services, but also provide counseling and spiritual support to military service members, operating as liaisons between soldiers and mental health professionals. In this study, active-duty soldiers (n=889) reported help-seeking behaviors and mental health. Using logistic regressions, researchers describe the issues for which soldiers reported seeking help, then outline the characteristics of those who are most likely to seek help from a chaplain. Of the soldiers who sought help from a chaplain within the previous year, 29.9% reported high levels of combat exposure, 50.8% screened positive for depression, 39.1% had probable PTSD, and 26.6% screened positive for generalized anxiety disorder. The participant’s unit firing on the enemy, personally firing on the enemy, and seeing dead bodies or human remains predicted seeing a chaplain. Future research should examine ways to engage soldiers who have had more combat experiences with the chaplain community to address spiritual issues.

Popovic, Zorica & Predrag Nikic. 2016. Traditional knowledge on benefits of yoga practice verified in modern scientific literature: An overview of journals indexed in Integrative and Complementary Medicine. *Indian Journal of Traditional Knowledge* 15(3). 378–384.

A total of 195 papers regarding yoga, published from 2001 to 2014 in from 24 journals indexed in Integrative and Complementary medicine, were extracted from the science citation index (SCI). The most productive journals were: Evidence-Based Complementary and Alternative Medicine, Journal of Alternative and Complementary Medicine, Alternative Therapies in Health and Medicine, Complementary Therapies in Medicine and BMC Complementary and Alternative Medicine, in which the cumulative number of papers on this subject constantly increased. The authors from US attained the dominant position regarding research on yoga practice and theory, followed by Indian, Australian, German and authors from UK. Most of research was conducted by the authors from the same country; fewer were the result of international collaboration. In total number of papers, reviews accounted for 38 titles, and original research articles for 157. The greatest interest was in publishing results of clinical experiments, particularly RCT studies (randomized controlled trials). Abstract analysis showed a variety of experimental designs, duration of research, subject categories, yoga techniques and reliability of conclusions derived.

- Rybczynski, Suzanne, Elana Katz, Scott Schultz & Cynthia Salorio. 2016. Survey of parental acceptance of massage therapy, energy therapy and acupuncture for their children in the acute pediatric inpatient rehabilitation setting. *Complementary Therapies in Medicine* 27. 102–107.
doi:10.1016/j.ctim.2016.06.006.

Parents of children aged 2-21 admitted for acute pediatric rehabilitation were provided a survey regarding their child's use of massage, energy therapy and acupuncture during admission. They were also asked about religious beliefs, education, perceived severity of injury and perceived response to the therapies. The study was conducted on the Inpatient Acute Pediatric Rehabilitation Unit at Kennedy Krieger Institute in Baltimore, Maryland, USA. Of those who completed the survey (n=38), 39% accepted massage services, 49% accepted energy therapy, and 16% accepted acupuncture for their child. Acceptance of massage services was significantly correlated with belonging to an organized religion. Participation in weekly religious services was associated with rejection of energy therapy. Prior parental experience with massage and acupuncture was associated with acceptance of these services for their child. Chronicity of condition and family education was not related to acceptance or rejection of services. Over 80% of parents felt massage and energy therapy helped the recovery process. In 63% of parents surveyed, acupuncture was felt to help the recovery process.

- Sadeghi, Narges, Marzieh Hasanpour, Mohamad Heidarzadeh, Aliakbar Alamolhoda & Elisha Waldman. 2016. Spiritual Needs of Families with Bereavement and Loss of an Infant in the Neonatal Intensive Care Unit: A Qualitative Study. *Journal of Pain and Symptom Management* 52(1). 35–42.
doi:10.1016/j.jpainsymman.2015.12.344.

The purpose of this study was to explore the spiritual needs of families in Iran at the end of their baby's life and through bereavement in the NICU. This study was an exploratory qualitative study performed using purposeful sampling and semi-structured interviews with 24 participants. Inclusion criteria for families, nurses, and physicians included having experienced at least one newborn death in the last six months in the NICU. The research environment was the NICU in Isfahan, one of the largest cities in Iran. Data analysis revealed three main themes: spiritual belief in a supernatural power, the need for comfort of the soul, and human dignity for the newborn. The results of this study created a new vision in addressing spiritual needs of Iranian families who experience the death of a newborn.

- Sharma, Vanshdeep, Deborah B. Marin, Eugene Sosunov, Fatih Ozbay, Rafael Goldstein & George F. Handzo. 2016. The Differential Effects of Chaplain Interventions on Patient Satisfaction. *Journal of Health Care Chaplaincy* 22(3). 85–101.
doi:10.1080/08854726.2015.1133203.

There is an acute need to define the specific skills that make chaplains integral to the healthcare team. This prospective study attempts to identify those skills that may be specific to chaplains, for which no other member of the

health care team has similar training, and to examine if these skills have a differential effect on patient satisfaction. A total of 59 interventions were identified and grouped into 10 categories by focus groups comprised of chaplains. Subsequently, Principal Component Analysis yielded two independent variables: Component 1 representing the “Religious/Spiritual” dimension, and Component 2 representing the “Psychosocial” dimension of chaplains’ work. The two components were used in an OLS regression model to measure patient satisfaction. Interventions that comprise the “Religious/Spiritual” dimension may be considered to be specific skills that chaplains contribute to patient care and these have a slightly stronger correlation with patient satisfaction than the interventions of the “Psychosocial” dimension.

Sherbersky, Hannah. 2016. Family therapy and fundamentalism: One family therapist’s exploration of ethics and collaboration with religious fundamentalist families. *Clinical Child Psychology and Psychiatry* 21(3). 381–396.

doi:10.1177/1359104515620249.

What are the therapeutic limitations of systemic psychotherapy when working with families who hold religious fundamentalist beliefs? At a time of debate about religious fundamentalism, terrorism and radicalization, where do family therapists position themselves when confronted by extreme beliefs in the therapy room? Research suggests that the increase in modernity within our society equates not just with an increase in secularization, but rather an increase in pluralism. Contemporary models of family therapy pay explicit attention to issues of gender, culture, ethnicity, discrimination and societal contexts. The author, therefore, proposes that family therapists need to examine their position regarding religious fundamentalism in relation to the social constructionist relativist continuum and engage with uncomfortable questions about whether they believe that fundamentalism has essentially pathological roots. This article will explore whether the dualist position within some religious movements set against a more secular psychotherapeutic and psychiatric cultural milieu can invite a fundamentalist response from clinicians. The author draws on her own work with families who hold religious fundamentalist beliefs and enquires about ethics, transparency and collaboration within family therapy practice. This article invites complex ongoing challenging questions and debate.

Steenfeldt, Vibeke Ostergaard. 2016. What Is the Essence of Spiritual Care? A Danish Hospice Perspective. *Journal of Christian Nursing: A Quarterly Publication of Nurses Christian Fellowship* 33(3). 150–155.

doi:10.1097/CNJ.0000000000000201.

This study explored patients’, relatives’, and healthcare professionals’ experience of life and caring practice in two Danish hospice settings. Using a phenomenological approach, four caring themes emerged from data analysis: recognized as an individual human being; caring as doing and being; caring for the whole body; and spaces of caring. Spiritual care was understood as providing whole-body experiences, respecting the patient, and involving the other person.

Stewart, Jennifer M., Christopher K. Rogers, Dawn Bellinger & Keitra Thompson. 2016. A Contextualized Approach to Faith-Based HIV Risk Reduction for African American Women. *Western Journal of Nursing Research* 38(7). 819–836.

doi:10.1177/0193945916629621.

HIV/AIDS has a devastating impact on African Americans, particularly women and young adults. Researchers sought to characterize risks, barriers, and content and delivery needs for a faith-based intervention to reduce HIV risk among African American women ages 18 to 25. In a convergent parallel mixed methods study, researchers conducted four focus groups (n=38) and surveyed 71 young adult women. Data were collected across four African American churches for a total of 109 participants. Researchers found the majority of women in this sample were engaged in behaviors that put them at risk for contracting HIV, struggled with religiously based barriers and matters of sexuality, and had a desire to incorporate their intimate relationships, parenting, and financial burdens into faith-

based HIV risk-reduction interventions. Incorporating additional social context-related factors into HIV risk-reduction interventions for young African American women is critical to adapting and developing HIV interventions to reduce risk among young adult women in faith settings.

Wells, Greta E. C. 2016. Reaching the next generation? Reorienting Australian Pentecostalism as a spiritual expression for the ageing. *Journal of Religion, Spirituality & Aging* 28(3). 139–154. doi:10.1080/15528030.2015.1092488.

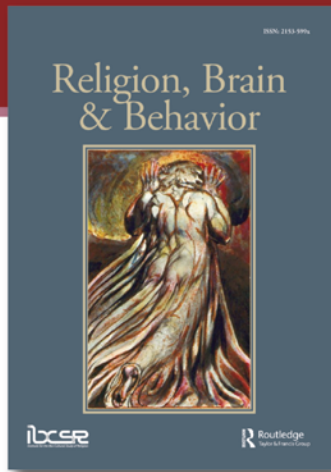
This article reflects upon the challenges of older generations in the Australian Pentecostal church. After careful consideration of the dynamics and nature of this movement, it is argued that Pentecostalism and its associated spiritual practices could still prove meaningful for the ageing, even challenging notions of what it means to know God in times of cognitive decline. Overall, although limitations in current practices are noted, suggestions are made for how Australian “Pentecostals” may better engage older persons, particularly the ageing baby boomer generation.

Williams, Margaret G., Autumn Voss, Barb Vahle & Sheila Capp. 2016. Clinical Nursing Education: Using the FICA Spiritual History Tool to Assess Patients’ Spirituality. *Nurse Educator* 41(4). E6–9. doi:10.1097/NNE.0000000000000269.

Nursing students often find it difficult to address spirituality in clinical practice. The purpose of this study was to examine the effect of students’ use of the FICA Spiritual History Tool during clinical practice on their own spirituality and comfort with the provision of spiritual care. The students (n=31) completed the Spirituality and Spiritual Care Rating Scale at the beginning and end of the semester, which revealed changes, although not statistically significant, in students’ spirituality, religiosity, and their provision of spiritual care.

Wrigley-Carr, Robyn Louise. 2016. “Soul Care” for people with dementia: Insights from Friedrich von Hügel’s “three Elements of Religion.” *Journal of Religion, Spirituality & Aging* 28(3). 155–166. doi:10.1080/15528030.2015.1092489.

In this article, Baron Friedrich von Hügel’s “three Elements of Religion” are provided as a schema for exploring attentive, individualized “soul care” for people with dementia. This article argues that the best way to respond to the diminution of the “Intellectual Element” for people with dementia is to explicitly increase the attention and nurture we give to the other two Elements – the “Mystical” and the “Institutional Elements.” It is argued that people with dementia still experience God, often in ways others cannot observe or understand, and that the stimulation of the senses may help in the provision of attentive “soul care.” The place of religious rituals and music therapy in attentive “soul care” is also discussed.



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PART 3: BOOKS

3.1 SCIENTIFIC STUDY OF RELIGION, BRAIN, AND BEHAVIOR

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