



RESEARCH REVIEW

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

DECEMBER, 2013

INTRODUCTION

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

Articles for this issue were located by searching the following databases: Applied Science and Technology, ATLA Religion Database, 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 774 articles, 102 articles have been retained from 57 journals. There are 38 pre-publication citations from 23 journals.

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PART 1: ARTICLES IN RELIGION, BRAIN, AND BEHAVIOR

1.1 SCIENTIFIC STUDY OF RELIGION: COGNITIVE NEUROSCIENCE

Ainsworth, Ben, Rachael Eddershaw, Daniel Meron, David S Baldwin & Matthew Garner. 2013. The effect of focused attention and open monitoring meditation on attention network function in healthy volunteers. *Psychiatry Research* 210(3). 1226–1231. doi:10.1016/j.psychres.2013.09.002.

Mindfulness meditation techniques are increasingly popular both as a life-style choice and therapeutic adjunct for a range of mental and physical health conditions. However, little is known about the mechanisms through which mindfulness meditation and its constituent practices might produce positive change in cognition and emotion. This study directly compared the effects of Focused Attention (FA) and Open-Monitoring (OM) meditation on alerting, orienting and executive attention network function in healthy individuals. Participants were randomized to three intervention groups: open-focused meditation, focused attention, and relaxation control. Participants completed an emotional variant of the Attention Network Test (ANT) at baseline and post-intervention. OM and FA practice improved executive attention, with no change observed in the relaxation control group. Improvements in executive attention occurred in the absence of change in subjective/self-report mood and cognitive function. Baseline levels of dispositional/trait mindfulness were positively correlated with executive control in the ANT at baseline. These results suggest that mindfulness meditation might usefully target deficits in executive attention that characterize mood and anxiety disorders.

Berkovich-Ohana, Aviva, Yair Dor-Ziderman, Joseph Glicksohn & Abraham Goldstein. 2013. Alterations in the sense of time, space, and body in the mindfulness-trained brain: a neurophenomenologically-guided MEG study. *Frontiers in Psychology* 4. 912. doi:10.3389/fpsyg.2013.00912.

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Meditation practice can lead to what have been referred to as “altered states of consciousness.” One of the phenomenological characteristics of these states is a joint alteration in the sense of time, space, and body. Here, researchers set out to study the unique experiences of alteration in the sense of time and space by collaborating with a select group of 12 long-term mindfulness meditation (MM) practitioners in a neurophenomenological setup, utilizing first-person data to guide the neural analyses. Researchers hypothesized that the underlying neural activity accompanying alterations in the sense of time and space would be related to alterations in bodily processing. The participants were asked to volitionally bring about distinct states of “Timelessness” (outside time) and “Spacelessness” (outside space) while their brain activity was recorded by MEG. In order to rule out the involvement of attention, memory, or imagination, control states of “Then” (past) and “There” (another place) were used. MEG sensors evidencing alterations in power values were identified, and the brain regions underlying these changes were estimated via spatial filtering (beamforming). Particularly, similar neural activity hypothesized to underlie both the state of “Timelessness” and “Spacelessness” were searched for. The results were mostly confined to the theta band, and showed that: (1) the “Then”/“There” overlap yielded activity in regions related to autobiographic memory and imagery (right posterior parietal lobule (PPL), right precentral/middle frontal gyrus (MFG), bilateral precuneus); (2) “Timelessness”/“Spacelessness” conditions overlapped in a different network, related to alterations in the sense of the body (posterior cingulate, right temporoparietal junction (TPJ), cerebellum); and (3) phenomenologically-guided neural analyses enabled the researchers to dissociate different levels of alterations in the sense of the body. This study illustrates the utility of employing experienced contemplative practitioners within a neurophenomenological setup for scientifically characterizing a self-induced altered sense of time, space and body, as well as the importance of theta activity in relation with these altered states.

Braboszcz, Claire, B Rael Cahn, Bhavani Balakrishnan, Raj K Maturi, Romain Grandchamp & Arnaud Delorme. 2013. Plasticity of visual attention in Isha yoga meditation practitioners before and after a 3-month retreat. *Frontiers in Psychology* 4. 914. doi:10.3389/fpsyg.2013.00914.

Meditation has lately received considerable interest from cognitive neuroscience. Studies suggest that daily meditation leads to long lasting attentional and neuronal plasticity. Researchers present changes related to the attentional systems before and after a 3 month intensive meditation retreat. Researchers used three behavioral psychophysical tests, including a Stroop task, an attentional blink task, and a global-local letter task, to assess the effect of Isha yoga meditation on attentional resource allocation. Eighty-two Isha yoga practitioners were tested at the beginning and at the end of the retreat. Results showed an increase in correct responses specific to incongruent stimuli in the Stroop task. Congruently, a positive correlation between previous meditation experience and accuracy to incongruent Stroop stimuli was also observed at baseline. Researchers also observed a reduction of the attentional blink. Unexpectedly, a negative correlation between previous meditation experience and attentional blink performance at baseline was observed. Regarding spatial attention orientation as assessed using the global-local letter task, participants showed a bias toward local processing. Only slight differences in performance were found pre- vs. post- meditation retreat. Biasing toward the local stimuli in the global-local task and negative correlation of previous meditation experience with attentional blink performance is consistent with Isha practices being focused-attention practices. Given the relatively small effect sizes and the absence of a control group, these results do not allow clear support nor rejection of the hypothesis of meditation-driven neuronal plasticity in the attentional system for Isha yoga practice.

Guleria, Anupam, Uttam Kumar, Sadguru Sri Kunal Kishan & Chunni Lal Khetrapal. 2013. Effect of “SOHAM” meditation on the human brain: an fMRI study. *Psychiatry Research: Neuroimaging* 214(3). 462–465. doi:10.1016/j.pscychresns.2013.06.012.

The effect of “SOHAM” meditation has been investigated using functional magnetic resonance imaging (fMRI) in long-term meditators while they were meditating and not meditating. The results have revealed activation in left

middle prefrontal cortex (MPFC) (Brodmann's area, BA 46), left inferior frontal gyrus (LIFG) (BA 44), left supplementary motor area (SMA) (BA 6) and left precuneus (BA 5) during the meditation period compared to the control period (no-meditation period). The results are interpreted in terms of regulation of the emotional state, attention and working memory of the meditators.

Jindal, Vishal, Sorab Gupta & Ritwik Das. 2013. Molecular mechanisms of meditation. *Molecular Neurobiology* 48(3). 808–811.
doi:10.1007/s12035-013-8468-9.

Meditation is a complex process involving change in cognition, memory, and social and emotional control, and causes improvement in various cardiovascular, neurological, autoimmune, and renal pathologies. Meditation also become widely used in medical and psychological treatment therapies for stress-related physical and mental disorders. But still, biological mechanisms in terms of effect on brain and body are poorly understood. This paper explains the basic changes due to meditation in cerebral cortex, prefrontal area, cingulate gyrus, neurotransmitters, white matter, autonomic nervous system, limbic system, cytokines, endorphins, hormones, etc. This article contains a review of the current literature regarding the various neurophysiological mechanisms, neuro-endocrine mechanisms, neurochemical substrates, etc. that underlies the complex processes of meditation.

Luders, Eileen, Paul M Thompson, Florian Kurth, Jui-Yang Hong, Owen R. Phillips, Yalin Wang, Boris A. Gutman, Yi-Yu Chou, Katherine L. Narr & Arthur W. Toga. 2013. Global and Regional Alterations of Hippocampal Anatomy in Long-Term Meditation Practitioners. *Human Brain Mapping* 34(12). 3369–3375.
doi:10.1002/hbm.22153.

Studies linking meditation and brain structure are still relatively sparse, but the hippocampus is consistently implicated as one of the structures altered in meditation practitioners. To explore hippocampal features in the framework of meditation, researchers analyzed high-resolution structural magnetic resonance imaging data from 30 long-term meditators and 30 controls, closely matched for sex, age, and handedness. Hippocampal formations were manually traced following established protocols. In addition to calculating left and right hippocampal volumes (global measures), regional variations in surface morphology were determined by measuring radial distances from the hippocampal core to spatially matched surface points (local measures). Left and right hippocampal volumes were larger in meditators than in controls, significantly so for the left hippocampus. The presence and direction of this global effect was confirmed locally by mapping the exact spatial locations of the group differences. Altogether, radial distances were larger in meditators compared to controls, with up to 15% difference. These local effects were observed in several hippocampal regions in the left and right hemisphere though achieved significance primarily in the left hippocampal head. Larger hippocampal dimensions in long-term meditators may constitute part of the underlying neurological substrate for cognitive skills, mental capacities, and/or personal traits associated with the practice of meditation. Alternatively, given that meditation positively affects autonomic regulation and immune activity, altered hippocampal dimensions may be one result of meditation-induced stress reduction. However, given the cross-sectional design, the lack of individual stress measures, and the limited resolution of brain data, the exact underlying neuronal mechanisms remain to be established.

Pickut, Barbara A, Wim Van Hecke, Eric Kerckhofs, Peter Mariën, Sven Vanneste, Patrick Cras & Paul M Parizel. 2013. Mindfulness based intervention in Parkinson's disease leads to structural brain changes on MRI: A randomized controlled longitudinal trial. *Clinical Neurology and Neurosurgery* 115(12). 2419–2425.
doi:10.1016/j.clineuro.2013.10.002.

The aim of the current study is to investigate structural changes on brain MRI using voxel based morphometry (VBM) related to an eight-week mindfulness based intervention (MBI) in Parkinson's Disease (PD). A total of 27 out of 30 PD patients completed a randomized controlled longitudinal trial. Fourteen patients participated in

a structured eight-week program of MBI. Thirteen patients received usual care (UC) alone. MRI data sets of the brain were obtained at baseline and after eight weeks follow-up. VBM analysis was performed using DARTEL from the SPM8 software. The resulting difference maps were statistically compared to examine gray matter density (GMD) differences. Following intervention, increased GMD was found in the MBI compared to the UC group in the region of interest (ROI) analysis in the right amygdala, and bilaterally in the hippocampus. Whole brain analysis showed increased GMD in the left and right caudate nucleus, the left occipital lobe at the lingual gyrus and cuneus, the left thalamus, and bilaterally in the temporo-parietal junction. In contrast, GMD differences were found in the UC group in the left anterior lobe and dentate nucleus of the cerebellum.

1.2 SCIENTIFIC STUDY OF RELIGION: EVOLUTION

Bateson, Melissa, Luke Callow, Jessica R. Holmes, Maximilian L. Redmond Roche & Daniel Nettle. 2013. Do Images of “Watching Eyes” Induce Behaviour That Is More Pro-Social or More Normative? A Field Experiment on Littering. *Plos One* 8(12). e82055. doi:10.1371/journal.pone.0082055.

Displaying images of eyes causes people to behave more pro-socially in a variety of contexts. However, it is unclear whether eyes work by making people universally more pro-social, or by making them more likely to conform to local norms. If the latter, images of eyes could sometimes make people less pro-social if pro-social behaviour is not the local norm. To separate these hypotheses researchers conducted a field experiment in which they explored whether manipulating a local descriptive norm altered the eyes effect. Researchers recorded litter dropping decisions on a university campus in a 2 x 2 design, comparing situations with and without litter already on the ground (a manipulation of the local descriptive norm), and with and without large signs displaying images of watching eyes. Researchers additionally recorded the number of potential human observers in the vicinity at the time of each littering decision. Researchers observed a norm effect: the presence of litter on the ground increased littering, replicating previous findings. It was also found that images of watching eyes reduced littering, although contrary to previous findings this was only when there were larger numbers of people around. No evidence was found that litter on the ground interacted non-additively with images of eyes to induce increased littering behavior. The data therefore support the hypothesis that images of eyes induce more pro-social behavior, independent of local norms. This finding has positive implications for the application of eye images in combating anti-social behavior.

Bulbulia, Joseph A, Dimitris Xygalatas, Uffe Schjoedt, Sabela Fondevila, Chris G Sibley & Ivana Konvalinka. 2013. Images from a jointly-arousing collective ritual reveal affective polarization. *Frontiers in Psychology* 4. 960. doi:10.3389/fpsyg.2013.00960.

Collective rituals are biologically ancient and culturally pervasive, yet few studies have quantified their effects on participants. Researchers assessed two plausible models from qualitative anthropology: ritual empathy predicts affective convergence among all ritual participants irrespective of ritual role; rite-of-passage predicts emotional differences, specifically that ritual initiates will express relatively negative valence when compared with non-initiates. To evaluate model predictions, images of participants in a Spanish fire-walking ritual were extracted from video footage and assessed by nine Spanish raters for arousal and valence. Consistent with rite-of-passage predictions, it was found that arousal jointly increased for all participants, but that valence differed by ritual role: fire-walkers exhibited increasingly positive arousal and increasingly negative valence when compared with passengers. This result offers the first quantified evidence for rite of passage dynamics within a highly arousing collective ritual. Methodologically, it was shown that surprisingly simple and non-invasive data structures (rated video images) may be combined with methods from evolutionary ecology (Bayesian Generalized Linear Mixed Effects models) to clarify poorly understood dimensions of the human condition.

Bulbulia, Joseph, Danny Osborne & Chris G Sibley. 2013. Moral foundations predict religious orientations in new zealand. *PloS one* 8(12). e80224.
doi:10.1371/journal.pone.0080224.

The interplay between religion, morality, and community-making is a core theme across human experience, yet scholars have only recently begun to quantify these links. Drawing on a sample of 1,512 self-identified religious New Zealanders, researchers used structural equation modeling to test hypothesized associations between Religious Orientations (Quest, Intrinsic, Extrinsic Personal, Extrinsic Social) and Moral Foundations (Care/Harm, Fairness/Cheating, Loyalty/Betrayal, Authority/Subversion, Sanctity/Degradation). These results show, for the first time in a comprehensive model, how different ways of valuing communities are associated with different ways of valuing religion.

Chiou, Wen-Bin & Ying-Yao Cheng. 2013. In broad daylight, we trust in God! Brightness, the salience of morality, and ethical behavior. *Journal of Environmental Psychology* 36. 37–42.
doi:10.1016/j.jenvp.2013.07.005.

Based on metaphorical associations between light and goodness, the authors hypothesized that experiencing brightness increases the salience of moral considerations and the likelihood of engaging in ethical behavior. The results of three experiments supported these predictions. In Experiment 1, participants in a well-lit room acted less selfishly in the dictator game and were more likely to return undeserved money than were those in a moderately or a dimly lit room. In Experiment 2, participants' monetary donations were positively associated with environment lighting. In Experiment 3, participants in a well-lit room volunteered to code more data sheets than did participants in moderate brightness. Experiments 2 and 3 used implicit and explicit measures of the salience of morality to self to demonstrate that the relationship between brightness and ethical behavior is driven by an increased mental accessibility of morality.

Harrison, Justin M D & Ryan McKay. 2013. Give me strength or give me a reason: self-control, religion, and the currency of reputation. *The Behavioral and Brain Sciences* 36(6). 688–689; discussion 707–726.
doi:10.1017/S0140525X13001003.

Whereas resource-depletion theorists suggest religion replenishes self-control resources (“strength”), the authors submit that religious cues make people feel observed, giving them “reason” to persevere, and we describe an experiment that supports our interpretation. Finally, the authors question the claim that subjective fatigue is a signal to redeploy resources. A response to the target article by Kurzman, et al., “An opportunity cost model of subjective effort and task performance.”

Oates, Gary L. 2013. Enhanced Religiosity Following Illness? Assessing Evidence of Religious Consolation Among Black and White Americans. *Review of Religious Research* 55(4).
doi:10.1007/s13644-013-0118-1.

This study assesses variation among Black and White Americans in the impact of ill-health on public and subjective religiosity. It is the first longitudinal assessment of race-based variation in “religious consolation.” The under-explored consolation thesis anticipates ill-health influencing religiosity rather than the reverse, with religiosity functioning as a coping resource marshaled by the ill. Effects across races of physical ill-health indicators (chronic illnesses and impaired functioning) on religiosity outcomes are the main focus; but across-race variation in psychological distress-induced “consolation” is also assessed. Findings yield only limited evidence of consolation in each race, and restricted variation across races: Change in impaired functioning slightly enhances Whites’ subjective religiosity; but that effect does not significantly eclipse the impact among Blacks. There is no evidence of physical illness-induced consolation among Blacks; and the proposition that Blacks are more inclined toward consolation than Whites is affirmed only for psychological distress. There are no signs in either race that consolation is

intensified by aging or higher religiosity, and no significant across-race differentials in effects of these illness-age and illness-religiosity interactions on subsequent religiosity. The multi-population model utilizes Americans' Changing Lives data.

- Tsakiridis, George. 2013. Guilt and the Science of Emotion: How Does Prayer Fit? *Zygon: Journal of Religion & Science* 48(4). 890–907.
doi:10.1111/zygo.12048.

This article engages sources regarding evolutionary development of guilt and how they can be used to dialogue with material on the alleviation of guilt in the Christian tradition using examples in the work of Anselm of Canterbury and John Chrysostom. This raises a few key questions: if guilt is an evolutionary trait created to build reputation and relationship, how does this mesh with some theological approaches to solutions for guilt? To be more precise, guilt possibly evolved to create a motivation for beneficial communal actions, and necessitates belief in the authority of the rules that one breaks to induce it. That said, does religion play a role in awareness of one's guilt, while also providing a solution to that guilt? The possibilities are explored in this article as they relate to issues of repentance, atonement, and prayer.

- Wright, Bradley R. E., Michael Wallace, John Bailey & Allen Hyde. 2013. Religious affiliation and hiring discrimination in New England: A field experiment. *Research in Social Stratification and Mobility* 34. 111–126.
doi:10.1016/j.rssm.2013.10.002.

This article describes a field experiment in which fictitious resumes were sent to advertised job openings in New England, in the Northeast region of the United States. Researchers randomly altered the resumes to indicate affiliation in one of seven religious groups or a control group. Resumes that mentioned any religious affiliation received about one-quarter fewer phone calls than did the control group but there were no significant difference in e-mails received. Muslim applicants received one-third fewer responses from employers, either as phone calls or e-mails, than did the control group. There was also evidence of discrimination against atheists, Catholics and pagans. These findings are consistent with theoretical models of secularization and cultural distaste theory.

1.3 SCIENTIFIC STUDY OF RELIGION: PSYCHOLOGY AND CULTURE

- Aalsma, Matthew C, Stacy E Woodrome, Sarah M Downs, Devon J Hensel, Gregory D Zimet, Don P Orr & J Dennis Fortenberry. 2013. Developmental trajectories of religiosity, sexual conservatism and sexual behavior among female adolescents. *Journal of Adolescence* 36(6). 1193–1204.
doi:10.1016/j.adolescence.2013.08.005.

The present study utilized longitudinal data from 328 young women to assess the role of religion and socio-sexual cognitions on sexual behavior accrual (measuring both coital and non-coital sexual behavior). In the final triple conditional trajectory structural equation model, religiosity declined over time and then increased to baseline levels. Additionally, religiosity predicted decreased sexual conservatism and decreased sexual conservatism predicted increased sexual behavior. The final models are indicative of young women's increasing accrual of sexual experience, decreasing sexual conservatism and initial decreasing religiosity. The results of this study suggest that decreased religiosity affects the accrual of sexual experience through decreased sexual conservatism.

- Coates, Dominiek D. 2013. A symbolic interactionist understanding of the selves of former members of New Religious Movements. *Mental Health, Religion & Culture* 16(10). 1066–1079.
doi:10.1080/13674676.2012.737315.

The current study investigates the construction of self in New Religious Movement (NRM) membership and argues that there is significant variation in the way in which members construct their sense of self. While the

majority of the literature suggests that differences in the way in which former members describe and experience NRM membership can be attributed to gender and the nature of the group, analysis of the life histories of 23 former members identified variations in the way in which these participants construct their sense of self as significant to understanding NRM membership. While some participants describe selves that are high in conformity or social connectedness, and depict NRM membership as motivated by a need for guidance and direction, others describe selves that appear high in individuality and personal autonomy and depict membership as motivated by a desire to overcome isolation and develop social connectedness. Even though these two narratives are conceptualized as distinct, they are not viewed as dichotomous but understood as on a continuum. To make sense of the selves of the participants in this study symbolic interactionist understandings of the self as to varying degrees informed by both “self” and “others” are applied.

Curtis, Jennifer. 2013. Pride and prejudice: Gay rights and religious moderation in Belfast. *The Sociological Review* 61(Suppl 2). 141–159.
doi:10.1111/1467-954X.12104.

This article draws upon ethnographic research with Belfast’s Pride Festival to examine religious groups’ increasing support for LGBT rights since 2008. The author describes this engagement as a practice of moderation in terms of its social and political effects. Here, moderation is conceived not in spatial terms as a position between opposed poles, but as a discursive practice that transforms political and religious debates. Drawing from Bakhtin’s (1981) concept of ‘dialogism’, the author considers how these discussions of Christianity, sexuality and politics unfolded. A Bakhtinian approach to the production and reception of these debates reveals how moderation is socially and historically situated. Moderation is practiced in relation to particular conditions and histories, yet has the potential to transform them.

Diaz-Moran, Sira, Rafael Torrubia, Alberto Fernández-Teruel, Beatriz Molinuevo & Adolf Tobeña. 2013. Religious upbringing and current religiosity in Spanish nursing and medicine students. *Mental Health, Religion & Culture* 16(10). 1056–1065.
doi:10.1080/13674676.2012.735226.

The influence of religious education in the family upon current spiritual and religious tendencies was assessed in a sample of 599 Spanish nurse and medicine students using a religiosity scale and answers to a series of belief/disbelief statements. Results showed that nursing and medicine students were equally low-religious, with no differences in religiosity total scores between participants coming from religious families; however, medical students coming from nonreligious families showed higher religiousness than the corresponding nursing trainees. This distinction appeared both across religiosity items and in a variety of responses to belief/disbelief of Christian/secular assertions. Regression analysis showed that religious family background was a consistent predictor of religious beliefs at young adulthood, and its influence was higher for medical students. In addition, to establish religious upbringing as an important factor modulating enduring religiosity, these findings provide distinctions between nurse and medical trainees, and reproduce, in a Spanish mainly catholic sample, the structure of religiosity factors previously found on North American mainline Protestants.

Houston, Jaclyn D & Nathan R Todd. 2013. Religious congregations and social justice participation: A multilevel examination of social processes and leadership. *American Journal of Community Psychology* 52(3-4). 273–287.
doi:10.1007/s10464-013-9593-3.

Religious congregations have the potential to be mediating structures for social justice participation. However, research has yet to examine the specific social processes or leadership characteristics within congregations that may promote social justice participation. In this study, researchers use data from 176,901 participants nested within 1,938 congregations to test how social processes (i.e., religious attendance at worship services, extra-worship participation, bonding social capital, a congregational norm for justice) and leadership characteristics (i.e., leader

modeling of justice, horizontal leadership style) predict personal social justice involvement through the congregation (i.e., participation in social justice activities sponsored by the congregation) as well as personal social justice involvement outside the congregation (i.e., participation in social justice activities not sponsored by the congregation). Researchers use multilevel logistic regression to examine these social processes and leadership characteristics at both individual and congregational levels of analysis. Results showed distinct patterns of associations at individual and congregational levels of analysis and that different social processes and leadership characteristics predicted personal social justice participation through or outside the congregation. These findings reveal the importance of social processes and leadership characteristics in understanding how congregations may mediate social justice participation.

Karataş, Mustafa & Özlem Sandıkcı. 2013. Religious communities and the marketplace: Learning and performing consumption in an Islamic network. *Marketing Theory* 13(4). 465–484.
doi:10.1177/1470593113499697.

Sociopolitical analyses of religion evidence the increasing prominence of religious communities across the world. However, existing work on religion/consumption interaction focuses mostly on the personal effects of religion and examines how religion and religious ideologies influence individual decision making, choice, and purchase and shopping behaviors. In this study, the authors focus on the collective experiences of religion, and unpack the multiple ways consumption shapes and is shaped by a communal religious ethos. Through an ethnographic study of a Turkish-based Islamic community, the article shows that consumption plays important roles in attracting individuals to the community, socializing them to the communal ethos, and drawing symbolic boundaries between the community members and outsiders. Researchers also discuss how the communal religious ethos shapes consumption practices and brand relationships of members and influences the marketplace dynamics.

Melloni, Margherita, Lucas Sedeño, Blas Couto, Martin Reynoso, Carlos Gelormini, Roberto Favalaro, Andrés Canales-Johnson, Mariano Sigman, Facundo Manes & Agustín Ibanez. 2013. Preliminary evidence about the effects of meditation on interoceptive sensitivity and social cognition. *Behavioral and Brain Functions* 9. 47.
doi:10.1186/1744-9081-9-47.

In this study, researchers selected a behavioral measure of interoceptive sensitivity (heartbeat detection task, HBD) to compare the effect of meditation practice on interoceptive sensitivity among long term practitioners (LTP), short term meditators (STM, subjects that completed a Mindfulness-Based Stress Reduction (MBSR) program) and controls (non-meditators). All participants were examined with a battery of different tasks including mood state, executive function and social cognition tests (emotion recognition, empathy and theory of mind). Following intervention, compared to controls, both meditators' groups showed lower levels of anxiety and depression, but no improvement in executive function or social cognition performance was observed (except for lower scores compared to controls only in the personal distress dimension of empathy). More importantly, meditators' performance did not differ from that of nonmeditators regarding cardiac interoceptive sensitivity. Results suggest no influence of meditation practice in cardiac interoception and in most related social cognition measures. These negative results could be partially due to the fact that awareness of heartbeat sensations is not emphasized during mindfulness/vipassana meditation and may not be the best index of the awareness supported by the practice of meditation.

Midden, Eva & Sandra Ponzanesi. 2013. Digital faiths: An analysis of the online practices of Muslim women in the Netherlands. *Women's Studies International Forum* 41, Part 3. 197–203.
doi:10.1016/j.wsif.2013.07.012.

In response to current debates in Western Europe around Islam, gender equality and emancipation, this article aims to develop a new perspective on conceptualizing 'emancipation' in feminist theory and practice. The case study of how Muslim women in the Netherlands use digital media to negotiate their religious affiliations and multiple

belongings shows that faith and religious practices are important markers of Muslim women's agency, both emancipatory and submissive. Theoretically, the article integrates classical feminist standpoint theory and situated knowledge with current debates on agency and subjectivity. Methodologically, a virtual ethnography draws on both online and offline data: postings on four websites for Muslims living in the Netherlands as well as focus group interviews with their editors/bloggers and women active in Dutch Muslim women's organizations. The data were analyzed through Critical Discourse Analysis.

Nager, Alan L, Phung Pham & Jeffrey I Gold. 2013. March of the living, a holocaust educational tour: Effect on adolescent Jewish identity. *Journal of Religion and Health* 52(4). 1402–1414.
doi:10.1007/s10943-013-9749-3.

March of the Living (MOTL) is a worldwide two-week trip for high school seniors to learn about the Holocaust by traveling to sites of concentration/death camps and Jewish historical sites in Poland and Israel. The mission statement of MOTL International states that participants will be able to “bolster their Jewish identity by acquainting them with the rich Jewish heritage in pre-war Eastern Europe.” However, this claim has never been studied quantitatively. Therefore, 152 adolescents who participated in MOTL voluntarily completed an initial background questionnaire, a Jewish Identity Survey and a Global Domains Survey pre-MOTL, end-Poland and end-Israel. Results suggest that Jewish identity did not substantially increase overall, or from one time period to the next.

Perry, Samuel L. 2013. Religion and Interracial Romance: The Effects of Religious Affiliation, Public and Devotional Practices, and Biblical Literalism. *Social Science Quarterly* 94(5). 1308–1327.
doi:10.1111/ssqu.12017.

This study examines how religious affiliations, salience, beliefs, and practices influence engagement in interracial dating or romance. Bivariate and multivariate analyses are employed using data from the 2007 Baylor Religion Survey (n=1,268). Logistic regression models are estimated in order to determine how certain dimensions of religious life predict whether one has engaged in interracial dating or romance, net of sociodemographic and ideological controls. Relative to evangelicals, mainline Protestants are less likely to have engaged in interracial romance. Those who frequently attend church and affirm biblical literalism are less likely to have dated across race, but those who engage in devotional practices such as prayer and sacred text reading are more likely to have interracially dated.

Sansone, Randy A., Amy R. Kelley & Jeremy S. Forbis. 2013. Abuse in childhood and religious/spiritual status in adulthood among internal medicine outpatients. *Journal of Religion and Health* 52(4). 1085–1092.
doi:10.1007/s10943-012-9582-0.

Using a cross-sectional consecutive sample of 317 internal medicine outpatients, researchers asked participants, “As a child, were you the victim of either physical or sexual abuse?” They then assessed religiosity/spirituality status with the Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being Scale (FACIT-Sp-12). Researchers found that among the cohort with abuse in childhood, seven of twelve scales as well as the overall FACIT-Sp-12 score demonstrated statistically significant differences, with abused participants consistently evidencing lower religiosity/spirituality scores.

Sansone, Randy A., Amy R. Kelley & Jeremy S. Forbis. 2013. Bullying in childhood and religious/spiritual status in adulthood among internal medicine outpatients. *International Journal of Social Psychiatry* 59(8). 739–744.
doi:10.1177/0020764012454383.

Using a cross-sectional sample of 324 consecutive internal medicine outpatients and a survey methodology, researchers examined relationships between ‘When you were growing up, were you ever a victim of bullying?’ and

(1) self-perceived extent of religiosity/spirituality and (2) religiosity/spirituality as assessed by scores on the Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being Scale (FACIT-Sp-12). While bullying status in childhood was not related to either the self-perceived extent of religiosity or spirituality, it did evidence negative statistically significant relationships with seven of 12 FACIT-Sp-12 scales, as well as the overall composite score.

Shelton, Rachel C, Anna C Snavely, Maria De Jesus, Megan D Othus & Jennifer D Allen. 2013. HPV vaccine decision-making and acceptance: Does religion play a role? *Journal of Religion and Health* 52(4). 1120–1130.
doi:10.1007/s10943-011-9553-x.

Researchers conducted a web-based survey among 476 white, Black, and Hispanic parents or caregivers with daughter(s) between the ages of 9-17 to better understand how religion influences HPV vaccine acceptance. Catholic parents were more likely than nonaffiliated parents to have already vaccinated their daughters (vs. being undecided). Parents with frequent attendance at religious services were more likely than parents who do not attend services to have decided against vaccination (vs. being undecided). Directions for research and implications for interventions are addressed.

Whitehead, Deborah. 2013. When religious “mommy bloggers” met “mommy porn”: Evangelical Christian and Mormon women’s responses to *Fifty Shades*. *Sexualities* 16(8). 915–931.
doi:10.1177/1363460713508904.

*While some conservative religious women have rejected *Fifty Shades of Grey* as contrary to their values and beliefs, others have embraced it. This article analyzes commentaries and reflections on the book series in US evangelical Christian and Mormon women’s blog communities, and shows how many of these women find value in the books because of their personal, cultural, and religious significance. This article argues that attention to the reading strategies employed by evangelical and Mormon women in relation to *Fifty Shades* demonstrates a complex set of responses to “secular” culture as well as ongoing negotiations of gender, sexuality, and authority within these conservative religious traditions.*

1.4 SCIENTIFIC STUDY OF RELIGION: METHOD & THEORY

Bangen, Katherine J, Thomas W Meeks & Dilip V Jeste. 2013. Defining and assessing wisdom: A review of the literature. *The American Journal of Geriatric Psychiatry* 21(12). 1254–1266.
doi:10.1016/j.jagp.2012.11.020.

In this literature review article, the authors aimed to (1) investigate the degree of overlap among empirical definitions of wisdom, (2) identify the most commonly cited wisdom subcomponents, (3) examine the psychometric properties of existing assessment instruments, and (4) investigate whether certain assessment procedures work particularly well in tapping the essence of subcomponents of the various empirical definitions. Thirty-one articles met inclusion criteria. Despite variability among the 24 reviewed definitions, there was significant overlap. Commonly cited subcomponents of wisdom included knowledge of life, prosocial values, self-understanding, acknowledgment of uncertainty, emotional homeostasis, tolerance, openness, spirituality, and sense of humor. Published reports describing the psychometric properties of nine instruments varied in comprehensiveness but most measures were examined for selected types of reliability and validity, which were generally acceptable.

Brown, Patricia MacDonald. 2013. Emerging worldviews: The supplicate order-invocation of the sacred. *Journal of Religion and Health* 52(4). 1296–1305.
doi:10.1007/s10943-012-9573-1.

Approaches to supplication, such as faith and single-minded devotion to an ultimate value or deity, are proposed to constitute the human interface between the manifest and the unmanifest. A reciprocal, resonant interchange

between the unmanifest and human summoning of the holy can bring the sacred to expression in cultural forms and personal experience. Addressing the boundaries between the human and the divine, this paper presents a cross-cultural model for spiritual supplication. This model utilizes the anthropological term ritual frame and provides an integrative worldview with which to examine the dynamics of sacred contact and invocation. This suggests that supplication is the universal and fundamental human orientation to invoke the reception of profound healings, as well as spiritual blessings, cross-cultural understandings and innumerable gifts of creativity.

Lužný, Dušan & Petra Tlčimuková. 2013. Academic Study of Religions in Secular Age: The Case of Czech Republic. *Procedia - Social and Behavioral Sciences* 106. 289–294.
doi:10.1016/j.sbspro.2013.12.034.

This paper reports experiences that are related to the preparation of Study of Religions Curriculum in Czech Republic, a country often considered one of the most secularized countries. When implementing the education of Study of Religions, the authors were confronted with two general problems. Firstly, believers sometimes reject an academic Study of Religions which is by them apprehended as unable to understand the reality of their religious experience. Furthermore they strive to reach a religiously caused (social) progress. Secondly, there is a wide underestimation of social impacts of religion among non-believing population according to which to deal with the topic of religion is of no use at all. In this article the authors intend to show elementary principles inherent to Study of Religions that need to be respected when educating at the academic level.

Martin, Paul C. 2013. The Exploratory and Reflective Domain of Metaphor in the Comparison of Religions. *Zygon: Journal of Religion & Science* 48(4). 936–965.
doi:10.1111/zygo.12054.

There has been a longstanding interest in discovering or uncovering resemblances among what are ostensibly diverse religious schemas by employing a range of methodological approaches and tools. However, it is generally considered a problematic undertaking. Jonathan Z. Smith has produced a large body of work aimed at explicating this and has tacitly based his model of comparison on metaphor, which is traditionally understood to connote similarity between two or more things, as based on a linguistic or pragmatic assessment. However, another possible approach is cognitive. George Lakoff and Mark Johnson have championed the view of ‘conceptual metaphor,’ which regards metaphor as being pervasive not only in language, but also in thought and action. Indeed, according to them, it structures human conceptual operations and hence views of the world through partially mapping knowledge across ontological domains, generally from the concrete to the abstract. The author argues in this article that a similar mechanism can fruitfully be applied to comparing religious schemas, as based on the postulated relationship between the domains of human and divine, physical and abstract, and as realized through expressions of journeying and reflection.

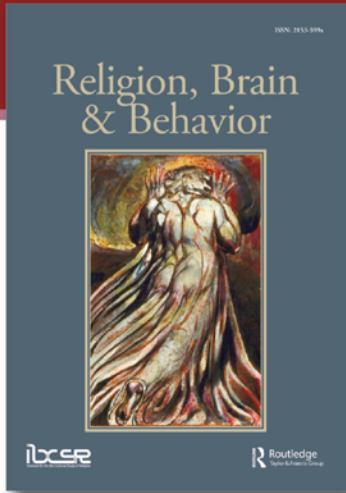
Moreira-Almeida, Alexander. 2013. Implications of spiritual experiences to the understanding of mind–brain relationship. *Asian Journal of Psychiatry* 6(6). 585–589.
doi:10.1016/j.ajp.2013.01.006.

While there has been a large increase in scientific studies on spirituality, there has been too few of studies of the core of spirituality: spiritual experiences (SE), which often involve altered states of consciousness, reports of anomalous experiences and of consciousness beyond the body. This paper argues that SE, although usually neglected in debates regarding mind–brain relationship (MBR), may provide the much needed enlargement of the empirical basis for advancing the understanding of the MBR. This paper briefly presents and discusses recent scientific investigations on some types of SE (meditative states, end of life and near death experiences, mediumship and alleged memories of previous lives) and their implications to MBR. Neurofunctional studies of SE have shown that they are related to but not necessarily caused by complex functional patterns in several brain areas. The study of meditative states, as voluntarily induced mind states that influence brain states has been a privileged venue to investigate top-down (mind over brain) causation. End of life and near death experiences offer cases of

unexpected adequate mental function under severe brain damage and/or dysfunction. Scientific investigations of several types of SE have provided evidence against materialistic reductionist views of mind.

Russell, Yvan I. & Fernand Gobet. 2013. What is counterintuitive? Religious cognition and natural expectation. *Review of Philosophy and Psychology* 4(4). 715–749.
doi:10.1007/s13164-013-0160-5.

The aim of this paper is to deconstruct the notion of ‘counterintuitive’ and provide a more philosophically rigorous definition congruent with the history of psychology, recent experimental work in ‘minimally counterintuitive’ concepts, the science vs. religion debate, and the developmental and evolutionary background of human beings. The authors conclude that previous definitions of counterintuitiveness have been flawed and did not resolve the conflict between a believer’s conception of the supernatural entity (an atypical “real kind”) and the non-believer’s conception (empty name/fictional). Furthermore, too much emphasis has been placed on the universality and (presumed) innateness of intuitive concepts (and hence the criteria for what is counterintuitive), and far too little attention paid to learning and expertise. Researchers argue that many putatively universal concepts are not innate, but mostly learned and defeasible as part of a religious believer’s repertoire of expert knowledge. Nonetheless, the results from empirical studies about the memorability of counterintuitive concepts have been convincing and it is difficult to improve on existing designs and methodologies. However, future studies in counterintuitive concepts need to embed their work in research about context effects, typicality, the psychology of learning and expertise (for example, the formation of expert templates and range defaults), with more attention to the sources of knowledge (direct and indirect knowledge) and a better idea of what ‘default’ knowledge really is.



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PART 2. ARTICLES IN SPIRITUALITY & HEALTH RESEARCH

2.1 SPIRITUALITY & HEALTH: GENERAL HEALTH & WELL-BEING

Alabdulwahab, Sami Saleh, Shaji John Kachanathu & Kamaldeen Oluseye. 2013. Physical activity associated with prayer regimes improves standing dynamic balance of healthy people. *Journal Of Physical Therapy Science* 25(12). 1565–1568.
doi:10.1589/jpts.25.1565.

The purpose of this study was to determine the effect of the Islamic prayer regime on balance. Sixty healthy male subjects participated in this study. The subjects were divided into two equal groups: one group of subjects who regularly practiced Islamic prayer, and another group of non-practicing subjects. The dynamic balance of individuals in both groups was measured using a Balance Master. Adult healthy subjects practicing Islamic prayer regimes exhibited statistically significantly better dynamic balance than the non-practicing healthy subjects. The results of this study support the hypothesis that religious meditation and prayers benefit human physiological function, especially balance.

Bartlett, Susan J., Steffany H. Moonaz, Christopher Mill, Sasha Bernatsky & Clifton O. Bingham, III. 2013. Yoga in Rheumatic Diseases. *Current Rheumatology Reports* 15(12). 387.
doi:10.1007/s11926-013-0387-2.

In this article, the authors review the literature on yoga for healthy, musculoskeletal, and rheumatic disease populations and offer recommendations for discussing ways to begin yoga with patients. It is found that regular yoga practice can increase muscle strength and endurance, proprioception, and balance, with emphasis on movement through a full range of motion to increase flexibility and mobility. Additional beneficial elements of yoga include breathing, relaxation, body awareness, and meditation, which can reduce stress and anxiety and promote a sense of calmness, general well-being, and improved quality of life. Yoga also encourages a meditative focus, increased body awareness and mindfulness; some evidence suggests yoga may help reduce inflammatory mediators including C-reactive protein and interleukin-6.

Boisvert, Jennifer A. & W. Andrew Harrell. 2013. The impact of spirituality on eating disorder symptomatology in ethnically diverse Canadian women. *International Journal of Social Psychiatry* 59(8). 729–738.
doi:10.1177/0020764012453816.

This study investigates ethnicity, spirituality, religiosity, body shame, body mass index (BMI) and age in relation to eating disorder symptomatology in women. A representative non-clinical sample of ethnically diverse Canadian women (n=591) was surveyed. Results indicate that younger women, particularly those with higher body shame, BMI and lower spirituality, reported more eating disorder symptomatology. Hispanic and Asian women had higher body shame and lower BMI compared to white women. Spirituality was more strongly related to eating disorder symptomatology than religiosity.

George, Linda K, Warren A Kinghorn, Harold G Koenig, Patricia Gammon & Dan G Blazer. 2013. Why Gerontologists Should Care About Empirical Research on Religion and Health: Transdisciplinary Perspectives. *Gerontologist* 53(6). 898–906.
doi:10.1093/geront/gnt002.

A large volume of empirical research has accumulated on the relationship between religion/spirituality (R/S) and health since the year 2000, much of it involving older adults. The purpose of this article is to discuss how this body of existing research findings has important messages or important new insights for gerontologists; clinicians in medicine, psychiatry, and psychology; sociologists; and theologians. What contributions do the research findings on

R/S and health make to these disciplines? In this article, experts from each of the aforementioned disciplines discuss what contributions this research can make to their own area of study and expertise. Besides emphasizing the broad relevance of research on R/S and health to many clinical and academic audiences in gerontology (i.e., addressing the “so what” question), this discussion provides clues about where R/S research might focus on in the future.

- Hegde, Shreelaxmi V., Prabha Adhikari, Sowmya Shetty, Poornima Manjrekar & Vivian D’Souza. 2013. Effect of community-based yoga intervention on oxidative stress and glycemic parameters in prediabetes: A randomized controlled trial. *Complementary Therapies in Medicine* 21(6). 571–576. doi:10.1016/j.ctim.2013.08.013.

In an intervention with 29 pre-diabetes participants, randomized to either 3-month yoga or wait-list controls, it would found that yoga intervention resulted in a significant decline in malondialdehyde, relative to the control group. In comparison with the control, there was a significant improvement in BMI, waist circumference, systolic blood pressure and fasting glucose levels at follow-up. No significant improvement in glycated haemoglobin, waist-to-hip ratio or any of the antioxidants was observed.

- Kagimu, Magid, David Guwatudde, Charles Rwabukwali, Sarah Kaye, Yusuf Walakira & Dick Ainomugisha. 2013. Religiosity for promotion of behaviors likely to reduce new HIV infections in Uganda: a study among Muslim youth in Wakiso District. *Journal of Religion and Health* 52(4). 1211–1227. doi:10.1007/s10943-011-9563-8.

The study was done to determine the association between religiosity and behaviors likely to reduce new HIV infections among 1,224 Muslim youth. Respondents with Sujda, the hyperpigmented spot on the forehead due to prostration during prayers, were more likely to abstain from sex, be faithful in marriage, and avoid alcohol and narcotics. Males wearing a Muslim cap were more likely to abstain from sex and avoid alcohol and narcotics. Females wearing the long dress (Hijab) were also more likely to avoid alcohol.

- Lev-ari Shahar, Sigal Zilcha-Mano, Larisa Rivo, Ravit Geva & Ilan Ron. 2013. A prospective pilot clinical trial of “The work” meditation technique for survivors of breast cancer. *European Journal of Integrative Medicine* 5(6). 487–494. doi:10.1016/j.eujim.2013.07.003.

“The work” meditation technique was developed by Byron Katie in 1986 and has been practiced worldwide. This study assessed the feasibility and effectiveness of “The work” meditative technique in improving psychological and physical wellbeing in 24 breast cancer survivors. Following intervention, sleep quality, levels of fatigue as well as physical, social, familial, emotional and functional wellbeing improved significantly. The sense of coherence scores were not affected by the intervention.

- McLaughlin, Bryan, Woohyun Yoo, Jonathan D’Angelo, Stephanie Tsang, Bret Shaw, Dhavan Shah, Timothy Baker & David Gustafson. 2013. It is out of my hands: how deferring control to God can decrease quality of life for breast cancer patients. *Psycho-Oncology* 22(12). 2747–2754. doi:10.1002/pon.3356.

In this paper, researchers propose a theoretical model predicting that a passive coping style, deferring control to God, will result in lower levels of quality of life for women with breast cancer. Data were collected as part of a randomized clinical trial funded by the National Cancer Institute. A total of 192 women with breast cancer participated in a computer-mediated social support group. Deferring control to God statements were captured by using computer-aided content analysis of discussion posts. As predicted, deferring control to God led to lower levels of breast cancer concerns but also to more passive coping styles. Ultimately, deferring control to God can lead to lower levels of quality of life.

- O'Reilly, Dermot, Heather Kinnear, Michael Rosato, Adrian Mairs & Clare Hall. 2013. Uptake of breast screening is influenced by current religion and religion of upbringing. *Journal of Religion and Health* 52(4). 1168–1176.
doi:10.1007/s10943-011-9556-7.

The aim of this study was to determine whether breast screening uptake in Northern Ireland is higher amongst women with a current affiliation to an organized religion and, for those with no current affiliation, to examine whether their religion of upbringing is associated with uptake of breast screening. Using data from the Northern Ireland Longitudinal Study (NILS) researcher found that uptake of breast screening is about 25% lower for those without a current religious affiliation. There are modest differences between Catholics and Protestants, with the latter about 11% more likely to attend for screening. For those with no current religion, the religion of upbringing appears to positively influence attendance rates. These differences remain after adjustment for all of the socio-demographic and socio-economic factors that have been shown to influence uptake rates of breast screening in the UK to date.

- Overcash, Janine, Kathryn M. Will & Debra Weisenburger Lipetz. 2013. The Benefits of Medical Qigong in Patients With Cancer: A Descriptive Pilot Study. *Clinical Journal of Oncology Nursing* 17(6). 654–658.
doi:10.1188/13.CJON.654-658.

The purpose of the current study was to determine whether patients with cancer and survivors who participated in a Medical Qigong (MQ) class experienced a change in fatigue, depression, and sleep from a preintervention evaluation to a postintervention evaluation. Participants were patients diagnosed with cancer who participated in MQ classes. Some were actively undergoing cancer treatment (e.g., surgery, hormone therapy, radiation therapy, chemotherapy) and some were receiving no treatment. Patients diagnosed with cancer and enrolled in an MQ class were invited to participate. A packet of surveys was completed before the first class and before the final class. Scores showed a reduced depression score after completing the five-week MQ course. Those findings indicate that MQ is helpful in reducing some of the problems associated with cancer and cancer treatment.

- Szaflarski, Magdalena. 2013. Spirituality and religion among HIV-infected individuals. *Current HIV/AIDS Reports* 10(4). 324–332.
doi:10.1007/s11904-013-0175-7.

The authors points out that spirituality and religion are important to many people living with HIV (PLWH). Spirituality/religion in PLWH has been refined as a multidimensional phenomenon, which improves health/quality of life directly and through mediating factors (healthy behaviors, optimism, social support). Spirituality/religion helps people to cope with stressors, especially stigma/discrimination. Spiritual interventions utilizing the power of prayer and meditation and addressing spiritual struggle are under way. Faith-based community interventions have focused on stigma and could improve individual outcomes through access to spiritual/social support and care/treatment for PLWA. Community engagement is necessary to design/implement effective and sustainable programs.

- Taylor, Lou Ella V., Nancy A. Stotts, Janice Humphreys, Marsha J. Treadwell & Christine Miaskowski. 2013. A Biopsychosocial-Spiritual Model of Chronic Pain in Adults with Sickle Cell Disease. *Pain Management Nursing* 14(4). 287–301.
doi:10.1016/j.pmn.2011.06.003.

In this article, a biopsychosocial-spiritual model is proposed for adults with chronic pain from sickle cell disease (SCD). This model includes the biologic, psychologic, sociologic, and spiritual factors relevant to adults with SCD based on past and current research. The model is an adaptation of Turk and Gatchel's model of chronic pain for adults with SCD. The authors summarize research findings that support each component of the revised model

(i.e., biologic, psychologic, sociologic, spiritual), and conclude with a discussion of implications for the use of this model in research.

Unantenne, Nalika, Narelle Warren, Rachel Canaway & Lenore Manderson. 2013. The strength to cope: Spirituality and faith in chronic disease. *Journal of Religion and Health* 52(4). 1147–1161. doi:10.1007/s10943-011-9554-9.

The lifelong management of a chronic condition requires considerable mental fortitude and commitment in social adjustment and adherence to medical advice. In examining strategies of adaptation, researchers draw on ethnographic research, including interviews with 69 people with type 2 diabetes and/or cardiovascular disease. Researchers explore how the participants incorporate spirituality into their self-management routines, with positive impact on their health and wellbeing, and highlight the role of spiritual practices in supporting people with chronic conditions mentally, physically and socially.

Wijesinghe, Sunny & Cindy Mendelson. 2013. The health behavior of Sri Lankan Buddhist nuns with type 2 diabetes: Duty, devotion, and detachment. *Journal of Religion and Health* 52(4). 1319–1332. doi:10.1007/s10943-012-9592-y.

Sri Lanka has experienced an increase in the rate of type 2 diabetes. Self-management of diabetes among Sri Lanka's Buddhist nuns, who depend on food donations and limit physical activity in accord with the monastic code of conduct, presents unique challenges and has not been previously studied. The purpose of this focused ethnographic study of 10 Buddhist nuns was to understand how they managed their illness within the restrictions on diet and physical activity. The themes of duty, devotion, and detachment explained and described their health behavior regarding type 2 diabetes within the context of their daily routines and obligations.

Williamson, W. Paul & Ralph W. Jr. Hood. 2013. Spiritual transformation: A phenomenological study among recovering substance abusers. *Pastoral Psychology* 62(6). 889–906. doi:10.1007/s11089-012-0502-8.

This qualitative study describes the lived experience of spiritual transformation within the context of a 12-month resident substance abuse recovery program called the Lazarus Project, which is sponsored by a southern U.S. Pentecostal-based congregation. Researchers conducted phenomenological interviews with 10 participants who had been in the program from six to nine-months and asked that they describe their most important spiritual experiences that brought about change. A hermeneutical analysis found that a pattern of five overlapping themes emerged consistently across all 10 protocols to describe the meaning of the experience of spiritual transformation for these participants. The themes were: (1) "Sick and Tired", (2) Unmerited Love, (3) "I'm Changing," (4) Fast/Gradual, and (5) Destiny. The themes are discussed from an existential perspective and related to the literature on spiritual transformation as well as the earlier quantitative study at the Lazarus Project.

Wolff, Moa, Kristina Sundquist, Sara Larsson Lonn & Patrik Midlov. 2013. Impact of yoga on blood pressure and quality of life in patients with hypertension: A controlled trial in primary care, matched for systolic blood pressure. *BMC Cardiovascular Disorders* 13. 111. doi:10.1186/1471-2261-13-111.

In this intervention, researchers divided patients with hypertension into three groups: 1) yoga class with yoga instructor (n=28); 2) yoga at home (n=28); and 3) a control group (n=27). The participants were matched at the group level for systolic blood pressure. After 12 weeks of intervention, the yoga class group showed no improvement in blood pressure or self-rated quality of life, while in the yoga at home group there was a decline in diastolic blood pressure compared to the control group. Moreover, the yoga at home group showed significant improvement in self-rated quality of life compared to the control group.

2.2 SPIRITUALITY & HEALTH: MENTAL HEALTH

Briegel-Jones, Richard M. H., Zoe Knowles, Martin R. Eubank, Katie Giannoulatos & Diane Elliot. 2013. A preliminary investigation into the effect of yoga practice on mindfulness and flow in elite youth swimmers. *The Sport Psychologist* 27(4). 349–359.

Research has indicated positive effects of mindfulness training as a performance-based intervention and of yoga on mindfulness. This study examined the effects of a 10-week yoga intervention on mindfulness and dispositional flow of elite youth swimmers using a mixed methods design. No significant changes in mindfulness and dispositional flow were identified. Qualitative data suggested that the 10-week yoga intervention had a positive impact on a range of physiological, cognitive, and performance parameters that included elements of mindfulness and flow.

Cappellen, Patty Van, Vassilis Saroglou, Caroline Iweins, Maria Piovesana & Barbara L. Fredrickson. 2013. Self-transcendent positive emotions increase spirituality through basic world assumptions. *Cognition & Emotion* 27(8). 1378–1394.
doi:10.1080/02699931.2013.787395.

Researchers investigated whether spirituality may be triggered by self-transcendent positive emotions, which are elicited by stimuli appraised as demonstrating higher good and beauty. In two studies, elevation and/or admiration were induced using different methods. These emotions were compared to two control groups, a neutral state and a positive emotion (mirth). Self-transcendent positive emotions increased participants' spirituality (Studies 1 and 2), especially for the non-religious participants (Study 1). Two basic world assumptions, i.e., belief in life as meaningful (Study 1) and in the benevolence of others and the world (Study 2) mediated the effect of these emotions on spirituality.

Dein, Simon & Kate M Loewenthal. 2013. The mental health benefits and costs of Sabbath observance among Orthodox Jews. *Journal of Religion and Health* 52(4). 1382–1390.
doi:10.1007/s10943-013-9757-3.

This study examined the perceived psychological costs and benefits of Sabbath (Shabbos) observance among 13 practicing Jews, 9 of whom are UK residents and 4 of whom are US residents. Emerging themes were as follows: Shabbos as a special day, giving time to contemplate on profound issues, withdrawal and rest from mundane concerns, and deepening relationships. These aspects can potentially improve feelings of mental well-being, and were indeed often said to do so. Some difficulties were described: some found they were prone to worry more on Shabbos because of the freedom from distractions, and there were reports of the difficulties of explaining to non-Jewish work colleagues the religious need to be free from work commitments. These findings were related to the literature on religious ritual observance and generally accord with other work in anthropology and psychology of religion examining the psychological impact of ritual.

Hardiman, Piers & Janette Graetz Simmonds. 2013. Spiritual well-being, burnout and trauma in counsellors and psychotherapists. *Mental Health, Religion & Culture* 16(10). 1044–1055.
doi:10.1080/13674676.2012.732560.

In the research reported here, the relationship between spiritual well-being and burnout was explored, with attention paid to clinicians' perceptions of trauma. Eighty-nine Australian counsellors and psychotherapists (71 females and 18 males) completed a demographic survey, the Maslach Burnout Inventory, and Spiritual Well-Being Scale. It was found that existential well-being accounted for some of the variance in MBI subscale scores, and buffered the effect of trauma on emotional exhaustion. In addition, clinicians who reported high levels of existential well-being reported being better able to avoid emotional exhaustion when working with severely traumatized clients.

Homan, Kristin J. & Brianna N. Cavanaugh. 2013. Perceived relationship with God fosters positive body image in college women. *Journal of Health Psychology* 18(12). 1529–1539. doi:10.1177/1359105312465911.

Positive body image is defined as healthy body-related attitudes that go beyond the absence of distressful symptoms. A warm and secure relationship with an important other person has been linked with attitudes of acceptance and appreciation toward one's body as well as adaptive eating patterns. This study tested whether a warm and secure relationship with God was similarly related to positive body image. Undergraduate women completed self-report measures of religiosity, life satisfaction, body appreciation, body acceptance by others, functional orientation, and intuitive eating. Multiple regression analyses showed that relationship with God contributed variance to most of the well-being variables.

Howell, Andrew J., Holli-Anne Passmore & Karen Buro. 2012. Meaning in Nature: Meaning in Life as a Mediator of the Relationship Between Nature Connectedness and Well-Being. *Journal of Happiness Studies* 14(6). 1681–1696. doi:10.1007/s10902-012-9403-x.

In this study, researchers examined whether meaning in life mediated the association between nature connectedness and well-being. In Study 1, 311 undergraduates completed multiple measures of nature connectedness, multiple measures of meaning in life, and multiple measures of well-being. Mediation analyses revealed that meaning in life fully mediated the association between nature connectedness and well-being. In Study 2, the authors examined whether mediation of the association between nature connectedness and well-being by meaning in life could be demonstrated alongside a previously documented mediation of the association between religiousness and well-being by meaning in life. Undergraduates (n=227) completed measures of nature connectedness, religiousness, meaning in life, and well-being. Mediation analyses revealed that meaning in life fully mediated both the association between nature connectedness and well-being and the association between religiousness and well-being.

Ireland, Michael James. 2013. Meditation and psychological health: Modeling theoretically derived predictors, processes, and outcomes. *Mindfulness* 4(4). 362–374. doi:10.1007/s12671-012-0136-z.

This study draws on multiple traditional and contemporary theoretical frameworks to (1) uncover fundamental aspects of variability in meditation practice, (2) test the role of several primary and secondary processes believed to be responsible for positive effects, and (3) explore a range of positive and negative outcomes believed to be closely aligned with the original intended outcomes of meditation practices. Using two large (each n>500) heterogeneous samples of meditation practitioners, this study calibrated and then cross-validated a theoretical model testing the plausibility of several causal pathways linking variation in experience with meditation to positive and negative psychological outcomes. Results showed that individual differences in meditation involve both behavioral aspects accounting for the degree of engagement, and psychological aspects incorporating the intensity or depth of this engagement. Variation in these aspects accounts for large proportions of variance in psychological health and functioning outcomes. Several factors representing attention refinement (mindfulness), changes in self-perception and outlook (transcendence), worldview (insight), and psychological development serve as plausible change mechanisms serving to transmit the effects of meditation on psychological health and functioning.

Kamitsis, Ilias & Andrew J. P. Francis. 2013. Spirituality mediates the relationship between engagement with nature and psychological wellbeing. *Journal of Environmental Psychology* 36. 136–143. doi:10.1016/j.jenvp.2013.07.013.

The aim of the present study was to determine the extent to which engaging with nature, through both exposure and connectedness, influences psychological health, and the role of spirituality in this relationship. Analysis of

surveys administered to 190 participants revealed that nature exposure and connectedness to nature were positively associated with psychological wellbeing and greater reported spirituality. Furthermore, through the implementation of a hierarchical regression and mediation analysis, positive relationships between both nature exposure and connectedness to nature with psychological wellbeing, were significantly mediated by spirituality. It is concluded that spirituality can be an important aspect of one's experience of nature and, as a consequence, the positive effects derived from it.

- Kirk, Chris Michael & Rhonda K. Lewis. 2013. The impact of religious behaviours on the health and well-being of emerging adults. *Mental Health, Religion & Culture* 16(10). 1030–1043.
doi:10.1080/13674676.2012.730037.

Emerging adulthood is a life stage in which the frequency of religious behaviors often wanes while the risk of mental illness, substance abuse, and risky sexual behavior increases. The current study explores the role that religious behaviors might play in mitigating these risks among college-attending emerging adults. Survey data were collected on religious service attendance, prayer and meditation, substance use, sexual activity, and life satisfaction. Results revealed a significant effect for religious service attendance on substance use and sexual behavior and for the frequency of prayer/meditation on life satisfaction, marijuana use, and sexual intercourse. Group comparisons revealed that emerging adults who participated in religious activities reported lower rates of substance use, less sexual behavior, and greater satisfaction with life.

- Konkolöy Thege, Barna, János Pilling, András Székely & Mária S Kopp. 2013. Relationship between religiosity and health: evidence from a post-communist country. *International Journal of Behavioral Medicine* 20(4). 477–486.
doi:10.1007/s12529-012-9258-x.

In 2002, 12,643 persons were interviewed in a Hungarian representative survey. The relationship of mental and physical health indicators with religious worship and personal importance of religion-controlling for several psychological and lifestyle characteristics-were analyzed using the general linear model procedure. Results showed that practicing religion was largely associated with better mental health and more favorable physical health status. However, persons being religious in their own way tended to show more unfavorable results across several variables when compared to those practicing religion regularly in a religious community or even to those considering themselves as non-religious. The personal importance of religion showed a mixed pattern, since it was positively associated not only with well-being but depression and anxiety as well.

- Linders, Ellis H. & B. Les Lancaster. 2013. Sacred illness: Exploring transpersonal aspects in physical affliction and the role of the body in spiritual development. *Mental Health, Religion & Culture* 16(10). 991–1008.
doi:10.1080/13674676.2012.728578.

This paper investigates the occurrence of somatic involvement in spiritual development by exploring transpersonal dimensions of physical illness. Using semi-structured interviews and the qualitative method of heuristic inquiry, the transpersonal experiences of seven people with long-term health conditions are reported. Results indicate that a spiritual perspective in illness can extend much beyond being a coping mechanism into profound experiences of self-transformation and healing, and by illustrating that the body can be intimately involved in the spiritual process. Participants considered the transpersonal dimension to be central to their experiences and as such understood their physical challenge as a state of potency wherein healing and embodiment of transpersonal influences were inextricably linked.

- Nicaise, Virginie & David Kahan. 2013. Psychological Changes Among Muslim Students Participating in a Faith-Based School Physical Activity Program. *Research Quarterly for Exercise and Sport* 84(4). 522–529.

doi:10.1080/02701367.2013.839933.

The study was conducted to examine the effect of a faith-based pedometer program (Virtual Umra) on psychological correlates of PA behavior and their contribution to school-time changes in PA among 43 Muslim adolescents. One third of the sample expressed greater enjoyment post-program, while motivation was unaffected. Analysis of data revealed that boys increased their steps, whereas girls reduced their step number, through the program. Enjoyment increased and extrinsic motivation and amotivation decreased. Partial correlations revealed that enjoyment and more self-determined behavioral regulations were positively associated with non-physical education (PE)-day PA change; only intrinsic motivation was positively associated with PE-day PA change.

Page, Matthew J L, Kristin M Lindahl & Neena M Malik. 2013. 'The Role of Religion and Stress in Sexual Identity and Mental Health Among LGB Youth. *Journal of Research on Adolescence* 23(4). 665–677.

doi:10.1111/jora.12025.

This study investigated religious stress, gay-related stress, sexual identity, and mental health outcomes in lesbian, gay and bisexual adolescents and emerging adults. The model examined negative LGB identity as a mediator of the relationships between a) religious stress and mental health, and b) gay-related stress and mental health. The data indicated that negative LGB identity fully accounted for both relationships. Findings suggest that a negative sense of sexual identity for LGB youth helps explain the links between religious and gay-related stressors and mental health.

Ruths, Florian A., Nicole de Zoysa, Sonya J. Frearson, Jane Hutton, J. Mark G. Williams & James Walsh. 2013. Mindfulness-based cognitive therapy for mental health professionals: A pilot study. *Mindfulness* 4(4). 289–295.

doi:10.1007/s12671-012-0127-0.

Researchers investigated the adherence of mental health professionals to a Mindfulness-Based Cognitive Therapy (MBCT) program, as well as the impact of MBCT on mindful awareness and attention, psychological well-being and distress, state and trait anxiety, worry and satisfaction with life. The design comprised of a prospective uncontrolled intervention study with pre- and post-measurements of meditation adherence and measures of psychological well-being. Twenty-seven mental health professionals participated in an 8-week MBCT program for relapse prevention of depression, modified for healthy individuals; twenty-four completed the course. Of these, 75 % (18 of 24) were female with a mean age of 36 years and a mean experience in cognitive behavioral therapy (CBT) of 6 years. Sixty-three per cent (15 of 24) reported continued practice at 20-week follow-up. A statistically significant improvement of mindful awareness and psychological well-being, with significant reduction in worry, trait anxiety and general psychopathology, was observed in participants who continued some form of meditation practice during the follow-up period. The majority of mental health professionals adhered to the MBCT meditation practice, and the more they practiced mindfulness meditation, the more they experienced an increase in mindful awareness and attention, general psychological well-being and a decrease in general psychopathology, trait anxiety and worry.

Sauer-Zavala, Shannon E., Erin C. Walsh, Tory A. Eisenlohr-Moul & Emily L. B. Lykins. 2013. Comparing mindfulness-based intervention strategies: Differential effects of sitting meditation, body scan, and mindful yoga. *Mindfulness* 4(4). 383–388.

doi:10.1007/s12671-012-0139-9.

Researchers investigated whether three different meditation practices that are commonly used in mindfulness-based interventions lead to differential changes in psychological health outcomes when presented separately. Participants included 141 undergraduates assigned to a sitting meditation, body scan, or mindful yoga condition. Participants in all conditions attended three weekly 1-h sessions (105 min of guided meditation and 75 min of discussion) in

addition to pre- and post-intervention questionnaires collected in separate sessions. Participants reported significant improvements in the tendency to describe one's experience, rumination, self-compassion, and psychological well-being regardless of condition. The following between-group differences in change over time emerged: (1) mindful yoga was associated with greater increases in psychological wellbeing than the other two practices, (2) sitting meditation and mindful yoga were both associated with greater decreases in difficulties with emotion regulation than the body scan, and (3) sitting meditation was associated with greater increases in the tendency to take a non-evaluative stance toward observed stimuli than the body scan.

Sibinga, Erica M. S., Carisa Perry-Parrish, Shang-en Chung, Sara B. Johnson, Michael Smith & Jonathan M. Ellen. 2013. School-based mindfulness instruction for urban male youth: A small randomized controlled trial. *Preventive Medicine* 57(6). 799–801.
doi:10.1016/j.ypmed.2013.08.027.

Researchers explored the effects of a school-based mindfulness-based stress reduction (MBSR) program for 41 young urban males. Compared to participants who received health education, participants who completed the MBSR program had less anxiety, less rumination, and showed a trend for less negative coping. Comparing baseline with post-program, cortisol levels increased during the academic terms for health education participants but remained constant for MBSR participants.

Silton, Nava R., Kevin J. Flannelly & Laura J. Lutjen. 2013. It Pays to Forgive! Aging, Forgiveness, Hostility, and Health. *Journal of Adult Development* 20(4). 222–231.
doi:10.1007/s10804-013-9173-7.

The relationships among age, forgiveness, hostility, and subjective health were examined in a sample of 1,629 US adults who completed a Web-based survey sponsored by Spirituality and Health magazine. A structural equation model was used to test hypotheses about the relationships between age, forgiveness, hostility, and poor health. The model confirmed that age was positively related to poor health and to forgiveness. The model further confirmed the hypothesized negative relationship between forgiveness and hostility, and a positive relationship between hostility and poor health. Overall, forgiveness had an indirect salutary effect on health through its negative association with hostility. The findings thus support the notion that as one ages, forgiveness may serve as an indirect health benefit by reducing hostility. The present results therefore suggest that the deleterious effects of age on health may be moderated whereby the wisdom of age enhances a person's ability to forgive.

Terreri, Cydney J & David S Glenwick. 2013. The relationship of religious and general coping to psychological adjustment and distress in urban adolescents. *Journal of Religion and Health* 52(4). 1188–1202.
doi:10.1007/s10943-011-9555-8.

The present study explored the relationships among stress, general and religious coping, and mental health in a sample of 587 urban adolescents. Analysis of self-report measures indicated that perceived stress, negative religious coping, and avoidant coping were significantly associated with indicators of psychological distress. Conversely, positive religious coping and active/engagement coping were significantly associated with indicators of psychological adjustment. Negative religious coping also was found to moderate the relationship between perceived stress and positive affect. Finally, partial correlational analyses revealed significant relationships between religious coping and mental health indicators, even after controlling for the contributions of general coping.

Zhang, Kaili Chen. 2013. What I look like: College women, body image, and spirituality. *Journal of Religion and Health* 52(4). 1240–1252.
doi:10.1007/s10943-012-9566-0.

Despite public acknowledgment of the importance of spiritual development, little has been written globally on female young adults' personal views of their spiritual values and body image. This article briefly presents the

findings of a pilot study that explored female college students' reflections on body image and spirituality. Responses from participants showed that (1) many students are interested in faith and spiritual development; (2) body dissatisfaction affects those women who viewed themselves as spiritual (92%) as well as those who said they were free thinkers (49%). Nevertheless, religion and spiritual values seemed to confer some behavioral protection.

2.3 SPIRITUALITY & HEALTH: METHOD AND THEORY

Aghababaei, Naser & Jason Adam Wasserman. 2013. Attitude toward euthanasia scale: psychometric properties and relations with religious orientation, personality, and life satisfaction. *The American Journal of Hospice & Palliative Care* 30(8). 781–785.
doi:10.1177/1049909112472721.

End-of-life decisions (ELDs) represent a controversial subject, with ethical dilemmas and empirical ambiguities that stand at the intersection of ethics and medicine. In a non-Western population, the authors examined individual differences in perceiving ELDs that end the life of a patient as acceptable and found that an attitude toward euthanasia (ATE) scale consists of 2 factors representing voluntary and nonvoluntary euthanasia. Also, acceptance of ELDs that end the life of a patient negatively correlated with life satisfaction, honesty-humility, conscientiousness, and intrinsic and extrinsic personal motivation toward religion.

Bernstein, Karen, Lawrence J D'Angelo & Maureen E Lyon. 2013. An exploratory study of HIV+ adolescents' spirituality: Will you pray with me? *Journal of Religion and Health* 52(4). 1253–1266.
doi:10.1007/s10943-012-9565-1.

The aims of the study were (1) to determine whether adolescents find it acceptable to have physicians explore their spiritual beliefs as part of their medical care, (2) to characterize the role of spirituality and religious beliefs in adolescents with and without HIV, and (3) to examine associations between spirituality/religion and quality of life. Participants were 45 adolescents receiving medical care at an urban Adolescent Health Clinic. Four out of 45 (9%) had ever been asked by their doctor about their spiritual/religious beliefs, and only 8 (18%) had ever shared these beliefs with their healthcare provider. Most teens wanted their provider to ask them about their spiritual beliefs during some visits, especially when dealing with death/dying or chronic illness (67%). Those with HIV were more likely to endorse wanting their doctors to pray with them (42% vs. 15%), feeling "God's presence", being "part of a larger force", and feeling "God had abandoned them". There are certain circumstances in which healthcare providers should include a spiritual history with teenage patients. Few differences emerged in the teens studied with and without HIV.

Black, Helen K. 2013. Gender, religion, and the experience of suffering: A case study. *Journal of Religion and Health* 52(4). 1108–1119.
doi:10.1007/s10943-011-9544-y.

This article explores how gender and religious belief come together in an elderly woman's experience of suffering. The author uses the case study method to introduce themes that show suffering's uniqueness to the individual whose narrative is reported, as well as similarity to themes that emerged in other participants' narratives. In this case, an elderly woman's gender and religious identities merge in her stories of suffering, which include the memory of a childhood disability and an incident of clergy abuse that occurred 70 years previously. A key finding in this paper is that key themes in her story of suffering, which are disablement and clergy abuse, resonate to the general themes of suffering found in our study, which are (1) threats to personal identity; (2) loss of a valued item, quality, or relationship; and (3) a lack of control over self or the circumstances of life.

Bradby, Hannah, Charlotte Kenten, Sarah Deedat & Myfanwy Morgan. 2013. "Having a different conversation around death": Diverse hospital chaplains' views on end-of-life care. *Ethnicity & Health* 18(6). 530–543.

doi:10.1080/13557858.2013.828832.

This paper describes the perceptions and practices of hospital chaplains in the United Kingdom around end of life care and organ donation, utilizing 19 interviews with hospital chaplains. It was found that chaplains provided generic support for the family around death and in relation to end of life conversations. While chaplains were supportive of efforts to increase awareness of issues around deceased donation they held a range of views on organ donation and had limited knowledge of hospital processes and practices.

Brown, Otilia, Diane Elkonin & Samantha Naicker. 2013. The use of religion and spirituality in psychotherapy: Enablers and barriers. *Journal of Religion and Health* 52(4). 1131–1146.
doi:10.1007/s10943-011-9551-z.

This paper explores and describes whether psychologists would use religion and spirituality in psychotherapy as well as enablers and barriers in this regard. A qualitative exploratory descriptive method was followed using purposive sampling to obtain a sample of clinical and counselling psychologists. The focus group strategy was used to collect the data, and Tesch's model of content analysis was used to analyze the qualitative findings. Most participants expressed a willingness to discuss religion and spirituality with their clients. Participants also highlighted specific enablers and barriers to incorporating religion and spirituality in psychotherapy.

Buttle, Heather. 2013. More than the sum of my parts: A cognitive psychologist reflects on mindfulness/meditation experience. *Reflective Practice* 14(6). 766–773.
doi:10.1080/14623943.2013.835718.

This paper, through personal illustration, aims to show how reflective practices can lead to open and inquisitive questioning for those who work with empirically derived data. As a cognitive psychologist, the author reflects here on experiences of meditation, and a recognition of different modes of thinking. She concludes by writing of an aspiration to find a balance between the rational and the intuitive.

Cataldo, Lisa M. 2013. I know that my redeemer lives: Relational perspectives on trauma, dissociation, and faith. *Pastoral Psychology* 62(6). 791–804.
doi:10.1007/s11089-012-0493-5.

This paper focuses the lens of multiplicity on patients' religious experience in relation to the psychic realities of early or pervasive trauma, where dissociation is not just a normal means of self-regulation, but becomes an entrenched structuring mechanism through which the trauma survivor experiences every relationship, including any relationship to God. What might God or faith look like from the perspective of the traumatized self? This paper considers issues of multiplicity and dissociation as they affect the processing of religious or spiritual experience, with a few brief clinical illustrations, and offers a reading of the biblical book of Job as a metaphor for the inner world of the survivor of early trauma.

Charlier, Philippe, Alain Joly, Julie Champagnat, Luc Brun, Geoffroy Lorin de la Grandmaison & Christian Hervé. 2013. Death, cadavers and post-mortem biomedical research: A point of view from a Christian community. *Journal of Religion and Health* 52(4). 1346–1355.
doi:10.1007/s10943-012-9634-5.

Facing modern developments of medicine and biomedical researches, religious communities are a strong source of ethics principles and orientations. Moral, political, social and scientific aspects of research on human cadavers (mainly autopsies) have been widely discussed in biomedical publications, whereas the religious aspects have rarely been analyzed and presented. This article will present the results of a survey carried out a French Benedictine Abbey regarding death, cadaver's status and biomedical research, and subsequent Christian thought according to canonical texts and practical cases from anthropological, historical, archeological and biomedical origin.

Clarke Chapman, G. 2013. Bonhoeffer and universal health care as a human right. *Journal of Religion and Health* 52(4). 1392–1401.
doi:10.1007/s10943-013-9738-6.

Bonhoeffer gave a theocentric basis for human rights, as God is the ground of ethics. In the earthly world, the “ultimate” must be prepared by what is “penultimate.” That includes humanity’s natural life and bodily wholeness, leading to human duties crafted by human reason. Biblical texts should not be used as partisan weapons attacking government provision of health care, since all Scripture (even the Law) is seen as a Christ-centered focus on human redemption. Thus, Bonhoeffer implies a right to universal health care, but leaves entirely open which practical structures may best provide it.

Corry, Dagmar Anna Susanne, John Mallett, Christopher Alan Lewis & Ahmed M. Abdel-Khalek. 2013. The creativity-spirituality construct and its role in transformative coping. *Mental Health, Religion & Culture* 16(10). 979–990.
doi:10.1080/13674676.2013.834492.

The present study examines whether and to what extent creativity and spirituality are used in coping in a cross-cultural and cross-denominational student sample of 610 participants. Two new theory-based instruments, displaying good internal consistency and satisfactory levels of content-, and construct validity, are introduced, the Creative Coping Scale-19 (CCS-19), and the Spiritual Coping Scale-30 (SCS-30). A positive, moderate relationship between creative and spiritual coping emerged, thus supporting the theory of transformative coping. The findings demonstrated that participants applied both creative and spiritual coping in their lives in order to deal with acute and chronic stress. Associations between creative and spiritual coping and demographic variables were outlined.

Ellis, Mark R, Paul Thomlinson, Clay Gemmill & William Harris. 2013. The spiritual needs and resources of hospitalized primary care patients. *Journal of Religion and Health* 52(4). 1306–1318.
doi:10.1007/s10943-012-9575-z.

In this study, researchers sought to study patients’ internal and external resources for addressing spiritual questions, while also exploring the physician’s role in providing spiritual care. This multicenter observational study evaluated 326 inpatients admitted to primary care physicians in four midwestern hospitals. Researchers assessed how frequently these patients identified spiritual concerns during their hospitalization, the manner in which spiritual questions were addressed, patients’ desires for spiritual interaction, and patient outcome measures associated with spiritual care. Nearly 30% of respondents (referred to as “R/S respondents”) reported religious struggle or spiritual issues associated specifically with their hospitalization. Eight-three percent utilized internal religious coping for dealing with spiritual issues. Chaplains, clergy, or church members visited 54% of R/S respondents; 94% found those visits helpful. Family provided spiritual support to 45% of R/S respondents. Eight percent of R/S respondents desired, but only one patient actually received, spiritual interaction with their physician, even though 64% of these patients’ physicians agreed that doctors should address spiritual issues with their patients. Researchers conclude that inpatients quite commonly utilize internal resources and quite rarely utilize physicians for addressing their spiritual issues. Spiritual caregiving is well received and is primarily accomplished by professionals, dedicated laypersons, or family members. A significantly higher percentage of R/S patients desire spiritual interaction with their physician than those who actually receive it.

Hart, Rona, Itai Ivztan & Dan Hart. 2013. Mind the gap in mindfulness research: A comparative account of the leading schools of thought. *Review of General Psychology* 17(4). 453–466.
doi:10.1037/a0035212.

The literature on mindfulness has been dominated by the two leading schools of thought: one advanced by Langer and her colleagues; the other developed by Kabat-Zinn and his associates. Curiously, the two strands of research

have been running in parallel lines for more than 30 years, scarcely addressing the other's work, and with almost no attempt to clarify the relationship between them. In view of this gap, this article sought to systematically compare and contrast the two lines of research. The comparison between the two schools of thought suggests that although there are some similarities in their definitions of mindfulness, they differ in several core aspects: their philosophies, the components of their constructs, their goals, their theoretical scope, their measurement tools, their conceptual focus, their target audiences, the interventions they employ, the mechanisms underlying these interventions, and the outcomes of their interventions. However, the analysis also revealed that self-regulation is a core mechanism in both perspectives, which seems to mediate the impact of their interventions. In view of the differences between the two strands of research, the authors propose that they be given different titles that capture their prime features. The authors suggest "creative mindfulness" for Langer and her colleagues' scholarship, and "meditative mindfulness" for Kabat-Zinn and his associates' scholarly work.

Hussain, Feryad. 2013. "Heart-talk:" considering the role of the heart in therapy as evidenced in the Quran and medical research. *Journal of Religion and Health* 52(4). 1203–1210.
doi:10.1007/s10943-011-9560-y.

This paper highlights the relationship between the heart and brain function as termed 'heart brain' coined by pharmacologist Dr. Armourin 1991, and as it is suggestive of its use in the world of psychological therapy. It relates to those cognitions which patients suggest come 'from the heart' which though previously dismissed evidenced with brief reference to Quranic verses and medical (namely, neurocardiological) research. Further, it raises questions around the implications of this information for therapists working in both physical and mental health.

Jensen, Sarah B & Christine B Phillips. 2013. Bearing witness through medicine: an exploratory study of attitudes to service among Australian evangelical Christian doctors. *Journal of Religion and Health* 52(4). 1177–1187.
doi:10.1007/s10943-011-9558-5.

This study explores the attitudes of Australian evangelical Christian doctors to healing, suffering and good practice, using in-depth interviews. Doctors described an intellectualized faith, in which medical care was conceived in itself as a way of bearing witness. The alleviation of suffering, for these doctors, included supporting patients to rediscover purpose and meaning in their lives. There was diversity of opinion about evangelizing, with many feeling that this was a contingent activity best conducted outside the consultation. This cohort of doctors, mostly non-denominational, had consciously engaged in work with the poor and marginalized as an expression of their faith.

John, Dolly A & David R Williams. 2013. Mental health service use from a religious or spiritual advisor among Asian Americans. *Asian Journal of Psychiatry* 6(6). 599–605.
doi:10.1016/j.ajp.2013.03.009.

Researchers analyzed data from 2,095 respondents in the 2002-2003 National Latino and Asian American Study and found that lifetime and 12-month prevalence of mental health service use from a religious/spiritual advisor (5.5% and 1% overall, respectively) was generally higher among U.S.-born Asians and those with a 12-month mental disorder (23.6% and 7.5%, respectively). Religious/spiritual advisors were seen by 35% of treatment-seeking Asian Americans with a lifetime mental disorder. They were seen as commonly as psychiatrists but less commonly than a mental health specialist or general medical provider. Approximately 70% of those seeking treatment had a mental disorder, significant proportions of whom sought treatment in the absence of a psychiatrist, a mental health specialist or even a healthcare provider. A significant majority with 12-month use perceived the care as helpful, felt accepted/understood and satisfied (71-86%). However, only 31% rated the care as excellent, 28% quit completing care, and referral rates for specialty mental health treatment were low, even among those with a mental disorder (9.5%).

Kisvetrová, Helena, Miloslav Klugar & Ladislav Kabelka. 2013. Spiritual support interventions in nursing care for patients suffering death anxiety in the final phase of life. *International journal of palliative nursing* 19(12). 599–605.

In order to investigate which activities from the ‘Spiritual Support’ intervention of the Nursing Interventions Classification (NIC) are used in patients with the nursing diagnosis ‘Death Anxiety’ in the Czech Republic, this study surveyed 468 Czech nurses using a quantitative questionnaire. The most frequently used activity was ‘Treat individual with dignity and respect’ and the least frequently used was ‘Pray with the individual’. ‘Treat individual with dignity and respect’ was also thought to be the most feasible activity for Czech nursing practice. Significant differences were found between nurses working in hospices and those in other sites and between religious believers and non-believers.

Knabb, Joshua J. & Matthew Y. Emerson. 2012. “I Will Be Your God and You Will Be My People”: Attachment Theory and the Grand Narrative of Scripture. *Pastoral Psychology* 62(6). 827–841. doi:10.1007/s11089-012-0500-x.

In this article, the authors apply attachment theory to the grand narrative of Christian Scripture: creation, fall, redemption, and new creation. First, utilizing four key features of attachment theory—secure base, exploration, attachment behaviors, and safe haven—they attempt to integrate the ‘circle of attachment’ with the biblical story of creation. Next, they explore the overlap between maternal deprivation, including the stages of protest, despair, and detachment, and the fall of humankind elucidated in the biblical storyline. Finally, the relationship between attachment theory and redemption and new creation within the grand narrative of Scripture is discussed. By focusing on the relationship between God and humankind found within the Old and New Testaments, the authors seek to expand the theological underpinnings of the attachment to God literature and conclude by offering suggestions for therapists and pastoral counselors working with Christians exhibiting disordered attachment patterns.

Lucchetti, Giancarlo, Leandro Romani de Oliveira, Harold G. Koenig, Jose Roberto Leite & Alessandra L. G. Lucchetti. 2013. Medical students, spirituality and religiosity: Results from the multicenter study SBRAME. *BMC Medical Education* 13(1). 162. doi:10.1186/1472-6920-13-162.

After analyzing data from 3,630 medical students (MS), researchers found that there is a large gap between MS attitudes and expectations and the spirituality/religiosity (S/R) training that they are receiving during their undergraduate training. The majority of MS surveyed believe that patients should have their beliefs addressed and that these beliefs could have important effects on their health and the doctor-patient relationship.

Lucchetti, Giancarlo, Renata Ferreira de Oliveira, Juliane Piasseschi de Bernardin Gonçalves, Suely Mitoi Ykko Ueda, Lycia Mara Jenne Mimica & Alessandra Lamas Granero Lucchetti. 2013. Effect of Spiritist “passe” (Spiritual healing) on growth of bacterial cultures. *Complementary Therapies in Medicine* 21(6). 627–632. doi:10.1016/j.ctim.2013.08.012.

The aim of this study was to evaluate bacterial growth in two groups of cultures subjected to biofield therapy (Spiritist “passe” and laying on of hands (LOH)) in four situations (no intention, intention to inhibit bacterial growth, intention to promote growth, and influence of a negative factor) and compare them with a “no LOH/no treatment” group. A total of 11 Spiritist “passe” healers, 10 LOH laymen and “no LOH” tubes were assessed. Under the intention to inhibit bacterial growth condition, statistically significant differences were found between the Spiritist “passe” and “no LOH” Groups and also between the Spiritist “passe” and “LOH” Groups. No statistically significant difference was detected for the other situations tested (no intention, intention to promote

growth and influence of a negative factor). Researchers concluded that Spiritist “passe” effectively inhibited growth in bacterial cultures compared to LOH with intention or no LOH.

- Lumpkins, Crystal Y, K Allen Greiner, Christine Daley, Natabhona M Mabachi & Kris Neuhaus. 2013. Promoting healthy behavior from the pulpit: Clergy share their perspectives on effective health communication in the African American church. *Journal of Religion and Health* 52(4). 1093–1107.
doi:10.1007/s10943-011-9533-1.

The objective of this study was to investigate African American pastors’ perceptions about health promotion in the church and how these perceptions could serve as a guide for improving health communication targeting African Americans. Semi-structured interviews with African American clergy revealed that pastors feel strongly about the intersection of health, religion and spirituality; they also believe that discussing health screening and other health issues more frequently from the pulpit and their own personal experiences will ultimately impact health behavior among congregants. This study suggests that African American clergy see themselves as health promoters in the church and believe this communication (i.e., pastor-endorsed health information materials) will impact health behavior among underserved and minority populations.

- McEvoy, Mimi, Victoria Gorski, Deborah Swiderski & Elizabeth Alderman. 2013. Exploring the spiritual/religious dimension of patients: A timely opportunity for personal and professional reflection for graduating medical students. *Journal of Religion and Health* 52(4). 1066–1072.
doi:10.1007/s10943-013-9716-z.

This article describes a longitudinal senior elective course at the end of their medical school training to delve into matters of religion/spirituality surrounding patient care. The authors pose their own perspectives on what both students and faculty gained from the experience.

- Padela, Aasim I & Farr A Curlin. 2013. Religion and disparities: Considering the influences of Islam on the health of American Muslims. *Journal of Religion and Health* 52(4). 1333–1345.
doi:10.1007/s10943-012-9620-y.

In this paper, the authors focus on Islam and American Muslims to outline the ways in which a shared religion may impact the health of a racially, ethnically, and socioeconomically diverse minority community. Researchers use Kleinman’s “cultural construction of clinical reality” as a theoretical framework to interpret the extant literature on American Muslim health. Researchers then propose a research agenda that would extend current disparities research to include measures of religiosity, particularly among populations that share a minority religious affiliation. The research proposed would provide a fuller understanding of the relationships between religion and health among Muslim Americans and other minority communities and would thereby undergird efforts to reduce unwarranted health disparities.

- Post, Brian C., Marilyn A. Cornish, Nathaniel G. Wade & Jeritt R. Tucker. 2013. Religion and spirituality in group counseling: Beliefs and practices of university counseling center counselors. *Journal for Specialists in Group Work* 38(4). 264–284.
doi:10.1080/01933922.2013.834401.

Fifty-four counselors at 9 university counseling centers participated in a study regarding religion and spirituality (R/S) in group counseling. The majority indicated that R/S is an appropriate topic for group counseling and that some religious and spiritual interventions are appropriate to use. However, counselors rarely use these interventions. Counselors endorsed higher ratings for spiritual interventions compared to their religious counterparts. After reading 1 of 2 vignettes depicting either a religious or spiritual concern raised by a group client, counselors rated their likelihood of responding in different ways. Researchers observed no differences in the responses based on the different vignettes.

Reinert, Katia Garcia & Harold G. Koenig. 2013. Re-examining definitions of spirituality in nursing research. *Journal of Advanced Nursing* 69(12). 2622–2634.
doi:10.1111/jan.12152.

The authors discuss the definition of spirituality and its limitations for nursing research. They then propose a definition that will capture more accurately the role of spirituality in health outcomes. The authors propose defining spirituality in the context of religious involvement when conducting research, while using a broader definition of spirituality when providing spiritual care. They argue such definition provides a more appropriate method of measuring this concept in research aimed at evaluating mental health outcomes while preserving the currently used patient-defined definition of spirituality when providing spiritual care.

Rosmarin, David H., Dovid Green, Steven Pirutinsky & Dean McKay. 2013. Attitudes toward spirituality/religion among members of the Association for Behavioral and Cognitive Therapies. *Professional Psychology: Research and Practice* 44(6). 424–433.
doi:10.1037/a0035218.

Attitudes toward spirituality and religion (S/R) have not been systematically surveyed among practitioners of cognitive-behavior therapy. Researchers therefore administered a brief survey about S/R to 262 members of the Association for Behavioral and Cognitive Therapies (ABCT). Approximately half the sample reported a strong sense of spirituality (54%); however, religious affiliation, belief in God, religious practice, and intrinsic religiosity were substantially lower than that of the general population in the United States. Further, 36% of respondents reported some discomfort in addressing S/R issues with clients, 19% reported never/rarely inquiring about S/R, and 71% reported little-to-no previous clinical training in this area. Higher levels of personal S/R involvement predicted greater perception that S/R is relevant to mental health and greater comfort/frequency of addressing S/R in treatment.

Schulman, Martin A & Ricki S Kaplan. 2013. Transference and “the Rebbe” idiographic and nomothetic factors in the psychoanalysis of Lubavitch Chassidim. *Journal of Religion and Health* 52(4). 1267–1280.
doi:10.1007/s10943-013-9745-7.

The Lubavitch Chassidim are one of several ultra-orthodox groups within Judaism. Their central focus is on their leader or Rebbe, who is seen as not only the possessor of all wisdom but also having supernatural powers. In working therapeutically with Lubavitch, one needs to distinguish if the beliefs of the individual are unique to them or reflect the belief system of the community. If the former, then it obviously needs to be analyzed. If the latter, then it is seen as an identification with the group and reflective of the need for group cohesion and often a regulator of self-esteem. The article demonstrates these factors.

Sealy, Patricia A. 2013. Integrating Job, Jesus’ passion, and Buddhist Metta to bring meaning to the suffering and recovery from breast cancer. *Journal of Religion and Health* 52(4). 1162–1167.
doi:10.1007/s10943-011-9547-8.

In this autobiographical article, the author shares her experience of coming face-to-face with death, describing it as a spiritual crisis. She compares her experience with the story of Job, and reflects on the passion narrative of Jesus. In addition, the physical and emotional healing she found included Buddhist meditation of Metta and guided imagery that involved spiritual healing focussed on God, Jesus and the Holy Spirit. These reflections on the story of Job, the experience of passion journaling and Buddhist meditation enabled her to physically, emotionally, and spiritually heal, even in the midst of chaos.

Torri, Maria Costanza. 2013. The influence of Christian conversion in Mapuche traditional medicine in Temuco, Chile: Toward a cultural syncretism or a form of ideological assimilation? *Journal of Religion and Health* 52(4). 1228–1239.

doi:10.1007/s10943-011-9561-x.

The Mapuche communities living in the urban areas of Chile have undergone radical cultural changes due to Christian conversion. This article analyzes the influence of these changes on the Mapuche ideas and practices of the traditional healers (machi) and patients in Temuco (IX Region), Chile, and the changes and adaptations in the perceptions of healing practices and rituals by the patients. The paper shows how, despite some evident challenges, the encounter with the religion of Christianity can create a process of cultural and spiritual syncretism and push traditional medicine toward an increased specialization in the therapeutic practices.

Vaillant, George E. 2013. Psychiatry, religion, positive emotions and spirituality. *Asian Journal of Psychiatry* 6(6). 590–594.
doi:10.1016/j.ajp.2013.08.073.

This paper proposes that eight positive emotions: awe, love/attachment, trust/faith, compassion, gratitude, forgiveness, joy and hope constitute what is meant by spirituality. These emotions have been grossly ignored by psychiatry. The author utilizes ethology and neuroscience to demonstrate this definition of spirituality. Rather than ideas, sacred texts or theology, the author holds that spirituality is all about emotion and social connection that are more dependent on the limbic system than the cortex. Specific religions, for all their limitations, are often the portal through which positive emotions are brought into conscious attention. Neither Freud nor psychiatric textbooks ever mention emotions like joy and gratitude. Hymns and psalms give these emotions pride of place. The whole concept of psychotherapy might change if clinicians set about enhancing positive emotions, rather than focusing only on the negative ones.

Veselský, Pavel, Jiří Poslt, Petra Majewská & Michaela Bolcková. 2013. Addressing Spirituality in Experiential Learning. *Procedia - Social and Behavioral Sciences* 106. 328–337.
doi:10.1016/j.sbspro.2013.12.038.

Experiential learning has had a firm place in education since the time of John Dewey. Nevertheless in the Czech Republic, due to its isolation during the Communist era, its development has been unique. This study aims to examine whether experiential learning is capable of addressing spirituality as a significant aspect of human life. The findings of a research survey conducted among participants of two experiential courses show that a kind of spiritual experience did occur, although it was not intended in the original design of the course. An insight into the question of addressing spirituality through experiential learning is thus provided.

Wachholtz, Amy B. & Usha Sambamthoori. 2013. National trends in prayer use as a coping mechanism for depression: Changes from 2002 to 2007. *Journal of Religion and Health* 52(4). 1356–1368.
doi:10.1007/s10943-012-9649-y.

To analyze national trends in the use of prayer among individuals with depression, researchers adopted a cross-sectional design with data from the adult Alternative Medicine supplement of the National Health Interview Survey 2002 and 2007. Prayer use and depression were combined into 4 categories: (a) prayed in the past 12 months and depressed; (b) prayed in the past 12 months and not depressed; (c) never prayed but depressed; and (d) never prayed and not depressed. Analysis revealed that use of prayer for depression was steady at 6.9 % across time; however, general prayer increased significantly between 2002 and 2007. Women, aged 50-64, unmarried, with high school education were more likely to use prayer while depressed compared to those who were neither depressed nor prayed. Lifestyle behaviors (e.g. alcohol, smoking, exercise) were also associated with prayer use and depression. Prayer use for depression remained steady with unique relationships occurring among those who smoke, use alcohol, and have irregular exercise.

Wolenberg, Kelly M, John D Yoon, Kenneth A Rasinski & Farr A Curlin. 2013. Religion and United States physicians' opinions and self-predicted practices concerning artificial nutrition and hydration. *Journal of Religion and Health* 52(4). 1051–1065.
doi:10.1007/s10943-013-9740-z.

This study surveyed 1,156 practicing US physicians to examine the relationship between physicians' religious characteristics and their approaches to artificial nutrition and hydration (ANH). Forty percent of physicians believed that unless a patient is imminently dying, the patient should always receive nutrition and fluids; 75 % believed that it is ethically permissible for doctors to withdraw ANH. The least religious physicians were less likely to oppose withholding or withdrawing ANH. Compared to non-evangelical Protestant physicians, Jews and Muslims were significantly more likely to oppose withholding ANH, and Muslims were significantly more likely to oppose withdrawing ANH.

PART 3. BOOKS

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