

## INTRODUCTION

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

Articles for this issue were located by searching the following databases: H. W. Wilson Applied Science and Technology, ATLA Religion Database, H. W. Wilson General Science, PubMed, EBSCO Psychology and Behavioral Sciences Collection, PsycARTICLES, PsycINFO, ScienceDirect, and Web of Science. The search terms were altruism, god, goddess, meditat\*, prayer, relig\*, ritual, spiritu\*, and yoga, tailored to the database being searched. Books were located on Amazon.com. Articles not directly relevant to the scientific study of religion were excluded, as were correspondence and reviews. From a universe of 958 articles, 99 articles have been retained from 67 journals. There are 60 pre-publication citations from 43 journals.

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## PART 1: ARTICLES IN RELIGION, BRAIN, AND BEHAVIOR

### 1.1 SCIENTIFIC STUDY OF RELIGION: COGNITIVE NEUROSCIENCE

Berkovich-Ohana, Aviva, Meytal Wilf, Roni Kahana, Amos Arieli & Rafael Malach. 2015. Repetitive speech elicits widespread deactivation in the human cortex: the “Mantra” effect? *Brain and Behavior* 5(7). e00346.  
doi:10.1002/brb3.346.

*Mantra (prolonged repetitive verbal utterance) is one of the most universal mental practices in human culture. However, the underlying neuronal mechanisms that may explain its powerful emotional and cognitive impact are unknown. In order to try to isolate the effect of silent repetitive speech, which is used in most commonly practiced Mantra meditative practices, on brain activity, the authors studied the neuronal correlates of simple repetitive speech in nonmeditators, that is, silent repetitive speech devoid of the wider context and spiritual orientations of commonly practiced meditation practices. Researchers compared, using blood oxygenated level-dependent (BOLD) functional magnetic resonance imaging (fMRI), a simple task of covertly repeating a single word to resting state activity, in 23 subjects, none of which practiced meditation before. The results demonstrate that the repetitive speech was sufficient to induce a widespread reduction in BOLD signal compared to resting baseline. The reduction was centered mainly on the default mode network, associated with intrinsic, self-related processes. Importantly, contrary to most cognitive tasks, where cortical-reduced activation in one set of networks is typically complemented by positive BOLD activity of similar magnitude in other cortical networks, the repetitive speech practice resulted in unidirectional negative activity without significant concomitant positive BOLD. A subsequent behavioral study showed a significant reduction in intrinsic thought processes during the repetitive speech condition compared to rest. These results are compatible with a global gating model that can exert a widespread induction of negative BOLD in the absence of a corresponding positive activation. The triggering of a global inhibition by the minimally demanding repetitive speech may account for the long-established psychological calming effect associated with*

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*commonly practiced Mantra-related meditative practices.*

- Dissanayaka, Chamila, Eti Ben-Simon, Michal Gruberger, Adi Maron-Katz, Haggai Sharon, Talma Hendler & Dean Cvetkovic. 2015. Comparison between human awake, meditation and drowsiness EEG activities based on directed transfer function and MVDR coherence methods. *Medical & Biological Engineering & Computing* 53(7). 599–607.  
doi:10.1007/s11517-015-1272-0.

*This study examined the electroencephalogram functional connectivity (coherence) and effective connectivity (flow of information) of selected brain regions during three different attentive states: awake, meditation and drowsiness. For the estimation of functional connectivity (coherence), Welch and minimum variance distortionless response (MVDR) methods were compared. The MVDR coherence was found to be more suitable since it is both data and frequency dependent and enables higher spectral resolution, while Welch's periodogram-based approach is both data and frequency independent. The directed transfer function (DTF) method was applied in order to estimate the effective connectivity or brain's flow of information between different regions during each state. DTF enables to identify the main brain areas that initiate EEG activity and the spatial distribution of these activities with time. Analysis was conducted using the EEG data of 30 subjects (ten awake, ten drowsy and ten meditating) focusing on six main electrodes (F3, F4, C3, C4, P3, P4, O1 and O2). For each subject, EEG data were recorded during 5-min baseline and 15 min of a specific condition (awake, meditation or drowsiness). Statistical analysis included the Kruskal-Wallis (KW) nonparametric analysis of variance followed by post hoc tests with Bonferroni alpha correction. The results reveal that both states of drowsiness and meditation states lead to a marked difference in the brain's flow of information (effective connectivity) as shown by DTF analyses. In specific, a significant increase in the flow of information in the delta frequency band was found only in the meditation condition and was further found to originate from frontal (F3, F4), parietal (P3, P4) and occipital (O1, O2) regions. Altogether, these results suggest that a change in attentiveness leads to significant changes in the spectral profile of the brain's information flow as well as in its functional connectivity and that these changes can be captured using coherence and DTF analyses.*

- Saggar, Manish, Anthony P. Zanesco, Brandon G. King, David A. Bridwell, Katherine A. MacLean, Stephen R. Aichele, Tonya L. Jacobs, B. Alan Wallace, Clifford D. Saron & Risto Miikkulainen. 2015. Mean-field thalamocortical modeling of longitudinal EEG acquired during intensive meditation training. *NeuroImage* 114. 88–104.  
doi:10.1016/j.neuroimage.2015.03.073.

*Meditation training has been shown to enhance attention and improve emotion regulation. However, the brain processes associated with such training are poorly understood and a computational modeling framework is lacking. Modeling approaches that can realistically simulate neurophysiological data while conforming to basic anatomical and physiological constraints can provide a unique opportunity to generate concrete and testable hypotheses about the mechanisms supporting complex cognitive tasks such as meditation. Here researchers applied the mean-field computational modeling approach using the scalp-recorded electroencephalogram (EEG) collected at three assessment points from meditating participants during two separate 3-month-long shamatha meditation retreats. Cortical, corticothalamic, and intrathalamic interactions were modeled to generate a simulation of EEG signals recorded across the scalp. Two novel extensions to the mean-field approach are presented that allow for: (a) non-parametric analysis of changes in model parameter values across all channels and assessments; and (b) examination of variation in modeled thalamic reticular nucleus (TRN) connectivity over the retreat period. After successfully fitting whole-brain EEG data across three assessment points within each retreat, two model parameters were found to replicably change across both meditation retreats. First, after training, the researchers observed an increased temporal delay between modeled cortical and thalamic cells. This increase provides a putative neural mechanism for a previously observed reduction in individual alpha frequency in these same participants. Second, there was decreased inhibitory connection strength between the TRN and secondary relay nuclei (SRN) of*

*the modeled thalamus after training. This reduction in inhibitory strength was found to be associated with increased dynamical stability of the model. Altogether, this paper presents the first computational approach, taking core aspects of physiology and anatomy into account, to formally model brain processes associated with intensive meditation training. The observed changes in model parameters inform theoretical accounts of attention training through meditation, and may motivate future study on the use of meditation in a variety of clinical populations.*

## **1.2 SCIENTIFIC STUDY OF RELIGION: EVOLUTION**

Bouvet, Romain & Jean-François Bonnefon. 2015. Non-Reflective Thinkers Are Predisposed to Attribute Supernatural Causation to Uncanny Experiences. *Personality & Social Psychology Bulletin* 41(7). 955–961.  
doi:10.1177/0146167215585728.

*For unknown reasons, individuals who are confident in their intuitions are more likely to hold supernatural beliefs. How does an intuitive cognitive style lead one to believe in faith healing, astrology, or extrasensory perception (ESP)? The present authors hypothesize that cognitive style is critically important after one experiences an uncanny event that seems to invite a supernatural explanation. In three studies, researchers show that irrespective of their prior beliefs in the supernatural, non-reflective thinkers are more likely than reflective thinkers to accept supernatural causation after an uncanny encounter with astrology and ESP. This is the first time that controlled experiments demonstrate the negative dynamics of reflection and supernatural causality attribution. The authors consider the possible generalization of these findings to religious beliefs and their implications for the social vulnerability of non-reflective individuals.*

Cavrak, Sarah E. & Heather M. Kleider-Offutt. 2015. Pictures Are Worth a Thousand Words and a Moral Decision or Two: Religious Symbols Prime Moral Judgments. *The International Journal for the Psychology of Religion* 25(3). 173–192.  
doi:10.1080/10508619.2014.921111.

*Symbols represent information that people have previously learned or experienced, but they can also serve to encourage thoughts and behaviors that are consistent with this knowledge/experience in order to maintain social cohesion. Secular pictures representing moral rules have been shown to influence moral decisions, but there is no empirical evidence to demonstrate that religious pictures (e.g., crucifix) encourage the same outcome. Two studies examined whether religious pictures would influence decision making (lexical, moral) and whether personal religious belief was a moderating factor. Results overall showed that religious pictures influenced decision making. In Study 1, lexical decisions were faster to religious than nonreligious words when primed with religious pictures. In Study 2a, participants rated morally ambiguous actions as less morally appropriate when primed with religious pictures. This occurred to a greater degree for religious participants. In Study 2b, there was a priming effect of religious versus control words on moral decisions, but this was not influenced by individual religious beliefs. When compared, pictures versus words led to lower ratings of moral appropriateness for presented actions.*

Galen, Luke. 2015. Atheism, Wellbeing, and the Wager: Why Not Believing in God (With Others) is Good for You. *Science, Religion & Culture* 2(3). 54–69.

*The majority of social science research on religiosity and associated variables has tended to focus on putative beneficial aspects, implying that the absence of religious belief is accompanied by liabilities. However, a closer examination of the literature reveals that the mechanisms of most beneficial associations with religiosity are attributable to factors other than beliefs, chiefly, social engagement and embeddedness in supportive groups. Often, those with the lowest levels of well-being and prosociality are uncommitted or indifferent religious believers, not socially engaged nonbelievers. Therefore, defining individuals who are not committed or engaged in socially supportive groups solely in terms of their lack of religious belief virtually guarantees that atheists and agnostics will appear inferior on a variety of outcome variables. However, nonbelief and secular worldviews can also be practiced*

*in social groups such as atheist, humanist, and freethought organizations. Contrary to prevalent stereotypes, organized nonbelief is also associated with well-being and prosociality equivalent to that seen with organized religious belief. Notable areas of relative advantage for nonbelievers are in the domains of outgroup tolerance and moral universalism.*

- Gegelashvili, M., A. Meca & S. Schwartz. 2015. Religious Exclusivity And Psychosocial Functioning. *Georgian Medical News* (244-245). 45–55.

*In the present study researchers sought to clarify links between religious exclusivity, as form of intergroup favoritism, and indices of psychosocial functioning. The study of in group favoritism has generally been invoked within Social Identity Theory and related perspectives. However, there is a lack of literature regarding religious exclusivity from the standpoint of social identity. In particular, the ways in which religious exclusivity is linked with other dimensions of religious belief and practice, and with psychosocial functioning, among individuals from different religious backgrounds are not well understood. A sample of 8,545 emerging-adult students from 30 U.S. universities completed special measures. Measure of religious exclusivity was developed and validated for this group. The results suggest that exclusivity appears as predictor for impaired psychosocial functioning, low self-esteem and low psychosocial well-being for individuals from organized faiths, as well as for those identifying as agnostic, atheist, or spiritual/nonreligious. These findings are discussed in terms of Social Identity Theory and Terror Management Theory (TMT).*

- Goeke-Morey, Marcie C., Ed Cairns, Laura K. Taylor, Christine E. Merrilees, Peter Shirlow & E. Mark Cummings. 2015. Predictors of Strength of In-Group Identity in Northern Ireland: Impact of Past Sectarian Conflict, Relative Deprivation, and Church Attendance. *Journal of Community & Applied Social Psychology* 25(4). 283–295.  
doi:10.1002/casp.2211.

*Social identity in Northern Ireland is multifaceted, with historical, religious, political, social, economic, and psychological underpinnings. Understanding the factors that influence the strength of identity with the Protestant or Catholic community, the two predominate social groups in Northern Ireland, has implications for individual well-being as well as for the continuation of tension and violence in this setting of protracted intergroup conflict. This study examined predictors of the strength of in-group identity in 692 women (mean age 37 years) in post-accord Northern Ireland. For Catholics, strength of in-group identity was positively linked to past negative impact of sectarian conflict and more frequent current church attendance, whereas for Protestants, strength of in-group identity was related to greater status satisfaction regarding access to jobs, standard of living, and political power compared with Catholics; that is, those who felt less relative deprivation. The discussion considers the differences in the factors underlying stronger identity for Protestants and Catholics in this context.*

- Järnefelt, Elisa, Caitlin F. Canfield & Deborah Kelemen. 2015. The divided mind of a disbeliever: Intuitive beliefs about nature as purposefully created among different groups of non-religious adults. *Cognition* 140. 72–88.  
doi:10.1016/j.cognition.2015.02.005.

*Do non-religious adults – despite their explicit disavowal of religious beliefs – have a tacit tendency to view nature as purposefully created by some being? This question was explored in three online studies using a speeded judgment procedure, which assessed disbelievers in two different Western cultures (United States and Finland). Despite strong performance on control trials, across all three studies non-religious individuals displayed a default bias to increasingly judge pictures of natural phenomena as “purposefully made by some being” under processing constraints. Personal beliefs in the supernatural agency of nature (“Gaia beliefs”) consistently predicted this tendency. However, beliefs in nature as purposefully made by some being persisted even when such secular agency beliefs were controlled. These results suggest that the tendency to view nature as designed is rooted in evolved cognitive biases as well as cultural socialization.*

Lang, Martin, Jan Krátký, John H. Shaver, Danijela Jerotijević & Dimitris Xygalatas. 2015. Effects of Anxiety on Spontaneous Ritualized Behavior. *Current Biology: CB* 25(14). 1892–1897. doi:10.1016/j.cub.2015.05.049.

*Environmental uncertainty and uncontrollability cause psycho-physiological distress to organisms, often impeding normal functioning. A common response involves ritualization, that is, the limitation of behavioral expressions to predictable stereotypic and repetitive motor patterns. In humans, such behaviors are also symptomatic of psychopathologies like obsessive-compulsive disorder (OCD) and autism spectrum disorders (ASDs). Although these reactions might be mediated by different neural pathways, they serve to regain a sense of control over an uncertain situation by engaging in behavioral patterns characterized by redundancy (superfluous actions that exceed the functional requirements of a goal), repetitiveness (recurrent behaviors or utterances), and rigidity (emphasis on fidelity and invariance). In this study, researchers examined whether ritualized behavior will manifest spontaneously as a dominant behavioral strategy in anxiogenic situations. Manipulating anxiety, the researchers used motion-capture technology to quantify various characteristics of hand movements. It was found that induced anxiety led to an increase in repetitiveness and rigidity, but not redundancy. However, examination of both psychological and physiological pathways revealed that repetitiveness and rigidity were predicted by an increase in heart rate, while self-perceived anxiety was a marginally significant predictor of redundancy. The authors suggest that these findings are in accordance with an entropy model of uncertainty, in which anxiety motivates organisms to return to familiar low-entropy states in order to regain a sense of control. These results might inform a better understanding of ritual behavior and psychiatric disorders whose symptoms include over-ritualization.*

O’Grady, Cathleen, Christian Kliesch, Kenny Smith & Thomas C. Scott-Phillips. 2015. The ease and extent of recursive mindreading, across implicit and explicit tasks. *Evolution and Human Behavior* 36(4). 313–322. doi:10.1016/j.evolhumbehav.2015.01.004.

*Recursive mindreading is the ability to embed mental representations inside other mental representations, e.g., to hold beliefs about beliefs about beliefs. An advanced ability to entertain recursively embedded mental states is consistent with evolutionary perspectives that emphasize the importance of sociality and social cognition in human evolution: high levels of recursive mindreading are argued to be involved in several distinctive human behaviors and institutions, such as communication, religion, and story-telling. However, despite a wealth of research on first-level mindreading under the term Theory of Mind, the human ability for recursive mindreading is relatively understudied, and existing research on the topic has significant methodological flaws. Here researchers show experimentally that human recursive mindreading abilities are far more advanced than has previously been shown. Specifically, it is shown that humans are able to mindread to at least seven levels of embedding, both explicitly, through linguistic description, and implicitly, through observing social interactions. However, these data suggest that mindreading may be easier when stimuli are presented implicitly rather than explicitly. The authors argue that advanced mindreading abilities are to be expected in an extremely social species such as our own, where the ability to reason about others’ mental states is an essential, ubiquitous and adaptive component of everyday life.*

### ***1.3 SCIENTIFIC STUDY OF RELIGION: PSYCHOLOGY AND CULTURE***

Bach, Jennifer M. & Tharina Guse. 2015. The effect of contemplation and meditation on “great compassion” on the psychological well-being of adolescents. *Journal of Positive Psychology* 10(4). 359–369. doi:10.1080/17439760.2014.965268.

*This study aimed to evaluate the effect of contemplation and meditation (CM) training, with a focus on developing great compassion, on the psychological well-being (PWB) of adolescents. Participants (n=51) were randomly*

*allocated to either CM training (n=26) or a comparison group (n=25). Both groups completed measures of PWB before and after the intervention. Adolescents who received CM training showed statistically significant increases in environmental mastery and personal growth, as well as decreased negative affect compared to the comparison group. Girls in the experimental group also showed a significant decrease in negative affect compared with boys in the experimental group. Both the experimental and comparison groups demonstrated increased life satisfaction, environmental mastery, self-acceptance, autonomy, and purpose in life. There were no changes in positive affect and positive relations with others for both groups.*

- Barber, Nigel. 2015. Why is Mississippi more religious than New Hampshire? Material security and ethnicity as factors. *Cross-Cultural Research: Journal of Comparative Social Science* 49(3). 315–325. doi:10.1177/1069397114556071.

*Cross-national research links decline in religiosity with improved living conditions due to economic development. These associations were examined in data from Gallup polls conducted in 50 U.S. states. Correlational analysis found that state religiosity (or importance attributed to religion) declined with economic development (state Human Development Index [HDI]). Positive correlates of religiosity included state hypertension levels (used as an index of psychological stress), Southern location, and the proportion of the population that was African American. Regression analysis found that the largest predictors of religiosity were HDI and African American population. The greater religiosity of states with more African American population was statistically explained in terms of stress (hypertension) and racism (Southern location). This is the first systematic study of state or ethnic variation in U.S. religiosity. Results provide further support for the existential security hypothesis of religious belief and support adaptive environmental explanations of societal variation in religiosity.*

- Beit-Hallahmi, Benjamin. 2015. Explaining the Secularity of Academics: Historical Questions and Psychological Findings. *Science, Religion & Culture* 2(3). 104–119.

*Religious beliefs are the products of natural, intuitive human thinking, and are shared by most humans. Academic research, or science, is the product of counter-intuitive, unnatural psychological processes, and the resulting concepts are beyond the reach of most. It is not surprising that religion has been around for possibly more than 100,000 years, while academic research is a recent historical development. Over the past century, individuals who make academic research their life's work have been themselves the subject of academic studies which looked at their social origins, conscious ideals, beliefs, and psychological traits. The findings regarding religiosity have been striking. Academics, especially eminent ones, turn out to be quite irreligious. This is especially striking for academics in the United States, where a culture which is manifestly the most devout among First World nations has produced a sub-culture that is a mirror image of itself. How can the secularity of academics be explained? Research indicates that it has to do with a process of selection and self-selection, which starts in childhood and channels individuals who are highly intelligent, critical, independent, and confident towards the academic world. Contrary to what some might think, it is not getting a Ph.D. that contributes to individual secularity; rather, it is young secular individuals who are highly likely to commit themselves to an academic life.*

- Brambilla, Maria, Avi Assor, Claudia Manzi & Camillo Regalia. 2015. Autonomous Versus Controlled Religiosity: Family and Group Antecedents. *International Journal for the Psychology of Religion* 25(3). 193–210. doi:10.1080/10508619.2014.888902.

*Self-determination theory distinguishes between identified and introjected internalization of religious practices, positing that the former is experienced as autonomous, whereas the latter is experienced as controlling. A study of Italian Catholic youth showed that identified internalization was predicted by (a) parents' behaviors reflecting basic autonomy support (BAS; behaviors involving perspective taking, choice-provision, and control-minimization), (b) youth-group leader BAS, (c) parents' intrinsic value demonstration (IVD), and (d) peers' IVD. Introjected internalization was predicted by (a) conditional parental regard (CR) and (b) peers' IVD.*

*Perceived parental warmth did not mitigate the effect of CR on introjection. The study underscores the importance of two socializing behaviors rarely studied in the area of religious socialization: IVD and conditional regard. The findings also highlight the harmful nature of CR in the religion domain as a practice for which robust negative effects on internalization cannot be eliminated by more salutary parental behaviors as warmth.*

- Burr, Brandon K., J. Brooke Kuns, LaDonna Atkins, Anita Glee Bertram & Kaye Sears. 2015. Generation to generation: Passing on religious and spiritual beliefs and practices. *Journal of Religion, Spirituality & Aging* 27(2-3). 183–200.  
doi:10.1080/15528030.2015.1007544.

*Many families face difficulties in maintaining healthy relationships. Past research has identified that religious and/or spiritual beliefs and practices can enhance family well-being. Research has also shown that religious and/or beliefs and practices can shape the aging process. Yet there exists little information on the methods through which religious and/or spiritual beliefs are passed on to future generations. This study utilized Eriksonian conceptual ideas, and grounded theory methods to conduct interviews with 13 older adults on the process through which religious and/or spiritual beliefs are passed on to children and grandchildren.*

- Chen, Yung-Lung, Mi-Chi Liu, Tsu-Wei Tsai & Yueh-Hua Chen. 2015. Religious practices in cross-cultural contexts: Indonesian male science students' adjustment in Taiwan. *Journal of Counseling Psychology* 62(3). 464–475.  
doi:10.1037/cou0000076.

*Since the terrorist attacks of September 11, 2001, little is known about how Muslims, as a minority group, cope with the challenges associated with engaging their religious practices in a predominantly non-Islamic context. This study aims to investigate how international Muslim science students dealt with the difficulties they faced in their religious practices in a foreign context, and specifically in their research laboratories and in the wider Taiwanese society with its pluralistic spiritual beliefs. Fourteen male Muslim graduate students from Indonesia were recruited to participate in a qualitative interview. In terms of conventional content analysis, their adjustment issues were related to their religious issues, including gender roles both inside and outside of the laboratory, inconvenient practices relating to prayer needs, and eating halal foods and having to face social discrimination off campus. Two types of major adaptation strategies were identified for dealing with such struggles, including religious coping through their Islamic beliefs and bicultural connections. Their major concerns about religious practices (e.g., praying five times per day) were resolved by communicating their needs directly with their laboratory classmates and advisors; however, they navigated the gender boundaries in the laboratory both subtly and inwardly through their Islamic beliefs. The practical implications regarding counseling and education are discussed both in a local and a global context.*

- Delia Deckard, Natalie, Atta Barkindo & David Jacobson. 2015. Religiosity and rebellion in Nigeria: Considering Boko Haram in the radical tradition. *Studies in Conflict & Terrorism* 38(7). 510–528.  
doi:10.1080/1057610X.2015.1022443.

*Testing social movement theory positing that radical organizations are ideologically driven at their core, but are supported by civilians who are driven by social factors, this research interrogates the disparity between radical group ideology and supporter belief set in the context of present-day Nigeria. Content analysis of randomly selected Boko Haram publications establishes the high, and increasing, levels of religiosity exhibited by the violent social movement itself. In contrast, a large-N survey of Nigerians conducted in 2012 and 2013 shows that high levels of religiosity do not significantly predict willingness to justify violence, commitment to non-state violent actors, or positive attitude toward Boko Haram among Nigerians as a whole, but rather the opposite. Given these findings, Boko Haram may be better understood within the tradition of radical extremist movements across the ideological spectrum, even while it frames its struggle as that of a distinctly religious movement.*



- Dulin, John. 2015. Reversing Rupture: Evangelicals' Practice of Jewish Rituals and Processes of Protestant Inclusion. *Revertendo a Rotura: Prática evangélica de Rituais Judeus e Processos de Inclusão Protestante*. 88(3). 601–634.

*This article explores how an evangelical community in southern California can embrace disparate worship modalities—formalistic / anti-formalistic, Jewish/Christian—as legitimate and acceptable moral options. It argues that a major engine driving the acceptance of a previously excluded worship form is the way that Jewish rituals become framed within a particular Christian model of time. The meta-ritual discourse of religious leaders and lay people connects the ritual context to other moments in Christian narratives, opening up a pocket of biblical temporality where divine phenomena can crystallize into material worship forms. The model of time discussed instantiates distinct aspects of Christian metaphysics at discrete periods in salvation history. The ethnography and argument presented here suggest that attention to discourses that connect different temporal contexts may help us understand how theological ideas drive shifts toward both exclusion and greater inclusion of disparate worship forms in Christian communities.*

- Fan, Yaxin, Yi-Yuan Tang, Rongxiang Tang & Michael I. Posner. 2015. Time course of conflict processing modulated by brief meditation training. *Frontiers in Psychology* 6. 911.  
doi:10.3389/fpsyg.2015.00911.

*Resolving conflict is a pivotal self-control ability for human adaptation and survival. Although some studies reported meditation may affect conflict resolution, the neural mechanisms are poorly understood. Researchers conducted a fully randomized five-hour trial of one form of mindfulness meditation-integrative body-mind training (IBMT) in comparison to a relaxation training control. During the Stroop word-color task, IBMT group produced faster resolution of conflict, a smaller N2 and an earlier and larger P3 component of the event-related brain potentials. These results indicate that brief meditation training induces a brain state that improves the resolution of conflict.*

- Greene, Anne-marie & Mandy Robbins. 2015. The cost of a calling? Clergywomen and work in the Church of England. *Gender, Work and Organization* 22(4). 405–420.  
doi:10.1111/gwao.12101.

*This article explores the work of clergywomen in the Church of England within an analysis of the Church as a gendered organization. The authors highlight the sex discrimination they often face, at the same time as satisfaction with their work and the need to follow their calling regardless of the difficulties. This is explained through an analysis of the significance of religious calling and the requirement for “sacrifice” on their ability to endure their work and to challenge discriminatory treatment.*

- Hallett, Michael & J. Stephen McCoy. 2015. Religiously Motivated Desistance: An Exploratory Study. *International Journal of Offender Therapy and Comparative Criminology* 59(8). 855–872.  
doi:10.1177/0306624X14522112.

*This article examines the life-history narratives of 25 successful ex-offenders professing Christianity as the source of their desistance. Unstructured in-depth life-history interviews from adult male desisters affirm use of a “feared self” and “cognitive shifts” regarding perceptions of illegal behavior. “Condemnation scripts” and “redemption narratives,” however, differ radically from those uncovered in previous research. Stories of behavior change and identity transformation achieved through private religious practice and energetic church membership dominate the narratives. Findings suggest there are diverse phenomenologies of desistance and that by more narrowly tailoring research to explore subjectivities in the desistance process, important discrepancies in perceptions of agency and structure are revealed. Three prominent desistance paradigms (Making Good, Cognitive Transformation, and Identity Theory) are used to examine the narratives.*

Harris, Casey T., Mindy Bradley, Megan Handley & Steven Worden. 2015. Religion, age, and crime: Do religious traditions differentially impact juvenile versus adult violence? *Sociological Spectrum* 35(4). 372–391.

doi:10.1080/02732173.2015.1043682.

*A growing body of empirical research demonstrates that the relative presence of religious adherents at the community-level has important relationships with rates of crime and violence. Less understood is how adherence to specific religious traditions (e.g., evangelical Protestant, Catholic, mainline Protestant) is associated with rates of crime, especially across particular age groups toward which religious traditions devote varying degrees of structural and cultural resources. Using data from the Religious Congregations and Membership Survey and age-specific arrest data from the Uniform Crime Reporting program in 2010, the current study finds that the impact of religious adherence on crime varies by religious tradition and across juvenile versus adult crime. Specifically, evangelical Protestant adherence is negatively associated with juvenile but not adult violence, while Catholic adherence is associated with reduced adult but not juvenile violence, net of controls.*

Ingen, Erik van & Nienke Moor. 2015. Explanations of changes in church attendance between 1970 and 2009. *Social Science Research* 52. 558–569.

doi:10.1016/j.ssresearch.2015.04.004.

*Using a new dataset with 51 countries across a long period, researchers apply panel regression models, which enable them to test well-known theories in a more strict and dynamic fashion than do cross-sectional studies. These results provide new evidence for a few old ideas, but also show striking lack of evidence for ideas that appear well-accepted. Tertiary education proved to be a strong predictor of changes in church attendance. Theories about individualization were also supported. The evidence of existential insecurity as a cause of change was ambiguous: economic development and life expectancy showed significant effects but income inequality did not. Researchers found no support for theories on social globalization and social benefit policy. Finally, the authors found that income inequality and urbanization were driving forces of change during the 70s and 80s, but not since 1990.*

Krause, Neal. 2015. Assessing the religious roots of volunteer work in middle and late life. *Research on Aging* 37(5). 439–463.

doi:10.1177/0164027514541703.

*Research reveals that older people do a significant amount of volunteer work. Moreover, a good deal of this volunteering takes place in religious institutions. The purpose of this study is to examine how social factors in the church influence the decision to volunteer. The analyses are conducted in two steps. First, data from a longitudinal nationwide survey of older people are used to show that increases in spiritual support (i.e., assistance from fellow church members that is designed to bolster religious beliefs and behaviors) are associated with increases in the frequency of volunteer work. Second, cross-sectional analyses from the same survey suggest that spiritual support is associated with volunteering in part because it promotes greater compassion. However, the magnitude of the relationship between compassion and volunteering is fairly modest.*

Langston, Joseph, Joseph Hammer & Ryan T. Cragun. 2015. Atheism Looking In: On the Goals and Strategies of Organized Nonbelief. *Science, Religion & Culture* 2(3). 70–85.

*This exploratory study contributes to research on nonbelievers, their communities, and the atheist movement in general by dividing nonbelievers (n=1,939) into four groups based on degree of formal affiliation and assessing attitudes, perceptions, and preferences in three areas. First, researchers examined the preferences of nonbelieving group members (“secular affiliates”), former members, and nonbelieving non-members (“secular nonaffiliates”) on nonbeliever group goals, functions, and activities. Second, the researchers examined the perceptions of secular affiliates regarding why secular nonaffiliates do not join nonbeliever groups as well as the reasons given by secular nonaffiliates as to why they do not join these groups. Third, a series of questions were asked about nonbelievers’*

*preferences on how to best approach religion and religious individuals. Seventy-seven percent of all respondents opted for the group goal of charitable contributions and humanitarian activities, while only 23% of all respondents selected “proselytizing” as a desirable group goal. Secular nonaffiliates’ strongest reason for not joining groups was that joining such groups was a low priority for them, followed by nonbelief not being a salient part of their identity. Notably, approximately one third of secular nonaffiliates indicated that they would join such groups if they were locally available. Neither maximum accommodation nor confrontation with religion was indicated by a majority of nonbelievers, though more respondents opted for accommodation (60%) than confrontation (25%). Most respondents indicated that their willingness to attack or ridicule religion was not absolute, but rather context dependent.*

Longden, Gareth. 2015. A Profile of the Members of the British Humanist Association. *Science, Religion & Culture* 2(3). 86–95.

*In 1967 Campbell published the first detailed survey of the members of the British Humanist Association. His survey of 931 members represented the most comprehensive study of the members of the organization then published. The current research builds on Campbell’s work and offers a detailed profile of the membership of the British Humanist Association at the start of the 21st century. The results of a survey conducted in 2014 of 1,097 humanists are presented and compared with Campbell’s original 1967 data and against data derived from the 2011 United Kingdom Census. Particular attention is given to the topics of sex, age, residence, employment, and education background of the members.*

Maslowe, Kathryn E. & Mark A. Yarhouse. 2015. Christian Parental Reactions When a LGB Child Comes Out. *American Journal of Family Therapy* 43(4). 352–363.  
doi:10.1080/01926187.2015.1051901.

*The purpose of this study was to understand how parents who identify as Christian responded to and coped with their child’s disclosure of same-sex sexuality and/or having a lesbian, gay, or bisexual identity (LGB). Research has shown the effect parental responses can have on the psychological health of sexual minorities, as well as the emotions Christian parents may experience post disclosure. Little research highlights the struggle Christian parents can experience due to tension between their religious beliefs and the love they have for their child. This study highlights a unique aspect of how parents attempt to negotiate this tension.*

Patrick, Julie Hicks & James A. Henrie. 2015. Religious doubt and spiritual growth among adults bereaved of a grandparent. *Journal of Religion, Spirituality & Aging* 27(2-3). 93–107.  
doi:10.1080/15528030.2014.971142.

*Religious beliefs and bereavement provide contexts for personal growth. The death of a grandparent may be especially well-suited to prompt such growth. Using data from 164 adults, ages 18 to 51 years, bereaved of a grandparent, the authors examined whether religious doubt relates to current grief via perceived spiritual growth. Mediation analyses showed that fewer religious doubts were associated with spiritual growth in bereavement, but spiritual growth was associated with higher levels of current grief. Results are discussed within a framework for including family processes in bereavement research that includes religious doubt and spiritual growth.*

Pavlov, S. V., V. V. Korenyok, N. V. Reva, A. V. Tumyalis, K. V. Loktev & L. I. Aftanas. 2015. Effects of long-term meditation practice on attentional biases towards emotional faces: An eye-tracking study. *Cognition and Emotion* 29(5). 807–815.  
doi:10.1080/02699931.2014.945903.

*Attentional biases towards affective stimuli reflect an individual balance of appetitive and aversive motivational systems. Vigilance in relation to threatening information reflects emotional imbalance, associated with affective and somatic problems. It is known that meditation practice significantly improves control of attention, which is considered to be a tool for adaptive emotional regulation. In this regard, the main aim of the present study was to*

*evaluate the influence of meditation on attentional bias towards neutral and emotional facial expressions. Eyes were tracked while 21 healthy controls and 23 experienced meditators (all males) viewed displays consisting of four facial expressions (neutral, angry, fearful and happy) for 10 s. Measures of biases in initial orienting and maintenance of attention were assessed. No effects were found for initial orienting biases. Meditators spent significantly less time viewing angry and fearful faces than control subjects. Furthermore, meditators selectively attended to happy faces whereas control subjects showed attentional biases towards both angry and happy faces. In sum, the authors conclude that long-term meditation practice adaptively affects attentional biases towards motivationally significant stimuli and that these biases reflect positive mood and predominance of appetitive motivation.*

- Perry, Ryan, Yin Paradies & Anne Pedersen. 2015. Religious Ambivalence: Suppression of Pro-Social Attitudes Toward Asylum Seekers by Right-Wing Authoritarianism. *The International Journal for the Psychology of Religion* 25(3). 230–246.  
doi:10.1080/10508619.2014.921473.

*A survey of 168 White Australian community members examined whether ambivalence toward certain social groups by some religious individuals constituted a suppression effect in which authoritarian motivated prejudice suppressed more pro-social attitudes toward asylum seekers. Using mediation analysis, it was found that Christian religious identity was not significantly associated with prejudice at a bivariate level. However, when Right-Wing Authoritarianism (RWA) was taken into account, Christians (compared with non-Christians) were less likely to hold negative attitudes toward asylum seekers in Australia. Inclusion of acculturation ideologies (assimilation, multiculturalism, and color-blindness) in the models indicated that the suppression effect was specific to RWA rather than due to other intergroup attitudes. However, findings suggest that multiculturalism may be one proximal indicator of Christian pro-sociality.*

- Reymann, Linda S., Geraldine M. Fialkowski & Joseph A. Stewart-Sicking. 2015. Exploratory Study of Spirituality and Psychosocial Growth in College Students. *Journal of College Counseling* 18(2). 103–115.  
doi:10.1002/jocc.12008.

*This study examined spirituality, personality, and psychosocial growth among 216 students at a small university in Maryland. Results demonstrated that faith maturity predicted unique variance in purpose in life. There was a main effect observed for gender among faith scores, as well as an interaction effect between gender and year in school among faith scores. The findings suggest that a culture that fosters students' spirituality may have positive effects on aspects of well-being.*

- Shrell-Fox, Paul. 2015. When Rabbis Lose Faith: Twelve Rabbis Tell their Stories about their Loss of Belief in God. *Science, Religion & Culture* 2(3). 131–146.

*Religious intuition evolves over time. To the degree that belief in a supernatural God is a derivative of religious intuition, it is safe to assume that over one's lifetime, intuition and attitudes towards a belief in God is subject to fluctuation. Dennett and LaScola found this to be true with priests and ministers. That study was the catalyst for the current study of rabbis' shift in religious beliefs in general, and belief in God in particular. Approximately 25 rabbis voluntarily submitted vignettes concerning their shifts in religious belief. These vignettes were solicited via rabbinic list-serves. Those rabbis who denied a belief in a supernatural being were interviewed to explore the evolution of their religious faith and its impact on their religious practice and behavior. In as much as Judaism places a great emphasis on communal deeds rather than cultural creed, the rabbis still feel comfortable functioning in communities, school settings and informal educational roles. Researchers therefore may expect little existential angst; this was found to be only partially true. Some have found other expressions of their talents, while others anxiously await the opportunity to find alternate means of financial support. Specific issues of Jewish dietary*

*practice, Sabbath observance and daily prayer are addressed, as well as an exploration of the rabbis' connection to the Jewish people, despite waning practice.*

Stinespring, John & Ryan T. Cragun. 2015. Simple Markov Model for Estimating the Growth of Nonreligion in the United States. *Science, Religion & Culture* 2(3). 96–103.

*The authors develop a simple Markov model to forecast future rates of religious nonaffiliation. A two-period, two-variable Markov switching model is used which yields a tractable steady state solution and growth path for the share of the population that is nonreligious. The model setup and solution are shown to be both intuitive and determined by three parameter values. The authors illustrate its use by estimating these parameter values using biannual data from the 1973 to 2012 General Social Surveys (GSS). The parameter estimates from the first half of the GSS data series, 1973-1991, provide a good fit to the 1993-2012 data. Calibrating the model to the latter half of the data, 1993-2012, produces a forecast range of between 26% and 47% of the US population being nonreligious by the year 2042.*

Sun, Sai, Ziqing Yao, Jaixin Wei & Rongjun Yu. 2015. Calm and smart? A selective review of meditation effects on decision making. *Frontiers in Psychology* 6. 1059.  
doi:10.3389/fpsyg.2015.01059.

*Over the past two decades, there has been a growing interest in the use of meditation to improve cognitive performance, emotional balance, and well-being. As a consequence, research into the psychological effects and neural mechanisms of meditation has been accumulating. Whether and how meditation affects decision making is not yet clear. Here, researchers review evidence from behavioral and neuroimaging studies and summarize the effects of meditation on social and non-social economic decision making. Research suggests that meditation modulates brain activities associated with cognitive control, emotion regulation and empathy, and leads to improved non-social and social decision making. Accordingly, the authors propose an integrative model in which cognitive control, emotional regulation, and empathic concern mediate the effects of meditation on decision making. This model provides insights into the mechanisms by which meditation affects the decision making process. More evidence is needed to test our explanatory model and to explore the function of specific brain areas and their interactive effects on decision making during meditation training.*

#### **1.4 SCIENTIFIC STUDY OF RELIGION: METHOD & THEORY**

Bradley, David F., Julie J. Exline & Alex Uzdevaines. 2015. The God of Nonbelievers: Characteristics of a Hypothetical God. *Science, Religion & Culture* 2(3). 120–130.

*People who believe in the existence of a god or gods often hold an image of a god with relational characteristics (e.g., loving, cruel, and/or distant). Can nonbelievers form an image of a hypothetical god? What characteristics do their hypothetical gods have? Researchers conducted an Internet-based survey of adult nonbelievers in the U.S. (n=458). Most (86%; n=393) were able to form an image of a hypothetical god. On average, nonbelievers described a god that was more loving than distant or cruel. Compared to a previously reported sample of religious believers, nonbelievers described a god that was less loving, more distant, and more cruel. Using correlation and regression, the authors found that personality factors (Big Five personality traits, adult attachment style, and socially desirable responding) were not strong predictors of the characteristics nonbelievers assign to hypothetical gods. Seeing a hypothetical god as more loving, less cruel, and less distant was associated with more past positive emotional experiences with gods, less past anger at gods, less participation in explicitly nonreligious activities, and greater desire for gods to exist. Basing a hypothetical god on a previous personal image of god was associated with imagining a more loving and less distant god, while using a culturally popular image of god was associated with a more cruel god. These findings suggest that nonbelievers, when prompted to imagine a hypothetical god, do not uniformly imagine cruel gods, but a diverse array of deities based partly on prior experiences with gods and current interactions with nonbelief.*

Choe, Jaeyeon, Garry Chick & Michael O'Regan. 2015. Meditation as a kind of leisure: The similarities and differences in the United States. *Leisure Studies* 34(4). 420–437. doi:10.1080/02614367.2014.923497.

*Meditation has been shown to be a cost-effective means to help individuals reduce stress, alleviate anxiety and depression. Similarly, leisure has been found to reduce stress, improve mood and contribute to overall health and well-being. The similarities and differences in outcomes between meditation and leisure suggest that a comparative analysis may determine if and how experiences and outcomes of meditation may be similar to and different from those of leisure and provide deeper insights into the ways in which both can contribute to improved quality of life. The purpose of this study is to examine the similarities and differences in meditation and leisure as perceived by a range of individuals engaging in meditation. Results indicate that meditators experience stress reduction, emotional balance and an enhanced quality of life during both their leisure and meditation. Many of the positive experiences and outcomes derived from meditation render it very similar to leisure. Nevertheless, meditation and leisure also differ in several important ways.*

Cragun, Ryan T., Joseph Hammer & Michael Nielsen. 2015. The NonReligious-NonSpiritual Scale (NRNSS): Measuring Everyone from Atheists to Zionists. *Science, Religion & Culture* 2(3). 36–53.

*Although hundreds of measures of personal religiousness and spirituality exist, none are capable of reliably and validly assessing individuals who identify as nonreligious and nonspiritual. There is a need to develop a valid and reliable measure of (non)religiousness and (non)spirituality. This article discusses these problems, and presents the development and initial validation of a 17-item Nonreligious-Nonspiritual Scale (NRNSS) across three studies. The NRNSS exhibited high internal consistency and high test-retest reliability. Two exploratory and one confirmatory factor analysis of the NRNSS supported the hypothesized two-factor solution: (a) institutional religiousness and (b) individualistic spirituality. The NRNSS also demonstrated convergent validity through theoretically-expected correlations with established measures of religiousness and spirituality (the Cross-Cultural Dimensions of Religiosity, Humanistic Morality, and Traditional Religious Morality scales). In summary, the NRNSS may work as an initial attempt to address the limitations of other scales for capturing how religious/nonreligious/nonspiritual individuals are.*

Davis, Don E., Kenneth Rice, Joshua N. Hook, Daryl R. Van Tongeren, Cirleen DeBlaere, Elise Choe & Everett L. Worthington. 2015. Development of the Sources of Spirituality Scale. *Journal of Counseling Psychology* 62(3). 503–513. doi:10.1037/cou0000082.

*Most measures of spirituality privilege religious spirituality, but people may experience spirituality in a variety of ways, including a sense of closeness, oneness, or connection with a theistic being, the transcendent (i.e., something outside space and time), oneself, humanity, or nature. The overall purpose of the present 4 studies was to develop the Sources of Spirituality (SOS) Scale to measure these different elements of spirituality. In Study 1, researchers created items, had them reviewed by experts, and used data from a sample of undergraduates (n=218) to evaluate factor structure and inform initial measurement revisions. The factor structure replicated well in another sample of undergraduates (n=200; Study 2), and in a sample of community adults (n=140; Study 3). In a sample of undergraduates (n=200; Study 4), the researchers then evaluated evidence of construct validity by examining associations between SOS Scale scores and religious commitment, positive attitudes toward the Sacred, and dispositional connection with nature. Moreover, based on latent profile analyses results, they found 5 distinct patterns of spirituality based on SOS subscales. The authors end by considering implications for therapy and relevance of the findings for models of spirituality and future research.*

Jong, Jonathan. 2015. On (not) defining (non)religion. *Science, Religion & Culture* 2(3). 15–24.

*Social scientific research on religion (and related phenomena, including nonreligion, atheism, and secularity) is invariably prefaced by sheepish attempts to define these terms, followed by apologies for the inevitable inadequacy of the proposed definitions. This paper argues that scholars of religion and nonreligion should accept the fact that “religion” and “nonreligion” are, like all social scientific concepts (and some biological ones), fuzzy categories. There is no such thing as religion, such that the term “religion” picks out all and only all examples of religion, or specifies the necessary and sufficient conditions for counting as religious. Rather, there are causally and phenomenologically distinct phenomena—such as the belief in supernatural agents, participation in rituals, formation of non-kin groups, obedience to moral codes, and so forth—that variously co-occur in packages we intuitively label as particular religions. Furthermore, these distinct phenomena are also present among ostensibly nonreligious (or secular) individuals and groups. Scholars of religion and nonreligion should therefore all but abandon the terms “religion” and “nonreligion,” and with them the clichéd definitional handwringing that typically comes with attempts at defining these terms. At best, they may retain their social functions—in names of departments, scholarly organizations, conferences, and journals, for example—but they have no legitimate scientific use.*

Karakas, Fahri, Emine Sarigollu & Mustafa Kavas. 2015. Discourses of collective spirituality and Turkish Islamic ethics: An inquiry into transcendence, connectedness, and virtuousness in Anatolian tigers. *Journal of Business Ethics* 129(4). 811–822.  
doi:10.1007/s10551-014-2135-6.

*Based on case studies and qualitative interviews conducted with 40 stakeholders in five small-and-medium-sized enterprises (SMEs), or so called Anatolian tigers, in Turkey, this article explores what collective spirituality and Turkish Islamic business ethics entail and how they shape organizational values using diverse stakeholder perspectives. The study has revealed six emergent discourses around collective spirituality and Islamic business ethics: Flying with both wings; striving to transcend egos; being devoted to each other; treating people as whole persons; upholding an ethics of compassion; and leaving a legacy for future generations. These discourses are organized around three themes of collective spirituality, respectively: Transcendence, connectedness, and virtuousness.*

Quillen, Ethan G. 2015. Discourse Analysis and the Definition of Atheism. *Science, Religion & Culture* 2(3). 25–35.

*In recent years the study of Atheism has grown in popularity, leading to both positive and negative results. On one end, this has engendered a polyvocal and polyfocal discourse, garnering perspectives from a number of different methodological and theoretical approaches so as to develop a truly inter- and multi-disciplinary understanding about what is meant when atheism is discussed. On the other, this myriad of voices has equally led to an ever-broadening discordancy, an equivocal discourse that makes it all the more difficult to identify any sort of common or universal definition. This latter issue is, as this paper will argue, the result of a theoretical abstraction, a scholarly attempt at theorizing a general interpretation. This is evinced not just by the way the term has been contrarily defined, but by a number of novel approaches, such as the creation and use of umbrella terms such as “non-religion,” or the precarious notion of a division between “positive” and/or “negative” “Atheism. This article will attempt to assuage this issue by mapping out the discursive shifts presented within the discourse on defining the term, as well as promote a more discursive approach, linking the study of Atheism with the study of religion, and thereby the issues addressed in defining “religion” with those affecting the definition of “Atheism.”*

## PART 2: ARTICLES IN SPIRITUALITY & HEALTH RESEARCH

### 2.1 SPIRITUALITY & HEALTH: GENERAL HEALTH & WELL-BEING

Banth, Sudha & Maryam Didehdar Ardebil. 2015. Effectiveness of mindfulness meditation on pain and quality of life of patients with chronic low back pain. *International Journal of Yoga* 8(2). 128–133.  
doi:10.4103/0973-6131.158476.

*Recovery of patients with chronic low back pain (LBP) depends on several physical and psychological factors. Therefore, the authors aimed to examine the efficacy of mindfulness based stress reduction (MBSR) as a mind-body intervention on quality of life and pain severity of female patients with nonspecific chronic LBP (NSCLBP). Eighty-eight patients diagnosed as NSCLBP by physician and randomly assigned to experimental (MBSR with usual medical care) and the control group (usual medical care only). The subjects were assessed three times: before, immediately after, and 4 weeks after intervention. The findings showed MBSR was effective in reduction of pain severity and the patients who practiced 8 sessions meditation reported significantly lower pain than patients who only received usual medical care.*

Black, Helen K. & Susan M. Hannum. 2015. Aging, spirituality, and time: A qualitative study. *Journal of Religion, Spirituality & Aging* 27(2-3). 145–165.  
doi:10.1080/15528030.2014.1003274.

*The present article examines the concepts of aging, time, spirituality, and future care needs in four randomly selected informants from a group of 54 never-married childless older women. Using data from the Generativity and Lifestyles of Older Women (GLOW) study, researchers questioned how women's perceptions of these concepts came together in current older age. They employed cultural theory, ethnography, and phenomenology, to produce a portrait of each woman interviewed. Through a three-session interview process, interviewers elicited the women's life stories, reasons for childlessness, and topics that emerged as significant to the women, including aging, a sense of time remaining, and spirituality. A key finding was that the context of each woman's life, both biographical and historical, transpired as a foundation for these concepts. That is, a woman's "place in time" shaped their experiences of aging, as well as her reasons for childlessness and perceptions of finitude.*

Cramer, Holger, Sybille Rabsilber, Romy Lauche, Sherko Kümmel & Gustav Dobos. 2015. Yoga and meditation for menopausal symptoms in breast cancer survivors: A randomized controlled trial. *Cancer* 121(13). 2175–2184.  
doi:10.1002/cncr.29330.

*Breast cancer survivors have only very limited treatment options for menopausal symptoms. The objective of this trial was to evaluate the effects of a 12-week traditional Hatha yoga and meditation intervention on menopausal symptoms in breast cancer survivors. Patients were randomly assigned either to a 12-week yoga and meditation intervention or to usual care. The primary outcome measure was total menopausal symptoms (Menopause Rating Scale [MRS] total score). Secondary outcome measures included MRS subscales, quality of life (Functional Assessment of Cancer Therapy-Breast), fatigue (Functional Assessment of Chronic Illness Therapy-Fatigue), depression, and anxiety (Hospital Anxiety and Depression Scale). Outcomes were assessed at week 12 and week 24 after randomization. In total, 40 women were randomized to yoga (n=19) or to usual care (n=21). Women in the yoga group reported significantly lower total menopausal symptoms compared with the usual care group at week 12 and at week 24. At week 12, the yoga group reported less somatovegetative, psychological, and urogenital menopausal symptoms; less fatigue; and improved quality of life. At week 24, all effects persisted except for psychological menopausal symptoms. Short-term effects on menopausal symptoms remained significant when only*



women who were receiving antiestrogen medication (n=36) were analyzed. Six minor adverse events occurred in each group.

- Desveaux, Laura, Annemarie Lee, Roger Goldstein & Dina Brooks. 2015. Yoga in the Management of Chronic Disease: A Systematic Review and Meta-analysis. *Medical Care* 53(7). 653–661. doi:10.1097/MLR.0000000000000372.

*Heart disease, stroke, and chronic obstructive pulmonary disease (COPD) are the leading causes of death and disability worldwide. Although individuals with these conditions have been reported to benefit from yoga, its effectiveness remains unclear. The aim of this study was to perform a systematic review of the effectiveness of yoga on exercise capacity, health related quality of life (HRQL), and psychological well-being for individuals with chronic disease and describe the structure and delivery of programs. Researchers thus performed a systematic review of randomized controlled trials examining yoga programs for individuals with heart disease, stroke, and COPD compared with usual care. Ten studies (431 individuals) were included and were comparable in their design and components, irrespective of the chronic disease. The standardized mean difference for the mean change in exercise capacity was 2.69 and for HRQL it was 1.24. Symptoms of anxiety were reduced after yoga in individuals with stroke, although this was not observed in individuals with COPD. The effect of yoga on symptoms of depression varied across studies with no significant effects compared with usual care.*

- Ha, Min-Sung, Do-Yeon Kim & Yeong-Ho Baek. 2015. Effects of Hatha yoga exercise on plasma malondialdehyde concentration and superoxide dismutase activity in female patients with shoulder pain. *Journal of Physical Therapy Science* 27(7). 2109–2112.

*The purpose of this study was to analyze the effects of Hatha yoga exercise on plasma malondialdehyde (MDA) concentration and superoxide dismutase (SOD) activity in female patients with shoulder pain. Subjects comprised 20 female patients with shoulder pain. Subjects were divided into 2 groups: a Hatha yoga exercise group (n=10) and a control group that performed no exercise (n=10). The subjects' body composition, plasma malondialdehyde concentrations, and superoxide dismutase activities were measured before and after a 16-week Hatha yoga exercise program. After the 16-week Hatha yoga exercise program, the exercise group had significantly lower plasma MDA concentrations than the control group. In addition, the exercise group had significantly higher plasma SOD activity than the control group. The authors conclude that Hatha yoga exercise improves flexibility, muscle tone and strength, balance, and joint function. These findings indicate that regular and continuous yoga exercise effectively improved body composition, decrease plasma MDA concentration, and increase plasma SOD activity in female patients with shoulder pain.*

- Humberstone, Barbara & Carol Cutler-Riddick. 2015. Older women, embodiment and yoga practice. *Ageing & Society* 35(6). 1221–1241. doi:10.1017/S0144686X1400018X.

*In this paper, researchers consider the ageing body and the 'body techniques' practiced by older women within their yoga classes. The paper emphasizes the importance of exploring alternative definitions of the human condition, how these are shaped and assembled through particular embodied practices which are realized personally and socially. Taking a contextualized phenomenological approach, older women's experiences are made visible through interview and participant observation. Unlike much sporting practice, the body techniques managed by the women did not emphasize sporting prowess but provided for an integration of body and mind. In the process, biological ageing was accepted yet the women maintained control over the process, troubling prevailing narratives of ageing, declining control and increasing weakness that are taken for granted in much of Western society. The paper highlights the significance of socially rooted ontological embodiment in understanding the ageing body and particular bodily practices.*

Hurk, D. G. M. van den, M. P. J. Schellekens, J. Molema, A. E. M. Speckens & M. A. van der Drift. 2015. Mindfulness-Based Stress Reduction for lung cancer patients and their partners: Results of a mixed methods pilot study. *Palliative Medicine* 29(7). 652–660. doi:10.1177/0269216315572720.

*The article presents the results of a mixed methods pilot study concerning the impact on the Mindfulness-Based Stress Reduction training on lung cancer patients and partners. The study suggests the need to conduct a randomized controlled trial to determine the efficacy of the Mindfulness-Based Stress Reduction training to reduce psychological distress in lung cancer patients and partners. Details on the results, design and methods of the study are given.*

Jones, Kim D., Scott D. Mist, Marie A. Casselberry, Ather Ali & Michael S. Christopher. 2015. Fibromyalgia Impact and Mindfulness Characteristics in 4986 People with Fibromyalgia. *Explore (New York, N.Y.)* 11(4). 304–309. doi:10.1016/j.explore.2015.04.006.

*A growing body of literature suggests that mindfulness techniques may be beneficial in fibromyalgia. A recent systematic review and meta-analysis of six trials indicated improvement in depressive symptoms and quality of life, calling for increased rigor and use of standardized measures in future trials. The purpose of the study was to examine the relationship between mindfulness (as measured by the Five Facet Mindfulness Questionnaire [FFMQ]) and fibromyalgia impact (as measured by the Revised Fibromyalgia Impact Questionnaire [FIQR]). A cross-sectional survey was conducted with adults diagnosed with fibromyalgia from a national fibromyalgia advocacy foundation e-mail list. A total of 4986 respondents represented all 50 states in the United States and 30 countries. FIQR scores demonstrated moderate to severe fibromyalgia with the majority of subjects (59%) scoring  $\leq 60$ . Scores on the FFMQ subscales ranged from 20.8 to 27.3, with highest scores for the observe subscale. All subscale correlations were small to moderate and indicated that more severe fibromyalgia impact was associated with less mindfulness except in the observe scale. No clinical or demographics explained as much variance in the FIQR total as any of the mindfulness subscales.*

Khalsa, Sahib S., David Rudrauf, Richard J. Davidson & Daniel Tranel. 2015. The effect of meditation on regulation of internal body states. *Frontiers in Psychology* 6. 924. doi:10.3389/fpsyg.2015.00924.

*Meditation is commonly thought to induce physiologically quiescent states, as evidenced by decreased autonomic parameters during the meditation practice including reduced heart rate, respiratory rate, blood pressure, skin conductance, and increased alpha activity in the electroencephalogram. Preliminary empirical support for this idea was provided in a case report by Dimsdale and Mills (2002), where it was found that meditation seemed to regulate increased levels of cardiovascular arousal induced by bolus isoproterenol infusions. In that study, while meditating, a self-taught meditator exhibited unexpected decreases in heart rate while receiving moderate intravenous doses of the beta adrenergic agonist isoproterenol. This effect was no longer observed when the individual received isoproterenol infusions while not meditating. The current study was designed to explore this phenomenon empirically in a group of formally trained meditators. A total of 15 meditators and 15 non-meditators individually matched on age, sex, and body mass index were recruited. Participants received four series of infusions in a pseudorandomized order: isoproterenol while meditating (or during a relaxation condition for the non-meditators), isoproterenol while resting, saline while meditating (or during a relaxation condition for the non-meditators), and saline while resting. Heart rate was continuously measured throughout all infusions, and several measures of heart rate were derived from the instantaneous cardiac waveform. There was no evidence at the group or individual level suggesting that meditation reduced the cardiovascular response to isoproterenol, across all measures. These results suggest that meditation is not associated with increased regulation of elevated cardiac adrenergic tone.*

Kim, Sang-Dol. 2015. Effects of yoga exercises for headaches: a systematic review of randomized controlled trials. *Journal of Physical Therapy Science* 27(7). 2377–2380.

*The purpose of this study was to assess the evidence for the effectiveness of yoga exercises in the management of headaches. A search was conducted of six electronic databases to identify randomized controlled trials (RCTs) reporting the effects of yogic intervention on headaches published in any language before January 2015. One potential trial was identified and included in this review. The quality critical appraisal indicated a moderate risk of bias. The available data could only be included as a narrative description. Headache intensity and frequency, anxiety and depression scores, and symptomatic medication use were significantly lower in the yoga group compared to the control group. There is evidence from one RCT that yoga exercises may be beneficial for headaches. However, the findings should be interpreted with caution due to the small number of RCTs. Therefore, further rigorous methodological and high quality RCTs are required to investigate the hypothesis that yoga exercises alleviate headaches, and to confirm and further comprehend the effects of standardized yoga programs on headaches.*

Kobayashi, Daiki, Takuro Shimbo, Osamu Takahashi, Roger B. Davis & Christina C. Wee. 2015. The relationship between religiosity and cardiovascular risk factors in Japan: A large-scale cohort study. *Journal of the American Society of Hypertension* 9(7). 553–562.  
doi:10.1016/j.jash.2015.04.003.

*The goal of this study was to examine the relationship between religiosity and cardiovascular risk factors in a Japanese population. A retrospective cohort study was conducted involving individuals who underwent annual health checkups at St. Luke's International Hospital from 2005 to 2010. Data collected included self-reported demographics, clinical information, and health habits, as well as religiosity, baseline examination, and laboratory measures. Researchers conducted multivariable regression analyses to examine the associations between religiosity and cardiovascular risk factors at baseline and longitudinally. The analyses were performed in 2012. A total of 36,965 participants were enrolled, and 13,846 (37.8%) reported being at least somewhat religious. Compared with those who were not religious at baseline, religious participants (n=3685) were less likely to be current smokers and to report excessive alcohol consumption, and more likely to exercise at least three times a week and to be obese. There were no significant differences in the rate of hypertension, diabetes mellitus, or dyslipidemia prevalence. In longitudinal data analyses, religiosity was associated with a lower likelihood of smoking and excessive alcohol consumption, and a higher likelihood of regular exercise and a lower incidence of diabetes over time. Individuals who were more religious were significantly more likely to have favorable health habits and fewer cardiovascular risk factors, except for a higher prevalence of overweight/obesity at baseline. Religiosity was also associated with better health habits over time and less likely to be associated with future diabetes but not with blood pressure or lipid levels.*

Manning, Lydia K. & M. Elise Radina. 2015. The role of spirituality in the lives of mothers of breast cancer survivors. *Journal of Religion, Spirituality & Aging* 27(2-3). 125–144.  
doi:10.1080/15528030.2014.952055.

*Breast cancer affects an entire family system. The mothers of breast cancer patients are likely impacted in a variety of ways by their daughters' diagnoses. To date, few researchers have investigated the experiences and perspectives of this population. In the present study, the authors explored how mothers of breast cancer survivors managed adversities associated with this disease and illness. Using secondary data and narrative analysis, the investigators analyzed data gathered from 30 mothers. Findings indicate that participants relied on their spirituality for the management of stress and hardship related to having a loved one with breast cancer.*

McCall, Marcy, Sally Thorne, Alison Ward & Carl Heneghan. 2015. Yoga in adult cancer: an exploratory, qualitative analysis of the patient experience. *BMC Complementary and Alternative Medicine* 15. 245.

doi:10.1186/s12906-015-0738-9.

*Some patients receiving treatment in conventional health care systems access therapeutic yoga outside their mainstream care to improve cancer symptoms. Given the current knowledge gap around patient preferences and documented experiences of yoga in adult cancer, this study aimed to describe patient-reported benefits, barriers and characteristics of programming for yoga practice during conventional treatment. In-depth semi-structured interviews (n=10) were conducted in men and women recruited from cancer care clinics in Vancouver, Canada using a purposive sampling technique. The exploratory interviews were audio-recorded, transcribed and analyzed using Interpretive Description methodology and constant comparative analysis methods. Four themes emerged from the data to address research objectives: patient-perceived benefits of yoga; reasons and motivations for practicing yoga; hurdles and barriers to practicing yoga; and advice for effective yoga program delivery in adult cancer. Several patients reported that yoga reduced stress and other symptoms associated with cancer treatment. Thematic analysis found the social dimension of group yoga was important, as well as yoga's ability to encourage personal empowerment and awareness of physical body and self. Barriers to yoga adherence from the patient perspective included lack of time, scheduling conflicts and worries about financial burden. In sum, this small, diverse sample of patients reported positive experiences and no adverse effects following yoga practice for management of cancer and its symptoms. Results of this qualitative study identified patient-reported preferences, barriers and characteristics of yoga intervention optimal during adult cancer treatment.*

Meissner, Karin & Anne Koch. 2015. Sympathetic Arousal during a Touch-Based Healing Ritual Predicts Increased Well-Being. *Evidence-Based Complementary and Alternative Medicine: eCAM* 2015. 641704.

doi:10.1155/2015/641704.

*There is mounting evidence that more elaborate treatment rituals trigger larger nonspecific effects. The reasons for this remain unclear. In a pilot field study, the present researchers investigated the role of psychophysiological changes during a touch-based healing ritual for improvements in subjective well-being. Heart rate, respiratory rate, and skin conductance levels (SCL) were continuously assessed in 22 subjects before, during, and after a touch-based healing ritual. Participants rated their expectations and subjective well-being was assessed before and after the ritual by the "Short Questionnaire on Current Disposition." Subjective well-being increased significantly from before to after the ritual. The analysis of psychophysiological changes revealed a significant increase in respiratory rate from baseline to ritual, while skin conductance, heart rate, and heart rate variability did not change. Increases in SCL as well as decreases in respiratory rate from baseline to ritual were significantly associated with improvements in subjective well-being. Regression analyses showed increases in SCL to be the only significant predictor of improvements in well-being. Higher sympathetic arousal during a touch-based healing ritual thus predicted improvements in subjective well-being. Results suggest the occurrence of an anticipatory stress response, that is, a state of enhanced sympathetic activity that is known to precede relaxation.*

Moonaz, Steffany Haaz, Clifton O. Bingham, Lawrence Wissow & Susan J. Bartlett. 2015. Yoga in Sedentary Adults with Arthritis: Effects of a Randomized Controlled Pragmatic Trial. *Journal of Rheumatology* 42(7). 1194–1202.

doi:10.3899/jrheum.141129.

*The objective of this study was to evaluate the effect of Integral-based hatha yoga in sedentary people with arthritis. The participants were 75 sedentary adults aged 18+ years with rheumatoid arthritis (RA) or knee osteoarthritis. They were randomly assigned to 8 weeks of yoga (two 60-min classes and 1 home practice/week) or waitlist. Poses were modified for individual needs. The primary endpoint was physical health [Medical Outcomes Study Short Form-36 (SF-36) physical component summary (PCS)] adjusted for baseline; exploratory adjusted outcomes included fitness, mood, stress, self-efficacy, SF-36 health-related quality of life (HRQOL), and RA disease activity. In everyone completing yoga, the researchers measured long-term effects at nine months. Participants were*

*mostly female (96%), white (55%), and college-educated (51%), with a mean (SD) age of 52 years (12 yrs). Average disease duration was 9 years and 49% had RA. At 8 weeks, yoga was associated with significantly higher PCS, walking capacity, positive affect, and lower Center for Epidemiologic Studies Depression Scale. Significant improvements were evident in SF-36 role physical, pain, general health, vitality, and mental health scales. Balance, grip strength, and flexibility were similar between groups. Twenty-two out of 28 in the waitlist group completed yoga. Among all yoga participants, significant improvements were observed in mean PCS, flexibility, 6-min walk, and all psychological and most HRQOL domains at 8 weeks with most still evident 9 months later. Of 7 adverse events, none were associated with yoga. Preliminary evidence thus suggests that yoga may help sedentary individuals with arthritis safely increase physical activity, and improve physical and psychological health and HRQOL.*

Reinert, Katia G., Jacquelyn C. Campbell, Karen Bandeen-Roche, Phyllis Sharps & Jerry Lee. 2015. Gender and Race Variations in the Intersection of Religious Involvement, Early Trauma, and Adult Health. *Journal of Nursing Scholarship* 47(4). 318–327.  
doi:10.1111/jnu.12144.

*This study aimed to determine gender and race variations in regards to the influence of religious involvement (RI) as a moderator of the effects of early traumatic stress (ETS) on health-related quality of life among adult survivors of child abuse. A cross-sectional predictive design was used to study Seventh-day Adventist adults in North America (n=10,283). A secondary analysis of data collected via questionnaires was done using multiple regression. Data revealed that women had a significantly higher prevalence of any or all ETS subtypes, except for physical abuse prevalence, which was the same for both genders. Blacks reported a significantly higher prevalence of at least one ETS subtype than did Whites, except for neglect, where Whites had a higher prevalence. Exposure to at least one ETS subtype was associated with worse negative effect on mental health and physical health for women compared to men. Among those exposed to all ETS subtypes (n=447), Whites had significant worse physical health, with White women having almost two times the negative effect on physical health than White men. As for RI moderation, based on tests of three-way interactions of race–RI–ETS, there were no associated differences. However, tests of three-way interactions of gender–RI–ETS showed a significant buffering effect. Among those with high levels of negative religious coping (RC), women exposed to ETS had significantly worse physical health than men. These results give evidence of gender and racial differences on the magnitude of the ETS–health effect, as well as gender differences in ETS–health buffering by RC.*

Trevino, Kelly M. & Timothy R. McConnell. 2015. Religiosity and Spirituality during Cardiac Rehabilitation: A Longitudinal Evaluation of Patient-Reported Outcomes and Exercise Capacity. *Journal of Cardiopulmonary Rehabilitation and Prevention* 35(4). 246–254.  
doi:10.1097/HCR.000000000000110.

*This study is a longitudinal evaluation of religiosity/spirituality (R/S) and religious coping in post-myocardial infarction and post-coronary artery bypass surgery patients during a 12-week cardiac rehabilitation program. This study examines change in R/S and the relationship between R/S and psychosocial outcomes and exercise capacity over time. Cardiac rehabilitation patients (n=105) completed measures of R/S, religious coping, quality of life (QOL), self-efficacy (SE), and energy expenditure (EE) at the beginning (baseline) and end of a 12-week program. Relationships between R/S and religious coping and QOL, SE, and EE were evaluated. A negative relationship emerged between baseline measures of R/S and religious coping and QOL, SE, and EE. There were significant increases in Good Deeds Coping, QOL, SE, and EE from baseline to end of program. Baseline measures of Interpersonal Religious Support Coping were positively correlated with the change in EE from baseline to end, and there were positive correlations between the change in Experiential Religiosity and Overall Religiosity with the change in EE. These demonstrated relationships between R/S and Religious Coping and outcomes in cardiac patients provide compelling support for the development of spiritual care interventions for*

*cardiac patients and evaluation of the impact of these interventions on physiological, medical, and psychological outcomes in these patients.*

- Yorgason, Jeremy B. 2015. Exploring daily religious/spiritual activities among older couples: Religious/spiritual influence moderating the effects of health symptoms on marital interactions. *Journal of Religion, Spirituality & Aging* 27(2-3). 201–221.  
doi:10.1080/15528030.2014.989463.

*Using data from 191 later-life couples across 14 days, patterns of husband and wife religious/spiritual activities were explored, as well as how those activities predicted daily marital processes and how they moderated the links between daily physical symptoms and marital interactions. Husband and wife reports of religious/spiritual influence were linked with their own positive and negative marital interactions (“actor” effects). However, only husband religious/spiritual influence was linked with wife marital interactions (“partner” effects). Religious/spiritual influence moderated the link between symptoms and marital interactions for wives. Findings suggest a buffering effect of religious/spiritual activities on daily symptoms for older married wives.*

## **2.2 SPIRITUALITY & HEALTH: MENTAL HEALTH**

- Adib-Hajbaghery, Mohsen & Mona Faraji. 2015. Comparison of Happiness and Spiritual Well-Being among the Community Dwelling Elderly and those who Lived in Sanitariums. *International Journal of Community Based Nursing and Midwifery* 3(3). 216–226.

*Several studies are available on the lifestyle, psychological and mental health of the elderly adults. This study aimed to compare the spiritual well-being and happiness in the elderly who lived in sanitariums with those lived in the community. A comparative study was conducted on 384 elderly adults. A census sampling was used in sanitariums and a convenience sampling was performed to select the community dwelling (CD) older adults. A demographic questionnaire, the Pauloutzian and Ellison’s spiritual well-being scale, and the Oxford happiness questionnaire were used in this study. Of the total participants, 56% were CD elderly and 44% were in sanitariums. Among the CD older adults, no one was at a high level of spiritual well-being while in sanitariums 24.4% were at a high level of spiritual well-being. Also, 71.2% of the community dwelling older adults were at a high level of happiness while only 3.6% of those living in sanitariums expressed a high level of happiness. A significant association was found between the level of spiritual well-being and happiness in those who lived in sanitariums. Thus, most of the elderly living in the community and in sanitariums showed moderate spiritual well-being and low happiness. Therefore, nurses and health authorities are responsible not only to inform the community about the importance of spiritual well-being and happiness, but also to establish some strategies in this regard.*

- Anyfantakis, Dimitrios, Emmanouil K. Symvoulakis, Manolis Linardakis, Sue Shea, Demosthenes Panagiotakos & Christos Lionis. 2015. Effect of religiosity/spirituality and sense of coherence on depression within a rural population in Greece: the Spili III project. *BMC Psychiatry* 15. 173.  
doi:10.1186/s12888-015-0561-3.

*Recent research has addressed the hypothesis that religiosity/spirituality and sense of coherence buffer the negative effects of stress on numerous health issues. The aim of the current study was to further this work by exploring potential links between psycho-social factors such as religiosity/spirituality and sense of coherence with depression. A total number of 220 subjects of the SPILI III cohort (1988-2012) attending a primary care setting in the town of Spili on rural Crete represented the target group. All participants underwent a standardized procedure. Validated questionnaires were used to evaluate sense of coherence, depression levels and religious and spiritual beliefs. A multiple linear regression analysis of the Beck Depression Inventory Scale (BDI) in relation to demographic characteristics, scores on the Royal Free Interview for Spiritual and Religious Beliefs scale (RFI-SRB) and Sense of Coherence scale (SOC) was performed. Results: A significant inverse association was found*

*between BDI and RFI-SRB scale, as well as among BDI and SOC scale. The findings of the current observational study indicate that highly religious participants are less likely to score high in the depression scale. Furthermore, participants with high SOC scored significantly lower in the BDI scale. Further research is required in order to explore the potential effect of SOC and religiosity/ spirituality on mental health.*

- Bradshaw, Kate, John P. Dehlin, Katherine A. Crowell, Renee V. Galliher & William S. Bradshaw. 2015. Sexual orientation change efforts through psychotherapy for LGBQ individuals affiliated with the Church of Jesus Christ of Latter-day Saints. *Journal of Sex & Marital Therapy* 41(4). 391–412.  
doi:10.1080/0092623X.2014.915907.

*This study reports the results of a comprehensive online survey of 1,612 current or former members of the Church of Jesus Christ of Latter-day Saints, many of whom engaged in psychotherapy to cope with (i.e., understand, accept, or change) their same-sex attractions. Data obtained from written and quantitative responses showed that therapy was initiated over a very wide age range and continued for many years. However, counseling was largely ineffective; less than 4% reported any modification of core same-sex erotic attraction. Moreover, 42% reported that their change-oriented therapy was not at all effective, and 37% found it to be moderately to severely harmful. In contrast, affirming psychotherapeutic strategies were often found to be beneficial in reducing depression, increasing self-esteem, and improving family and other relationships. Results suggest that the very low likelihood of a modification of sexual orientation and the ambiguous nature of any such change should be important considerations for highly religious sexual minority individuals considering reorientation therapy.*

- Caribé, André C., Marlos Fernando Vasconcelos Rocha, Davi Félix Martins Junior, Paula Studart, Lucas C. Quarantini, Nicolau Guerreiro & Ângela Miranda-Scippa. 2015. Religiosity and impulsivity in mental health: Is there a relationship? *Journal of Nervous and Mental Disease* 203(7). 551–554.  
doi:10.1097/NMD.0000000000000316.

*The aim of this study is to evaluate the relationship between religiosity and impulsivity in patients with mental illness who had attempted suicide and in healthy individuals. This is a cross-sectional study that included 61 healthy individuals and 93 patients. The instruments used were a sociodemographic data questionnaire, the Mini International Neuropsychiatric Interview, the Barratt Impulsiveness Scale, and the Duke University Religion Index. The healthy individuals presented higher scores in the religiosity domains. The patients presented higher scores in the impulsivity dimensions. In the patient group, intrinsic religiosity had a significant inverse relationship with total impulsivity, attentional, and absence of planning, even after controlling for sociodemographic variables. Healthy individuals were more religious and less impulsive than patients. The relationship between religiosity, impulsiveness, and mental illness could be bidirectional; that is, just as mental illness might impair religious involvement, religiosity could diminish the expression of mental illness and impulsive behaviors.*

- Caribé, André C., Paula Studart, Severino Bezerra-Filho, Elisa Brietzke, Mariane Nunes Noto, Mireia Vianna-Sulzbach, Flavio Kapczinski, Fernando Silva Neves, Humberto Correa & Ângela Miranda-Scippa. 2015. Is religiosity a protective factor against suicidal behavior in bipolar I outpatients? *Journal of Affective Disorders* 186. 156–161.  
doi:10.1016/j.jad.2015.07.024.

*Several risk factors have been associated with suicidal behavior (SB) in bipolar disorder (BD), but little is known regarding possible protective factors. Religiosity has been related to favorable outcomes in mental health and to a reduction in the risk of SB, although the relation between BD, religiosity and SB remains under-investigated. The objective of this study was to evaluate the association between religiosity and SB in euthymic bipolar I outpatients. In this study, 164 outpatients with BD type I with and without a history of suicide attempts were assessed and compared using a questionnaire to collect clinical and sociodemographic characteristics, the Structured Clinical*

*Interview for DSM-IV, the Hamilton Depression Rating Scale, the Young Mania Rating Scale, the Duke Religious Index, and the Barratt Impulsivity Scale. The suicide attempters (SA) group had more psychiatric comorbidity, more rapid cycling, higher levels of impulsivity in all domains, and less religious affiliation, compared with the non-SA group. In the multivariate analysis, after controlling for covariates, non-organizational religious activities and intrinsic religiosity were associated with less SB.*

Hamren, Kidist, Holendro Singh Chungkham & Martin Hyde. 2015. Religion, spirituality, social support and quality of life: measurement and predictors CASP-12(v2) amongst older Ethiopians living in Addis Ababa. *Aging & Mental Health* 19(7). 610–621.  
doi:10.1080/13607863.2014.952709.

*As African populations begin to age developing accurate measures of quality of life (QoL) in later life for use on the continent is becoming imperative. This study evaluates the measurement and predictors of QoL amongst older Ethiopians. The data come from a multi-stage cluster sample of 214 people aged 55 and over living in Addis Ababa, Ethiopia. QoL was measured using the CASP-12(v2). Confirmatory factor analysis (CFA) was used to test the properties of the scale. The relationships between social support, religiosity/spirituality and socio-demographic factors on QoL were tested with linear regression analyses. The CASP subscales exhibited good internal reliability and the CFA provides reasonable support for an 11-item 4-factor model. Multivariate regression analyses suggest that both religiousness/spirituality and social support have positive relationships with QoL. The results show that a modified 11-item CASP is a meaningful measure of QoL for use with older Ethiopians. Both religiousness/spirituality and social support are positively associated with QoL and might be important buffers against deprivation.*

Jindani, Farah A. & G. F. S. Khalsa. 2015. A Yoga Intervention Program for Patients Suffering from Symptoms of Posttraumatic Stress Disorder: A Qualitative Descriptive Study. *Journal of Alternative and Complementary Medicine (New York, N.Y.)* 21(7). 401–408.  
doi:10.1089/acm.2014.0262.

*The objective of this study was to understand how individuals with symptoms of posttraumatic stress disorder (PTSD) perceive a trauma-sensitive Kundalini yoga (KY) program. Digitally recorded telephone interviews 30-60 minutes in duration were conducted with 40 individuals with PTSD participating in an 8-week KY treatment program. Interviews were transcribed verbatim and analyzed using qualitative thematic analysis techniques. Qualitative analysis identifies three major themes: self-observed changes, new awareness, and the yoga program itself. Findings suggest that participants noted changes in areas of health and well-being, lifestyle, psychosocial integration, and perceptions of self in relation to the world.*

Khalsa, Manjit K., Julie M. Greiner-Ferris, Stefan G. Hofmann & Sat Bir S. Khalsa. 2015. Yoga-Enhanced Cognitive Behavioural Therapy (Y-CBT) for Anxiety Management: A Pilot Study. *Clinical Psychology & Psychotherapy* 22(4). 364–371.  
doi:10.1002/cpp.1902.

*Meditation is commonly thought to induce physiologically quiescent states, as evidenced by decreased autonomic parameters during the meditation practice including reduced heart rate, respiratory rate, blood pressure, skin conductance, and increased alpha activity in the electroencephalogram. Preliminary empirical support for this idea was provided in a case report by Dimsdale and Mills (2002), where it was found that meditation seemed to regulate increased levels of cardiovascular arousal induced by bolus isoproterenol infusions. In that study, while meditating, a self-taught meditator exhibited unexpected decreases in heart rate while receiving moderate intravenous doses of the beta adrenergic agonist isoproterenol. This effect was no longer observed when the individual received isoproterenol infusions while not meditating. The current study was designed to explore this phenomenon empirically in a group of formally trained meditators. A total of 15 meditators and 15 non-meditators individually matched on age, sex, and body mass index were recruited. Participants received four series*



*of infusions in a pseudorandomized order: isoproterenol while meditating (or during a relaxation condition for the non-meditators), isoproterenol while resting, saline while meditating (or during a relaxation condition for the non-meditators), and saline while resting. Heart rate was continuously measured throughout all infusions, and several measures of heart rate were derived from the instantaneous cardiac waveform. There was no evidence at the group or individual level suggesting that meditation reduced the cardiovascular response to isoproterenol, across all measures. These results suggest that meditation is not associated with increased regulation of elevated cardiac adrenergic tone.*

- Kim, Na-Young, Hyu-Jung Huh & Jeong-Ho Chae. 2015. Effects of religiosity and spirituality on the treatment response in patients with depressive disorders. *Comprehensive Psychiatry* 60. 26–34. doi:10.1016/j.comppsych.2015.04.009.

*Few studies have investigated the roles of religiosity and spirituality in predicting treatment response among psychiatric patients with depressive disorders. In total, 232 outpatients with depressive disorders completed measurements of psychological symptoms, religiosity, and spirituality at baseline. A response was defined as Clinical Global Impression-Improvement scale (CGI-I) score of 1 or 2 at the last visit during a 6-month treatment period. Univariate analyses and logistic regression analysis were used to identify predictors of treatment response. In univariate analyses, treatment response was associated with marital status, longer treatment duration, less severe baseline symptoms, higher personal importance of religion, and higher spirituality. In logistic regression analysis, subjective important considerations for religion and spirituality were significantly related with treatment response after controlling for marital status, treatment duration, and baseline symptom severity. Of these variables, spirituality remained a significant predictor in the final model.*

- Kress, Victoria E., Rebecca A. Newgent, Janis Whitlock & Laura Mease. 2015. Spirituality/Religiosity, Life Satisfaction, and Life Meaning as Protective Factors for Nonsuicidal Self-Injury in College Students. *Journal of College Counseling* 18(2). 160–174. doi:10.1002/jocc.12012.

*The purpose of this study was to identify factors that may protect or insulate people from engaging in nonsuicidal self-injury (NSSI). College students (n=14,385) from 8 universities participated in a web-based survey. Results of bivariate correlations and multiple regression revealed that spirituality/religiosity, life satisfaction, and life meaning were predictive of NSSI. The authors provide practice suggestions for college counselors and other professionals charged with helping those at risk for NSSI.*

- Lazar, Aryeh. 2015. The Relation between Prayer Type and Life Satisfaction in Religious Jewish Men and Women: The Moderating Effects of Prayer Duration and Belief in Prayer. *International Journal for the Psychology of Religion* 25(3). 211–229. doi:10.1080/10508619.2014.920603.

*The possible moderating functions of prayer duration and belief in prayer on the prayer–well-being relation were examined. A multidimensional self-report measure of prayer including five types of prayer (Supplication, Thanksgiving, Adoration, Confession, and Reception) as well as measures of prayer duration, belief in prayer, and life satisfaction were used. On the basis of a sample of 345 Jewish religious pray-ers living in Israel it was found that for men all five types of prayer were directly related to life satisfaction. No moderating effects were found. In contrast, for women, although no significant direct relations were found between prayer type and life satisfaction, prayer duration moderated the relation between Supplication, Confession, and Reception with life satisfaction. In addition, significant three-way interactions (Prayer Type × Prayer Duration × Prayer Belief) were found for all five types of prayer. For women with a high belief in prayer, a positive prayer/well-being relation emerged when prayer duration was long, and a negative prayer/well-being relation emerged when prayer duration was short. In contrast, for women with a low belief in prayer, the opposite pattern emerged; lengthy prayer was*

*negatively related to well-being, whereas short prayer was positively related to well-being. An explanation based on self-attributions of prayer sincerity is offered.*

- Mir, Ghazala, Shaista Meer, David Cottrell, Dean McMillan, Allan House & Jonathan W. Kanter. 2015. Adapted behavioural activation for the treatment of depression in Muslims. *Journal of Affective Disorders* 180. 190–199.  
doi:10.1016/j.jad.2015.03.060.

*Incorporating religious beliefs into mental health therapy is associated with positive treatment outcomes. However, evidence about faith-sensitive therapies for minority religious groups is limited. For this study, Behavioural Activation (BA), an effective psychological therapy for depression emphasizing client values, was adapted for Muslim patients using a robust process that retained core effective elements of BA. The adapted intervention built on evidence synthesized from a systematic review of the literature, qualitative interviews with 29 key informants and findings from a feasibility study involving 19 patients and 13 mental health practitioners. Results indicate that core elements of the BA model were acceptable to Muslim patients. Religious teachings could potentially reinforce and enhance BA strategies and concepts were more familiar to patients and more valued than the standard approaches. Patients appreciated therapist professionalism and empathy more than shared religious identity but did expect therapist acceptance that Islamic teachings could be helpful. Patients were generally enthusiastic about the approach, which proved acceptable and feasible to most participants; however, therapists needed more support than anticipated to implement the intervention.*

- Nosaka, Michiyo & Hitoshi Okamura. 2015. A single session of an integrated yoga program as a stress management tool for school employees: Comparison of daily practice and nondaily practice of a yoga therapy program. *Journal of Alternative and Complementary Medicine* 21(7). 444–449.  
doi:10.1089/acm.2014.0289.

*The aim of this study was to assess the effect of the daily practice of a yoga therapy program learnt during a single session of an integrated yoga intervention that was developed by the authors as a stress management tool for 90 school employees. Three months after the intervention, the subjects were assigned to a daily practice group (case: n=43) and a nonconsecutive daily practice group (control: n=47) according to their daily practice level of the yoga therapy program. The subjects participated in a stress management education program based on an integrated yoga therapy session. The program included psychological education and counseling about stress management and yoga theories, as well as the practices of asanas, pranayama, relaxation, and cognitive structure based on Indian philosophy. Assessments were performed before and after the program using the Subjective Units of Distress for mind and body and the Two-Dimensional Mood Scale. The General Health Questionnaire 28 (GHQ28) was used to assess the mental health state before the intervention and at 3 months after the program. The subjects showed significant increases in their levels of calmness, comfort, and cheerfulness, and significant decreases in cognitive mind and body stress, after participating in the integrated yoga program. A comparison of the total scores on the GHQ28 using a two-way analysis of variance showed significant differences between the two groups in terms of both interaction and the main effect.*

- Osafo, J., I. Agyapong & M. Kumi Asamoah. 2015. Exploring the nature of treatment regimen for mentally ill persons by neo-prophetic ministers in Ghana. *International Journal of Culture and Mental Health* 8(3). 325–339.  
doi:10.1080/17542863.2014.973428.

*As Ghana seeks to improve mental healthcare services delivery, there is a heightened discourse regarding the role religious groups can play in the process. Whilst there is a general admission that there can be collaborative framework with faith-based treatments toward a holistic delivery of mental healthcare, the anxieties concerning the unverifiable nature of their services and reported abuses of patients appears to hamper this collaboration. In an*

*attempt to carefully delineate and bring to the fore the role of religious groups in mental health, 12 clergy from a specific Christian strand called the neo-prophetic Christian ministries (or churches) were interviewed. Using interpretative phenomenological analysis, findings show that these clergy view mental illness as a spiritual problem rather than a biomedical one. The treatments they prescribe for mental illness fall within two major approaches: the hope induction approach and the prophetic deliverance approach. Assessment of cure of illness involves observation of restored orientation, self-care and community participation and perceived complete exorcism. Researchers conclude that Christian groups are actively involved in mental healthcare delivery and that policy can focus on sanitizing and improving these services into mainstream mental healthcare services in Ghana.*

Pirutinsky, Steven, Jedidiah Siev & David H. Rosmarin. 2015. Scrupulosity and implicit and explicit beliefs about God. *Journal of Obsessive-Compulsive and Related Disorders* 6. 33–38.  
doi:10.1016/j.jocrd.2015.05.002.

*Dual-system models of cognition propose that the interplay between analytic and associative cognition determines emotions and behaviors. Scrupulosity, an OCD presentation dominated by religious or moral fears, involves fears that God is unreasonable and punitive, and previous research suggests that individuals with scrupulosity hold more negative concepts of God. The current research assessed if implicit associative aspects of these beliefs are relevant, both to bypass social desirability and to explore the role of non-conscious cognition. Participants were drawn from the Harvard Medical School Study on Judaism and Mental Health and completed an explicit assessment of beliefs about God, a related implicit association task (GNAT), and the Penn Inventory of Scrupulosity. Results indicated that explicit and implicit beliefs did not correlate, and that they both independently correlated with scrupulosity. Regression analyses indicated that only those with high explicit negative beliefs and relatively negative implicit associations reported elevated levels of scrupulosity. Beliefs about God, like other cognitive processes, appear to include both automatic and deliberate components that can be discordant, and symptoms of scrupulosity may require both explicit and implicit negative evaluations.*

Pressman, Sarah D., Tara L. Kraft & Marie P. Cross. 2015. It's good to do good and receive good: The impact of a "pay it forward" style kindness intervention on giver and receiver well-being. *Journal of Positive Psychology* 10(4). 293–302.  
doi:10.1080/17439760.2014.965269.

*Despite the popularity of the "pay it forward" (PIF) concept in textbooks and popular culture, to date, no study has tested the effectiveness of a brief, one-time PIF activity on the well-being of those who do good and those who receive good. To test this, 83 undergraduates ("givers") performed random kind acts for 1.5 hours. PIF resulted in a wide range of well-being benefits for givers (e.g. greater positive and lower negative affect), with females showing greater positive affect benefits. Receivers of kindness (n=1014) also benefited as evidenced by greater smiling behavior and more sincere smiles vs. controls (n=251). Of the 48 receivers who completed a follow-up online questionnaire, the majority indicated that they would also PIF, with almost 40% indicating that they already had. Results indicate that a one-time brief PIF intervention can have broad benefits for those involved.*

Roh, Hyun Woong, Chang Hyung Hong, Yunhwan Lee, Byoung Hoon Oh, Kang Soo Lee, Ki Jung Chang, Dae Ryong Kang, et al. 2015. Participation in Physical, Social, and Religious Activity and Risk of Depression in the Elderly: A Community-Based Three-Year Longitudinal Study in Korea. *PLoS One* 10(7). e0132838.  
doi:10.1371/journal.pone.0132838.

*Researchers examined the longitudinal association between participation in individual or combinations of physical, social, and religious activity and risk of depression in the elderly. Elderly subjects aged  $\geq 60$  years who completed the Living Profiles of Older People Survey in Korea (n=6,647) were included. The baseline assessment, Wave 1, was conducted in 2008, and a follow-up assessment, Wave 2, was conducted in 2011. Researchers defined participation in frequent physical activity as  $\geq 3$  times weekly (at least 30 minutes per activity). Frequent*

*participation in social and religious activity was defined as  $\geq 1$  activity weekly. The primary outcome was depression at 3-year follow up. Multivariable logistic regression analysis showed that subjects who participated in frequent physical, social, and religious activity had an adjusted odds ratio of 0.81, 0.87, and 0.78, respectively, compared with participants who did not participate in each activity. Participants who participated in only one type of activity frequently and participants who participated in two or three types of activities frequently had an adjusted odds ratio of 0.86 and 0.64, respectively, compared with participants who did not participate in any type of physical, social, and religious activity frequently.*

Shahar, Ben, Ohad Szsepsenwol, Sigal Zilcha-Mano, Netalee Haim, Orly Zamir, Simi Levi-Yeshuvi & Nava Levit-Binnun. 2015. A Wait-List Randomized Controlled Trial of Loving-Kindness Meditation Programme for Self-Criticism. *Clinical Psychology & Psychotherapy* 22(4). 346–356. doi:10.1002/cpp.1893.

*Self-criticism is a vulnerability risk factor for a number of psychological disorders, and it predicts poor response to psychological and pharmacological treatments. In the current study, researchers evaluated the efficacy of a loving-kindness meditation (LKM) program designed to increase self-compassion in a sample of self-critical individuals. Thirty-eight individuals with high scores on the self-critical perfectionism subscale of the Dysfunctional Attitude Scale were randomized to an LKM condition (n=19) or a wait-list (WL) condition (n=19). Measures of self-criticism, self-compassion and psychological distress were administered before and immediately following the intervention (LKM or WL). WL participants received the intervention immediately after the waiting period. Both groups were assessed 3 months post-intervention. Intent-to-treat (n=38) and per-protocol analyses (n=32) showed significant reductions in self-criticism and depressive symptoms as well as significant increases in self-compassion and positive emotions in the LKM condition compared with the WL condition. A follow-up per-protocol analysis in both groups together (n=20) showed that these gains were maintained 3 months after the intervention. These preliminary results suggest that LKM may be efficacious in alleviating self-criticism, increasing self-compassion and improving depressive symptoms among self-critical individuals.*

Williams, Anna-Leila, Jane Dixon, Richard Feinn & Ruth McCorkle. 2015. Cancer family caregiver depression: Are religion-related variables important? *Psycho-Oncology* 24(7). 825–831. doi:10.1002/pon.3647.

*Prevalence estimates for clinical depression among cancer family caregivers (CFC) range upwards to 39%. Research inconsistently reports risk for CFC depressive symptoms when evaluating age, gender, ethnicity, or length of time as caregiver. The discrepant findings, coupled with emerging literature indicating religiosity may mitigate depression in some populations, led us to investigate religion-related variables to help predict CFC depressive symptoms. Researchers conducted a cross-sectional study of 150 CFC. Explanatory variables included age, gender, spousal status, length of time as caregiver, attendance at religious services, and prayer. The outcome variable was the Center for Epidemiological Studies Depression Scale score. Compared with large national and state datasets, this sample has lower representation of individuals with no religious affiliation, higher rate of attendance at religious services, and higher rate of prayer. In unadjusted and adjusted models, prayer is not significantly associated with caregiver depressive symptoms or clinically significant depressive symptomology. Attendance at religious services is associated with depressive symptoms with an inversely linear trend. The significant inverse association between attendance at religious services and depressive symptoms, despite no association between prayer and depressive symptoms, indicates that social or other factors may accompany attendance at religious services and contribute to the association. Clinicians can consider supporting a CFC's attendance at religious services as a potential preventive measure for depressive symptoms.*

Willis, Danny G., Susan DeSanto-Madeya, Richard Ross, Danielle Leone Sheehan & Jacqueline Fawcett. 2015. Spiritual Healing in the Aftermath of Childhood Maltreatment: Translating Men's

Lived Experiences Utilizing Nursing Conceptual Models and Theory. *ANS. Advances in Nursing Science* 38(3). 162–174.

doi:10.1097/ANS.0000000000000075.

*This article presents an explication of spiritual healing situated within three nursing conceptual models (Neuman's systems model, Rogers' science of unitary human beings, and Roy's adaptation model) and one middle-range theory (Watson's theory of human caring), all of which include a focus on spirituality. These models and the theory are the vehicle for translation of themes of spiritual healing extracted from data provided by 30 adult male survivors of childhood maltreatment into nursing practice. This discipline-specific translational scholarship advances the profession of nursing.*

Wilmoth, Joe D., Abigail D. Blaney & Jennifer R. Smith. 2015. Marital satisfaction, negative interaction, and religiosity: A comparison of three age groups. *Journal of Religion, Spirituality & Aging* 27(2-3). 222–240.

doi:10.1080/15528030.2014.997955.

*This study compared marital satisfaction among three age groups and examined how negative interaction patterns and religiosity relate to marital satisfaction at each age using a sample of Protestants (n=45,387) diverse in denominations, location, geography, and size. Researchers performed a 1-way ANOVA to compare marital satisfaction among three age groups (younger than 40, 40–59, and 60 and older) and found a U-shape curve with marital satisfaction highest among the youngest group, lowest among middle-age couples, and high among older couples. ANCOVA analysis found negative interaction, age, religiosity, age\*negative interaction, and age\*religiosity, to be predictors of marital satisfaction.*

### **2.3 SPIRITUALITY & HEALTH: METHOD AND THEORY**

Alling, Frederic A. 2015. The Healing Effects of Belief in Medical Practices and Spirituality. *Explore (New York, N.Y.)* 11(4). 273–280.

doi:10.1016/j.explore.2015.04.002.

*Shamans and other healing practitioners have used placebos from earliest recorded history to treat those who were ill. As modern scientific theories of disease developed, the use of placebos was considered to be an ineffective and deceptive practice. Later, medical researchers used placebos primarily as an inactive treatment standard against which scientifically based (“real”) medicines could be evaluated. However, placebos were discovered to have their own self-healing effects. Spirituality including transcendent experiences also promotes healing effects and recently has been shown to involve neural systems (brain networks) comparable (if not identical) to those engaged in placebo responses. Therapists can facilitate both of these self-healing processes in different ways, including finding meaningfulness in physically and mentally painful situations using Viktor Frankl's practice of “logotherapy.”*

Banerjee, Ananya Tina, R. Kin, Patricia H. Strachan, Michael H. Boyle, Sonia S. Anand & Mark Oremus. 2015. Factors Facilitating the Implementation of Church-Based Heart Health Promotion Programs for Older Adults: A Qualitative Study Guided by the Precede-Proceed Model. *American journal of health promotion: AJHP* 29(6). 365–373.

doi:10.4278/ajhp.130820-QUAL-438.

*The purpose of this study was to describe the factors facilitating the implementation of heart health promotion programs for older adults in Anglican, United, and Catholic churches. The study used qualitative methods comprising semistructured interviews and focus groups. The interviews and focus groups were conducted in Anglican, Catholic, and United churches located in the Canadian cities of Toronto and Hamilton, Ontario. Participants were twelve ordained pastors and 21 older parishioners who attended church regularly and who had no health conditions. They were recruited to best explain how churches could be suitable locations for health*

*promotion activities targeting older adults. Twelve semistructured interviews with the pastors and three focus groups with the 21 parishioners were undertaken. A component of the Precede-Proceed model (a model for planning health education and health promotion programs and policies) was applied to the findings after direct content analysis of the data. Participants identified pastor leadership, funding for a parish nurse, community-focused interventions, secured infrastructure, and social support from congregation members as pertinent factors required for implementing health promotion programs in Anglican, United, and Catholic churches. The findings have particular relevance for health promotion and public health because they suggest factors that would be necessary to design church-based heart health promotion programs for older adults at risk of chronic diseases.*

- Beckstead, D. Joel, Michael J. Lambert, Anthony P. DuBose & Marsha Linehan. 2015. Dialectical behavior therapy with American Indian/Alaska Native adolescents diagnosed with substance use disorders: Combining an evidence based treatment with cultural, traditional, and spiritual beliefs. *Addictive Behaviors* 51. 84–87.  
doi:10.1016/j.addbeh.2015.07.018.

*This pilot study examined pre to post-change of patients in a substance use residential treatment center that incorporated Dialectical Behavior Therapy with specific cultural, traditional and spiritual practices for American Indian/Alaska Native adolescents. Specifically, the incorporation of cultural, spiritual and traditional practices was done while still maintaining fidelity to the evidence based treatment (DBT). Adolescents (n=229) participated in the study and were given the Youth Outcome Questionnaire-Self-Report version at pre-treatment and post-treatment and the total scores were compared. The results of the research study showed that 96% of adolescents were either “recovered” or “improved” using clinical significant change criteria. Additionally, differences between the group’s pre-test scores and post-test scores were statistically significant using a matched standard T-test comparison. Finally, the effect size that was calculated using Cohen’s criteria was found to be large. The results are discussed in terms of the implication for integrating western and traditional based methods of care in addressing substance use disorders and other mental health disorders with American Indian/Alaska Native adolescents.*

- Bronn, Gerhard & Doris McIlwain. 2015. Assessing spiritual crises: Peeling off another layer of a seemingly endless onion. *Journal of Humanistic Psychology* 55(3). 346–382.  
doi:10.1177/0022167814528045.

*What feels like spiritual experience to believers could seem like psychosis, a break from reality, to another. Validating measures that discriminate spiritual experiences from psychopathology reduce iatrogenic effects of misdiagnosis. Researchers tested the reliability and validity of the Spiritual Emergency Scale (SES), assessing internal consistency, test–retest reliability, structural, convergent, and divergent validity. The reliability and validity of the Experiences of Psychotic Symptoms Scale (EPSS) were tested to explore potential convergent and divergent relationships between SE and psychosis. Feedback from a spiritual pilot sample prompted scale amendments to the SES and EPSS, whereby 5-point Likert-type scales replaced true–false options. The researchers sampled 98 people from online spiritual forums, 94 undergraduate psychology students, and 20 of their friends and family. Scales included the following: SE, positive symptoms of psychosis, alogia (disfluency of thought and speech), spirituality, depression, anxiety, stress, and mysticism (experiences of connectedness that escape language). The SES-R and EPSS-R exhibited good internal consistency and structural validity, adequate test–retest reliability, and convergent and divergent validity. SE emerges as a distinct measurable construct, overlapping with positive symptoms of psychosis, distinguishable from the negative dimension of psychosis by its divergent relationship with alogia.*

- Deo, Guru, Kumar Itagi R, Srinivasan Thaiyar M & Kushwah K. Kuldeep. 2015. Effect of anapanasati meditation technique through electrophotonic imaging parameters: A pilot study. *International Journal of Yoga* 8(2). 117–121.  
doi:10.4103/0973-6131.158474.

*Mindfulness along with breathing is a well-established meditation technique. Breathing is an exquisite tool for exploring subtle awareness of mind and life itself. This study aimed at measuring changes in the different parameters of electrophotonic imaging (EPI) in anapanasati meditators. To carry out this study, 51 subjects comprising 32 males and 19 females of age 18 years and above were recruited voluntarily with informed consent attending Karnataka Dhyana Mahachakra-1 at Pyramid Valley International, Bengaluru, India. The design was a single group pre- post and data collected by EPI device before and after 5 days of intensive meditation. Results show significant changes in EPI parameter integral area with filter (physiological) in both right and left side, which reflects the availability of high functional energy reserve in meditators. The researchers observed similar trends without filter (psycho-physiological) indicating high reserves of energy at psycho-physiological level also. Activation coefficient, another parameter of EPI, reduced showing more relaxed state than earlier, possibly due to parasympathetic dominance. Integral entropy decreased in the case of psycho-physiological parameters left-side without filter, which indicates less disorder after meditation, but these changes were not significant. The study showed a reversed change in integral entropy in the right side without filter; however, the values on both sides with filter increased, which indicates disorder. The study suggests that EPI can be used in the recording functional physiological and psychophysiological status of meditators at a subtle level.*

Epps, Fayron. 2015. A closer look at religiosity among family caregivers. *Journal of Religion, Spirituality & Aging* 27(2-3). 166–182.  
doi:10.1080/15528030.2014.971141.

*This article addresses the relationships between the dimensions of religiosity and positive appraisal of caregiving among African American, Hispanic, and non-Hispanic Caucasian family caregivers for older adults. Data analysis of 69 subjects revealed a negative correlation between non-organizational religiosity and positive appraisal of care among African American caregivers and a positive correlation between organizational religiosity and positive appraisal of care among Hispanic caregivers. Findings from this analysis challenges the overall assumption that religiosity increases positive appraisal of caregiving. Rather, the nature and outcomes of family caregiving are different for various ethnic groups.*

Friedrich, Matthew D. 2015. The Affordable Care Act and Hospital Chaplaincy: Re-Visioning Spiritual Care, Re-Valuing Institutional Wholeness. *Journal of Health Care Chaplaincy* 21(3). 108–121.  
doi:10.1080/08854726.2015.1041329.

*This article focuses on the institutional dimensions of spiritual care within hospital settings in the context of the Patient Protection and Affordable Care Act of 2010 (ACA), applying policy information and systems theory to re-imagine the value and function of chaplaincy to hospital communities. This article argues that chaplaincy research and practice must look beyond only individual interventions and embrace chaplain competencies of presence, ritual, and communication as foundational tools for institutional spiritual care.*

Gordon, William Van, Edo Shonin & Mark D. Griffiths. 2015. Towards a second generation of mindfulness-based interventions. *Australian and New Zealand Journal of Psychiatry* 49(7). 591–592.  
doi:10.1177/0004867415577437.

*In addition to featuring in the practice guidelines of the American Psychiatric Association and the United Kingdom's National Institute for Health and Care Excellence for the treatment of recurrent depression in adults, emerging evidence suggests that mindfulness based interventions (MBIs) have applications for treating diverse psychopathologies and disorders including addictive behaviors, post-traumatic stress disorder (PTSD), anger dysregulation, attention deficit hyperactivity disorder, pain disorders, sexual dysfunction and psychotic disorders. Improved regulation of ego-centric thinking patterns leading to reductions in self-preoccupation, self-disparaging schemas and asocial behavior and increased spirituality that exerts a protective influence over life-adversity and low self-purpose.*

Hodge, David R. 2015. Spirituality and Religion among the General Public: Implications for Social Work Discourse. *Social Work* 60(3). 219–227.

*Conceptualizations play a central role in social work discourse, shaping actions in the areas of practice, research, and education. Although many formulations of spirituality and religion have been advanced by social work scholars, the views of members of the general public have been largely absent from the professional conversation. The present article adds to the profession's evolving discussion on spirituality and religion by describing common understandings of spirituality and religion among the general population and by discussing the implication of these views for social work discourse on spirituality and religion. By understanding common views among the public, the social work profession is better positioned to provide ethical and professional services that respect clients' spiritual beliefs and values.*

Hungerford, Catherine, Mitchell Dowling & Kerry Doyle. 2015. Recovery Outcome Measures: Is There a Place for Culture, Attitudes, and Faith? *Perspectives in Psychiatric Care* 51(3). 171–179. doi:10.1111/ppc.12078.

*The utilization of the Recovery Knowledge Inventory (RKI) and Recovery Attitudes Questionnaire (RAQ) in southeastern Australia raised questions about the RAQ, including links between attitudes, faith, and culture in supporting the recovery journey. These questions are particularly important when considered in the context of people with mental illness who live in secular multicultural societies. This paper discusses the cultural appropriateness of the RAQ in Australian settings, and identifies the need to develop rigorous, inclusive recovery outcome measures.*

Kiken, Laura G., Eric L. Garland, Karen Bluth, Olafur S. Palsson & Susan A. Gaylord. 2015. From a state to a trait: Trajectories of state mindfulness in meditation during intervention predict changes in trait mindfulness. *Personality and Individual Differences* 81. 41–46. doi:10.1016/j.paid.2014.12.044.

*Theory suggests that heightening state mindfulness in meditation practice over time increases trait mindfulness, which benefits psychological health. Researchers prospectively examined individual trajectories of state mindfulness in meditation during a mindfulness-based intervention in relation to changes in trait mindfulness and psychological distress. Each week during the eight-week intervention, participants reported their state mindfulness in meditation after a brief mindfulness meditation. Participants also completed pre- and post-intervention measures of trait mindfulness and psychological symptoms. Tests of combined latent growth and path models suggested that individuals varied significantly in their rates of change in state mindfulness in meditation during the intervention, and that these individual trajectories predicted pre-post intervention changes in trait mindfulness and distress. These findings support that increasing state mindfulness over repeated meditation sessions may contribute to a more mindful and less distressed disposition. However, individuals' trajectories of change may vary and warrant further investigation.*

Koenig, Harold G. 2015. Religion, spirituality, and health: A review and update. *Advances in Mind-Body Medicine* 29(3). 19–26.

*This article summarizes research prior to 2010 and more recent research on religion, spirituality, and health, including some of the latest work being done by research teams at Columbia University, Harvard University, Duke University, and other academic medical centers. First, terms such as religion, humanism, and spirituality are defined. Second, based on his research team's previous systematic review of quantitative studies published in the peer-reviewed literature prior to 2010, the author discusses the findings from that research on the effects of religion and spirituality (R/S) on (1) mental health-well-being, purpose in life, hope, optimism, self-esteem, depression, anxiety, suicide, and substance abuse; (2) health behaviors-exercise, diet, cigarette smoking, and risky sexual activity; and (3) physical health-coronary artery disease, cancer, and all-cause mortality. Third, the author examines the latest research on the prevalence of spiritual needs among individuals with serious or terminal*



*medical illnesses, the consequences of ignoring those needs, and the results of clinical trials that have examined the effects of spiritual assessments by physicians. Finally, the author reviews the research currently being conducted at Duke University on the efficacy of religious cognitive-behavioral therapies and on the effects of religious involvement on telomere length in stressed caregivers. Resources are provided that will assist seasoned researchers and clinicians who might be interested in doing research in this novel and expanding area of whole-person medicine.*

- Oxhandler, Holly K., Danielle E. Parrish, Luis R. Torres & W. Andrew Achenbaum. 2015. The Integration of Clients' Religion and Spirituality in Social Work Practice: A National Survey. *Social Work* 60(3). 228–237.

*This article describes the results of a cross-sectional study of licensed clinical social workers' (LCSWs') views and behaviors related to integrating clients' religion and spirituality in clinical practice. A total of 442 LCSWs from across the United States who advertised their services on the Internet provided anonymous responses to an online administration of the Religious/Spiritually Integrated Practice Assessment Scale. The results indicate that LCSWs have positive attitudes, high levels of self-efficacy, and perceive such integration as feasible, but report low levels of engagement in integrating clients' religious and spiritual beliefs into practice. Moreover, two variables emerged as significant predictors for LCSWs' overall orientation toward integrating clients' religion and spirituality in practice: practitioners' intrinsic religiosity and prior training (prior course work or continuing education).*

- Sadat Hoseini, Akram Sadat, AbdulHosein Khosro Panah & Fateme Alhani. 2015. The Concept Analysis of Health Based on Islamic Sources: Intellectual Health. *International Journal of Nursing Knowledge* 26(3). 113–120.

doi:10.1111/2047-3095.12052.

*This study describes the concept of health through an analysis of Islamic sources using the concept analysis method of Walker and Avant. The concept of health includes body and spiritual dimensions. Humans have the authority and insight to attain spiritual health, allowing intellectual dominance of the spirit over the body.*

- Sosevsky, Bella. 2015. Between Bethlehem and Jerusalem: Can empathy bridge the gap? *International Journal of Psychoanalytic Self Psychology* 10(3). 287–295.

doi:10.1080/15551024.2015.1043845.

*The author, an Israeli therapist and a political activist, describes watching the controversial Israeli feature film Bethlehem with a Palestinian friend, hoping to discuss with him the complicated issues raised by the film. The dramatic incident that ensued caused the surfacing of long-standing questions in the author's mind regarding the ways to apply Kohut's views and self psychology's basic tenets about essential human goodness, the sources of rage and aggression, to the turmoil of the local circumstances. Drawing from classical and contemporary self-psychological contributions, as well as from other philosophical and religious writings, she discusses the question of whether empathy can bridge the gap between Palestinians and Israelis.*

- Taylor, Janie J., Jennifer L. Hodgson, Irina Kolobova, Angela L. Lamson, Natalia Sira & David Musick. 2015. Exploring the Phenomenon of Spiritual Care Between Hospital Chaplains and Hospital Based Healthcare Providers. *Journal of Health Care Chaplaincy* 21(3). 91–107.

doi:10.1080/08854726.2015.1015302.

*Hospital chaplaincy and spiritual care services are important to patients' medical care and well-being; however, little is known about healthcare providers' experiences receiving spiritual support. A phenomenological study examined the shared experience of spiritual care between hospital chaplains and hospital-based healthcare providers (HBHPs). Six distinct themes emerged from the in-depth interviews: Awareness of chaplain availability, chaplains focus on building relationships with providers and staff, chaplains are integrated in varying degrees on certain hospital units, chaplains meet providers' personal and professional needs, providers appreciate*

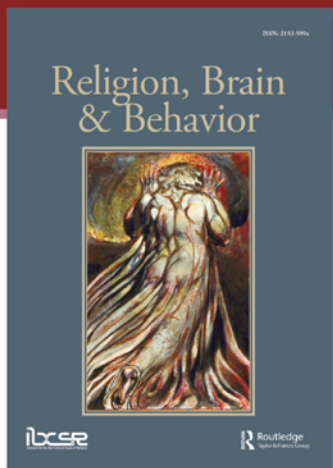
*chaplains, and barriers to expanding hospital chaplains' services. While HBHPs appreciated the care received and were able to provide better patient care as a result, participants reported that administrators may not recognize the true value of the care provided. Implications from this study are applied to hospital chaplaincy clinical, research, and training opportunities.*

Vermandere, Mieke, Franca Warmenhoven, Evie Van Severen, Jan De Leppeire & Bert Aertgeerts. 2015. The Ars Moriendi Model for Spiritual Assessment: A Mixed-Methods Evaluation. *Oncology Nursing Forum* 42(4). 294–301.  
doi:10.1188/15.onf.294-301.

*The purpose of this study was to explore nurses' and physicians' experiences with the ars moriendi model (AMM) for spiritual assessment in a convergent, parallel, mixed-methods experimental design in a palliative home care in Belgium. Participants were 17 nurses and 4 family physicians (FPs) in the quantitative phase, and 19 nurses and 5 FPs in the later qualitative phase. A survey was used to investigate first impressions after a spiritual assessment. Descriptive statistics were applied for the analysis of the survey. In a semistructured interview a few weeks later, nurses and physicians were asked to describe their experiences with using the AMM. Interviews were audio recorded, transcribed, and qualitatively analyzed. Quantitative and qualitative results were compared to see whether the findings were confirmative. The survey assessed the feasibility of the AMM for use in palliative home care, whereas the semistructured interviews collected in-depth descriptions of healthcare providers' (HCPs') experiences with the AMM. Results indicate that the AMM was perceived as valuable. Many patients shared their wishes and expectations about the end of life. Most HCPs said they felt that the patient-provider relationship had been strengthened as a result of the spiritual assessment. Almost all assessments raised new issues; however, many dyads had informally discussed spiritual issues before.*

Williams, Malcolm V., Ann Haas, Beth Ann Griffin, Brad R. Fulton, David E. Kanouse, Laura M. Bogart & Kathryn Pitkin Derose. 2015. Predictors of the Existence of Congregational HIV Programs: Similarities and Differences Compared With Other Health Programs. *American journal of health promotion: AJHP* 29(6). e225–235.  
doi:10.4278/ajhp.130531-QUAN-280.

*The purpose of this study was to identify and compare predictors of the existence of congregational human immunodeficiency virus (HIV) and other health programs using a cross-sectional experimental design. Participants were a nationally representative sample of 1,506 U.S. congregations surveyed in the National Congregations Study (2006-2007). Key informants at each congregation completed in-person and telephone interviews on congregational HIV and other health programs and various congregation characteristics (response rate = 78%). County-level HIV prevalence and population health data from the Robert Wood Johnson Foundation's 2007 County Health Rankings were linked to the congregational data. Multinomial logistic regression was used to assess factors that predict congregational health programs relative to no health programs; and of HIV programs relative to other health activities. Most congregations (57.5%) had at least one health-related program; many fewer (5.7%) had an HIV program. Predictors of health vs. HIV programs differed. The number of adults in the congregation was a key predictor of health programs, while having an official statement welcoming gay persons was a significant predictor of HIV programs. Other significant characteristics varied by size of congregation and type of program (HIV vs. other health).*



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## PART 3: BOOKS

### ***3.1 SCIENTIFIC STUDY OF RELIGION, BRAIN, AND BEHAVIOR***

Cardin, Matt. 2015. *Ghosts, Spirits, and Psychics: The Paranormal from Alchemy to Zombies*. ABC-CLIO.

Dilman, Ilham. 2015. *The Self, the Soul and the Psychology of Good and Evil*. (Routledge Studies in Ethics and Moral Theory). Routledge.

Moon, Hwarang. 2015. *Engraved Upon the Heart: Children, the Cognitively Challenged, and Liturgy's Influence on Faith Formation*. Wipf & Stock.

Sidky, H. 2015. *Religion: an anthropological perspective*. (American University Studies 348). New York: Peter Lang Publishing.

Uszkalo, Kirsten C. 2015. *Bewitched and Bedeviled: A Cognitive Approach to Embodiment in Early English Possession*. (Cognitive Studies in Literature and Performance). Palgrave Macmillan.

### ***3.2 SPIRITUALITY & HEALTH RESEARCH***

Hunsinger, Deborah van Deusen. 2015. *Bearing the Unbearable: Trauma, Gospel, and Pastoral Care*. Grand Rapids Michigan: Wm. B. Eerdmans Publishing Co.

Rassool, G. Hussein. 2015. *Islamic Counselling: An Introduction to theory and practice*. Routledge.

## PART 4: ARTICLES IN PRESS

### 4.1 SCIENTIFIC STUDY OF RELIGION, BRAIN, AND BEHAVIOR

- Anderson, Joel & Yasin Koc. 2015. Exploring patterns of explicit and implicit anti-gay attitudes in muslims and atheists. *European Journal of Social Psychology*.  
doi:10.1002/ejsp.2126.
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