

exploring the nexus of culture, mind and religion

RESEARCH REVIEW

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

April, 2013

INTRODUCTION

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

Articles for this issue were located by searching the following databases: Applied Science and Technology, ATLA Religion Database, General Science, PubMed, EBSCO Psychology and Behavioral Sciences Collection, PsycARTICLES, PsycINFO, ScienceDirect, and Web of Science. The search terms were altruism, god, goddess, meditat*, prayer, relig*, ritual, spiritu*, and yoga, tailored to the database being searched. Books were located on Amazon.com. Articles not directly relevant to the scientific study of religion were excluded, as were correspondence and reviews. From a universe of 691 articles, 93 articles have been retained from 67 journals. There are 49 pre-publication citations from 28 journals.

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PART 1: ARTICLES IN RELIGION, BRAIN, AND BEHAVIOR

1.1 SCIENTIFIC STUDY OF RELIGION: COGNITIVE NEUROSCIENCE

Keune, Philipp M, Vladimir Bostanov, Martin Hautzinger & Boris Kotchoubey. 2013. Approaching dysphoric mood: State-effects of mindfulness meditation on frontal brain asymmetry. *Biological psychology* 93(1). 105–113.

doi:10.1016/j.biopsycho.2013.01.016.

Meditation-based interventions reduce the relapse risk in recurrently depressed patients. Randomized trials utilizing neurophysiologic outcome measures, however, have yielded inconsistent results with regard to a prophylactic effect. Although frontal brain asymmetry, assessed through electroencephalographic (EEG) alpha activity (8-13 Hz), is indicative of approach vs. withdrawal-related response dispositions and represents a vulnerability marker of depression, clinical trials have provided mixed results as to whether meditation has beneficial effects on alpha asymmetry. Inconsistencies might have arisen since such trials relied on resting-state recordings, instead of active paradigms under challenge, as suggested by contemporary notions of alpha asymmetry. Researchers examined two groups of remitted, recurrently depressed females. In a "mindfulness support group" EEG was recorded during neutral rest, and rest following a negative mood induction. Subsequently, participants received initial meditation instructions. EEG was then obtained during an active period of guided mindfulness meditation and rest following the active period. In a "rumination challenge group" EEG was obtained during the same resting conditions, whereas in the active period, initial meditation instructions were followed by a rumination challenge. A significant shift in mid-frontal asymmetry, yielding a pattern indicative of approach motivation, was observed in the mindfulness support group, specifically during the meditation period. This indicates that mindfulness meditation may have a transient beneficial effect, which enables patients to take an approach-related motivational stance, particularly under circumstances of risk.

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Calendar year memberships US\$90 Discounts for retirees and students Mascaro, Jennifer S., James K. Rilling, Lobsang Tenzin Negi & Charles L. Raison. 2013. Pre-existing brain function predicts subsequent practice of mindfulness and compassion meditation. *NeuroImage* 69. 35–42.

doi:10.1016/j.neuroimage.2012.12.021.

While a variety of meditation techniques are increasingly employed as health interventions, the fact that meditation requires a significant commitment of time and effort may limit its potential widespread utility. In the current study, the authors ask whether baseline subjective reports or brain activity in response to a "Pain for Self and Others" paradigm predicts subsequent engagement in mindfulness and compassion meditation. The study also investigated whether compassion training would impact neural responses when compared to an active health education control group. Prior to training, activation of the left and right anterior insula, an area thought to be important for empathy, in response to the Other pain task was positively related to engagement with compassion meditation as measured by practice time (n=13). On the other hand, activity in the left amygdala during the Self pain task was negatively correlated with mindfulness practice time. Following the study intervention, there was no difference between the compassion group (n=13), and the control group (n=8), in brain responses to either the Self or Other task. These results are the first to indicate that baseline neural responses may predict engagement with meditation training and suggest that pre-existing neurobiological profiles differentially predispose individuals to engage with disparate meditation techniques.

Wei, Gao-Xia, Ting Xu, Feng-Mei Fan, Hao-Ming Dong, Li-Li Jiang, Hui-Jie Li, Zhi Yang, Jing Luo & Xi-Nian Zuo. 2013. Can Taichi reshape the brain? A brain morphometry study. *PloS one* 8(4). e61038.

doi:10.1371/journal.pone.0061038.

Although research has provided abundant evidence for Taichi-induced improvements in psychological and physiological well-being, little is known about possible links to brain structure of Taichi practice. Using high-resolution MRI of 22 Tai Chi Chuan (TCC) practitioners and 18 controls matched for age, sex and education, researchers set out to examine the underlying anatomical correlates of long-term Taichi practice at two different levels of regional specificity. For this purpose, parcel-wise and vertex-wise analyses were employed to quantify the difference between TCC practitioners and the controls based on cortical surface reconstruction. The Attention Network Test (ANT) was also adopted to explore the effect of TCC on executive control. TCC practitioners, compared with controls, showed significantly thicker cortex in precentral gyrus, insula sulcus and middle frontal sulcus in the right hemisphere and superior temporal gyrus and medial occipito-temporal sulcus and lingual sulcus was associated with greater intensity of TCC practice. These findings indicate that long-term TCC practice could induce regional structural change and also suggest TCC might share similar patterns of neural correlates with meditation and aerobic exercise.

1.2 SCIENTIFIC STUDY OF RELIGION: EVOLUTION

Blogowska, Joanna & Vassilis Saroglou. 2013. For Better or Worse: Fundamentalists' Attitudes Toward Outgroups as a Function of Exposure to Authoritative Religious Texts. *International Journal for the Psychology of Religion* 23(2). 103–125. doi:10.1080/87567555.2012.687991.

Fundamentalism not only predicts prejudice toward outgroups but also prosociality toward proximal targets and ingroups. Taking things a step further, the authors of this article hypothesized that because fundamentalists tend to show submission to religious authority, their attitudes toward unknown targets and outgroups may vary significantly depending on the nature of the authoritative religious texts to which they are exposed. In three studies using hypothetical scenarios, the association between fundamentalism and prosocial attitudes (a) became negative after exposure to a violent biblical text (Study 1; unknown targets), (b) reversed from negative to positive after reading a prosocial biblical text (Study 2; negligent targets), and (c) became negative or positive following a violent versus prosocial biblical text (Study 3; atheist target). Additional results confirmed the uniqueness of fundamentalism compared to general religiosity, quest orientation, and authoritarianism, regarding such dependency upon religious authority. Findings also support the mediating roles of reported submissiveness to religious teachings and perceived symbolic threat.

Grund, Thomas, Christian Waloszek & Dirk Helbing. 2013. How Natural Selection Can Create Both Self- and Other-Regarding Preferences, and Networked Minds. *Scientific Reports* 3. doi:10.1038/srep01480.

Biological competition is widely believed to result in the evolution of selfish preferences. The related concept of the 'homo economicus' is at the core of mainstream economics. However, there is also experimental and empirical evidence for other-regarding preferences. Here the authors present a theory that explains both self-regarding and other-regarding preferences. Assuming conditions promoting non-cooperative behavior, it is demonstrated that intergenerational migration determines whether evolutionary competition results in a 'homo economicus' (showing self-regarding preferences) or a 'homo socialis' (having other-regarding preferences). The model assumes spatially interacting agents playing prisoner's dilemmas, who inherit a trait determining 'friendliness', but mutations tend to undermine it. Reproduction is ruled by fitness-based selection without a cultural modification of reproduction rates. This model calls for a complementary economic theory for 'networked minds' (the 'homo socialis') and lays the foundations for an evolutionarily grounded theory of other-regarding agents, explaining individually different utility functions as well as conditional cooperation.

House, Bailey, Joseph Henrich, Barbara Sarnecka & Joan B. Silk. 2013. The development of contingent reciprocity in children. *Evolution and Human Behavior* 34(2). 86–93. doi:10.1016/j.evolhumbehav.2012.10.001.

Cooperation between nonrelatives is common in humans. Reciprocal altruism is a plausible evolutionary mechanism for cooperation within unrelated pairs, as selection may favor individuals who selectively cooperate with those who have cooperated with them in the past. Reciprocity is often observed in humans, but there is only limited evidence of reciprocal altruism in other primate species, raising questions about the origins of human reciprocity. Here, the authors explore how reciprocity develops in a sample of American children ranging from 3 to 7.5 years of age, and also compare children's behavior to that of chimpanzees in prior studies to gain insight into the phylogeny of human reciprocity. Children show a marked tendency to respond contingently to both prosocial and selfish acts, patterns that have not been seen among chimpanzees in prior studies. Results show that reciprocity increases markedly with age in this population of children, and by about 5.5 years of age children consistently match the previous behavior of their partners.

Hvidtjørn, Dorte, Inge Petersen, Jacob Hjelmborg, Axel Skytthe, Kaare Christensen & Niels C Hvidt. 2013. Familial resemblance in religiousness in a secular society: a twin study. Twin research and human genetics: the official journal of the International Society for Twin Studies 16(2). 544–553. doi:10.1017/thg.2013.3.

It is well known that human behavior and individual psychological traits are moderately to substantially heritable. Over the past decade, an increasing number of studies have explored the genetic and environmental influence on religiousness. These studies originate predominantly from countries generally considered more religious than the very secular northern European countries. Comparisons of the results are complicated by diverse definitions of religiousness, but several studies indicate that the influence of the family environment is most predominant in early life, whereas genetic influences increase with age. Researchers performed a population-based twin study of religiousness in a secular society using data from a Web-based survey sent to 6,707 Danish twins born 1970-1989, who were identified in the Danish Twin Registry. Controlling for gender and age, Fishman's three conceptual dimensions of religiousness were applied: cognition, practice, and importance. The study sample comprised 2,237 same sex twins, a response rate of 45%. High correlations were found within both monozygotic and dizygotic twin pairs in most items of religiousness, indicating a large influence from shared environmental factors. Personal religiousness such as praying to God, believing in God, and finding strength and comfort in religion were more influenced by genetic factors than were social forms of religiousness such as church attendance. A small tendency was found for increasing genetic influence with increasing age for some religious items, but not for all.

Petersen, Michael Bang. 2013. Moralization as protection against exploitation: do individuals without allies moralize more? *Evolution and Human Behavior* 34(2). 78–85. doi:10.1016/j.evolhumbehav.2012.09.006.

Over the course of human evolutionary history, individuals have required protection from other individuals who sought to exploit them. Moralization - broadcasting relevant behaviors as immoral - is proposed as a strategy whereby individuals attempt to engage third parties in the protection against exploitation. Whereas previous accounts of strategic morality have focused on the effect of individual differences in mating strategies, the present authors argue for the importance of another factor: differences in the availability of alternative sources of protection. Given the potential costs of moralization, it is predicted that it is primarily used among individuals lacking protection in the form of social allies. Consistent with this, a large cross-national set of surveys is used to reveal how individuals without friends moralize more. In contrast, however, support from other social sources such as family or religious individuals increases moralization.

Smead, Rory & Patrick Forber. 2013. The Evolutionary Dynamics of Spite in Finite Populations. *Evolution* 67(3). 698–707.

doi:10.1111/j.1558-5646.2012.01831.x.

Spite, the shady relative of altruism, involves paying a fitness cost to inflict a cost on some recipient. Here, the authors investigate a density dependent dynamic model for the evolution of spite in populations of changing size. They extend the model by introducing a dynamic carrying capacity. Analysis shows that it is possible for unconditionally spiteful behavior to evolve without population structure in any finite population. In some circumstances spiteful behavior can contribute to its own stability by limiting population growth. The authors use the model to show that there are differences between spite and altruism, and to refine Hamilton's original argument about the insignificance of spite in the wild. They also discuss the importance of fixing the measure of fitness to classify behaviors as selfish or spiteful.

Terrizzi, John A., Natalie J. Shook & Michael A. McDaniel. 2013. The behavioral immune system and social conservatism: a meta-analysis. *Evolution and Human Behavior* 34(2). 99–108. doi:10.1016/j.evolhumbehav.2012.10.003.

The behavioral immune system (BIS) is a cluster of psychological mechanisms (e.g., disgust) that have evolved to promote disease-avoidance. Recent evidence suggests that the BIS may promote avoidance of outgroup members, an historical source of contamination, by evoking social conservatism. That is, the BIS mechanisms may encourage the endorsement of socially conservative beliefs, which promote social exclusivity, tradition, and negativity toward outgroups. The current study provides a systematic review and meta-analysis of 24 studies to evaluate the hypothesis that the BIS is predictive of social conservatism. The results indicate that behavioral immune strength, as indicated by fear of contamination and disgust sensitivity, is positively related to social conservatism (i.e., rightwing authoritarianism, social dominance orientation, religious fundamentalism, ethnocentrism, collectivism, and political conservatism). These findings provide initial evidence that socially conservative values may function as evolutionarily evoked disease-avoidance strategies.

1.3 SCIENTIFIC STUDY OF RELIGION: PSYCHOLOGY AND CULTURE

Boppart, Timo, Josef Falkinger, Volker Grossmann, Ulrich Woitek & Gabriela Wüthrich. 2013. Under which conditions does religion affect educational outcomes? *Explorations in Economic History* 50(2). 242–266.

doi:10.1016/j.eeh.2012.12.001.

This paper examines under which conditions religious denomination affects public spending on schooling and educational performance. Researchers employ a unique data set which covers, inter alia, information on numerous measures of public school inputs in 169 Swiss districts for the years 1871/72, 1881/82 and 1894/95, marks from pedagogical examinations of conscripts (1875–1903), and results from political referenda to capture conservative or progressive values. Although Catholic districts show on average significantly lower educational performance and spend less on primary schooling than Protestant districts, Catholicism is harmful only in a conservative milieu. The researchers also exploit information on absenteeism of pupils from school to separate provision of schooling from use of schooling.

Carey, Jasmine M & Delroy L Paulhus. 2013. Worldview implications of believing in free will and/or determinism: politics, morality, and punitiveness. *Journal of Personality* 81(2). 130–141. doi:10.1111/j.1467-6494.2012.00799.x.

In this study, three studies were conducted via online questionnaires. Studies 1 and 3 recruited undergraduate students (n=220 and 161, respectively). Study 2 participants were recruited from a broader community sample (n=253). Studies 1 and 2 found that free will belief (FWB) is associated with traditional conservative attitudes, including authoritarianism, religiosity, and belief in a just world. Study 2 replicated this pattern but narrowed the religiosity link to the intrinsic style. In Study 3, FWB was associated with binding moral foundations and retributive punishment of hypothetical criminals. The authors conclude that belief in free will is associated with a conservative worldview, including such facets as authoritarianism, religiosity, punitiveness, and moralistic standards for judging self and others. The common element appears to be a strong sense of personal responsibility. Evidence for distinct correlates of scientific and fatalistic determinism reinforces the need for treating them separately.

Claudia, Vlaicu (Zlate). 2013. Spiritual Orientation of Youth from the Perspective or Humanist and Orthodox Therapies. *Procedia - Social and Behavioral Sciences* 76. 885–890. doi:10.1016/j.sbspro.2013.04.225.

Religion has become an important variable for those researchers in psychology who have constantly tried to describe and understand the spiritual experience of high school students and undergraduates from a psychological perspective. The most challenging aspect of each research has been to correlate the religious feeling to other types of values than the religious values. Most researchers have concluded that the religious feeling is rooted in childhood. This research paper utilizes a descriptive design which encompasses the humanist psychotherapy on the one hand and orthodox psychotherapy on the other hand and translates the stages of orthodox psychotherapy in psychological language; the stages of soul healing include amongst other actions the priest taking over the role of the psychotherapist. The methods include a questionnaire applied on young adults that investigates the extent to which both humanist and orthodox therapies are important in their life, their relationship with God and what the psychological balance means to them and how they see life fulfillment. The results of the research emphasize the fact that living, in a personal and unique manner, the relationship with God may be and it actually serves as a catalyst of harmonious personal development.

Cunningham, George B. & E. Nicole Melton. 2013. The Moderating Effects of Contact with Lesbian and Gay Friends on the Relationships among Religious Fundamentalism, Sexism, and Sexual Prejudice. *Journal of Sex Research* 50(3-4). 401–408.

doi:10.1080/00224499.2011.648029.

The purpose of this study was to examine the degree to which contact with lesbian and gay friends moderated the effects of religious fundamentalism and sexism on sexual prejudice. The authors gathered data from 269 heterosexual adults living in Texas. Results indicate that the effects of religious fundamentalism on sexual prejudice were reduced when contact was high. However, the positive association between modern sexism and sexual prejudice was not moderated by contact.

Ganzach, Yoav, Shmuel Ellis & Chemi Gotlibovski. 2013. On intelligence education and religious beliefs. *Intelligence* 41(2). 121–128. doi:10.1016/j.intell.2013.01.001.

A number of authors have suggested that education mediates the negative effect of intelligence on religiosity. However, there is very little direct evidence for this mediation, and the indirect evidence is contradictory. The results of the current paper suggest that, by and large, education does not mediate the effect of intelligence on religiosity. However, the results also suggest that since education has a positive effect on religiosity when religious background is strong and a negative effect when religious background is weak, and since intelligence has a positive effect on education, the negative effect of intelligence on religiosity is stronger when religious background is strong than when it is weak. Researchers examine this mediated moderation model in two large, nationally representative, databases.

Krauss, Steven Eric, Ismi Arif Ismail, Turiman Suandi, Azimi Hamzah, Siti Raba'ah Hamzah, Dzuhailmi Dahalan, Nor Farahana Mhd Daud & Fazilah Idris. 2013. Parenting and Community Engagement Factors as Predictors of Religiosity Among Muslim Adolescents From Malaysia. *International Journal for the Psychology of Religion* 23(2). 87–102. doi:10.1080/10508619.2012.670039.

Despite the plethora of research on correlates of adolescent religiosity, few studies have examined the contribution of social context to religiosity among non-Western Muslim samples using multidimensional religiosity measures. To address this gap, the current study investigated the influence of community engagement and parenting factors on religiosity among 596 Malaysian Muslim secondary school students. After controlling for gender, family structure, family income, and social desirability, the results showed that parental monitoring, mosque involvement, and school engagement significantly predicted religious worldview, whereas parental religious socialization, parental monitoring, mosque involvement, school engagement, and youth organization involvement accounted for a significant amount of the variance in religious personality. Implications for further research on socialization influences on religious development among adolescents are discussed.

Maranise, Anthony M. J. 2013. Superstition & Religious Ritual: An Examination of their Effects and Utilization in Sport. *Sport Psychologist* 27(1). 83–91.

This article discusses the use of superstition and religious rituals within sport. While the popular view among skeptics seems to be that religious ritual is nothing more than superstition, the author argues that while there admittedly are many similarities, there also exist major differences which separate superstition and religious ritual into distinct entities. The realm of sport is one widely known for the numerous exhibitions of both superstition and religious ritual. The examples of sport-related superstition and religious ritual are so numerous that they have even gained noted media attention in the past two decades. Thus, the article situates both terms within the practical framework of sport participation. From this foundation, the author defines both terms in context and begins to examine the effects on athletes' individual holistic development arguing that religious ritual leads ultimately to a greater holistic development than does superstition. Holistic development is examined in four aspects: physiology, emotionality, intellectuality, and spirituality. The positive effects of religious ritual as applied within athletics are mentioned in each aforementioned category. The author approaches the topic from the perspective of the psychology of religion, sports psychology, as well as Judeo-Christian theological concepts regarding religious ritual. The

numerous positive benefits of religious ritual over superstition within athletics lead to a final argument that religious ritual provides significant meaning to the lives of athletes in a way which superstition is simply unable.

McAdams, Dan P., Kathrin J. Hanek & Joseph G. Dadabo. 2013. Themes of Self-Regulation and Self-Exploration in the Life Stories of Religious American Conservatives and Liberals. *Political Psychology* 34(2). 201–219.

doi:10.1111/j.1467-9221.2012.00933.x.

A sample of 128 highly religious (Christian) midlife American adults completed a series of attitudinal and personality trait measures and narrated 12 important autobiographical scenes in their life stories. Individuals high on self-reported political conservatism tended to accentuate the theme of self-regulation in their life stories, repeatedly describing important autobiographical scenes wherein they struggled to control, discipline, manage, restrain, protect, or preserve the self. By contrast, individuals high on political liberalism tended to emphasize the theme of selfexploration, telling stories about expanding, discovering, articulating, or fulfilling the self. Demographics and dispositional traits (especially openness to experience) showed significant associations with conservatism-liberalism, as well, but these variables did not mitigate the robust relationship between life-narrative themes and political orientation. The results are discussed in terms of a broadened understanding of personality that conceives of dispositional traits and narrative identity as comprising distinct layers and complementary features of psychological individuality, both implicated in political lives.

Mugisha, James, Heidi Hjelmeland, Eugene Kinyanda & Birthe Loa Knizek. 2013. Religious Views on Suicide Among the Baganda, Uganda: A Qualitative Study. *Death Studies* 37(4). 343–361. doi:10.1080/07481187.2011.641136.

Relatively little research has been conducted on religion and suicide in Africa, yet religion has a lot of influence on people's way of life in Africa. To study religious views on suicide among the Baganda, Uganda, researchers used grounded theory and discourse analysis on a total of 28 focus groups and 30 key informant interviews. Suicide is largely seen as a breach of God's doctrine life is sacred, God's commandment thou shall not kill, and God's rule of agape. The study also focuses on the consequences of breaching God's divine providence: punishment from God and the Church. Religion still has a lot of influence on people's views on suicide in Uganda despite the challenges highlighted in the study. A recommendation from these results is that suicide prevention should cater to divergent views on religion and suicide.

Ozyurt, Saba. 2013. Negotiating Multiple Identities, Constructing Western-Muslim Selves in the Netherlands and the United States. *Political Psychology* 34(2). 239–263. doi:10.1111/j.1467-9221.2012.00924.x.

This article evaluates the psychological processes, discursive practices, and sociopolitical mechanisms underlying the identity reconstruction of Muslim immigrant women in the United States and the Netherlands. Specifically, it focuses on the ways in which Muslim immigrant women who are embedded in both Islamic and Western cultures negotiate their traditional and modern identities and self-representations and construct a coherent self-narrative about their bicultural existence as Western-Muslim.' The qualitative evidence presented here expands existing theoretical and empirical discussions on biculturalism and acculturation by demonstrating the ways in which contextual factors define the negotiation repertoire that is available to bicultural individuals. The findings of this article also call into question some of the earlier findings on cultural conflict hypothesis, because it shows that successful negotiation of bicultural identities depends not so much on whether the individual perceives these identities and cultures to be compatible with each other, but rather on the availability of a coherent self-narrative of belonging to both cultural worlds.

Preston, Jesse Lee, Ryan S Ritter & Justin Hepler. 2013. Neuroscience and the soul: competing explanations for the human experience. *Cognition* 127(1). 31–37.

doi:10.1016/j.cognition.2012.12.003.

The development of fMRI techniques has generated a boom of neuroscience research across the psychological sciences, and revealed neural correlates for many psychological phenomena seen as central to the human experience (e.g., morality, agency). Meanwhile, the rise of neuroscience has reignited old debates over mind-body dualism and the soul. While some scientists use neuroscience to bolster a material account of consciousness, others point to unexplained neural phenomena to defend dualism and a spiritual perspective on the mind. In two experiments the authors examine how exposure to neuroscience research impacts belief in the soul. Researchers find that belief in soul decreases when neuroscience provides strong mechanistic explanations for mind. But when explanatory gaps in neuroscience research are emphasized, belief in soul is enhanced, suggesting that physical and metaphysical explanations may be used reflexively as alternative theories for mind. Implications for the future of belief in soul and neuroscience research are discussed.

Røislien, Hanne Eggen. 2013. Religion and Military Conscription: The Case of the Israel Defense Forces (IDF). Armed Forces & Society (0095327X) 39(2). 213–232. doi:10.1177/0095327X12449429.

The military benefits from fostering an "us-feeling" among its members. On what basis is this formed? The following article explores how religion feeds into the selective conscription practices of the Israel Defense Forces (IDF). Combining legal documents with data gathered through interviews with thirty-four soldiers in a combat battalion, it is argued that the IDF's conscription practices are sensitive to the contents of religion. The IDF applies a multifarious concept of religion with significant impact on the IDF's ability to foster a sense of "us." The IDF recruits draftees on the basis of a twofold definition of Judaism, either as an ethnic group or as a theological concept. Both definitions help determine whether one is drafted. Interviews with soldiers expand on this definition, drawing attention to the integrative as well as disintegrative consequences of this notion of religion within the IDF.

Schaap-Jonker, Hanneke, Bram Sizoo, Jannine van Schothorst-van Roekel & Jozef Corveleyn. 2013. Autism Spectrum Disorders and the Image of God as a Core Aspect of Religiousness. International Journal for the Psychology of Religion 23(2). 145–160. doi:10.1080/10508619.2012.688005.

Associations between Autism Spectrum Disorders (ASD) and the image of God were studied among adult mental health outpatients with ASD (n=78) and compared to a psychiatric and a nonclinical norm group. The God image, which refers to the personal meaning that God/ the divine has to the individual, of those with ASD had fewer positive and more negative traits than the God image of those without ASD. Especially impairments in the social domain of individuals with ASD were related to more feelings of anxiety toward God and the perception of God as ruling/punishing, which suggests that difficulties in the social, interpersonal domain and the accompanying feelings extend into the religious/spiritual domain. Religious saliency particularly predicted positive aspects of the image of God. This implies that the God image of individuals with ASD in this sample differs not only according to the degree to which autistic traits are present but also according to the degree in which religion is an essential factor in their lives. Implications for clinical care are discussed.

Tummala-Narra, Pratyusha & Milena Claudius. 2013. A qualitative examination of Muslim graduate international students' experiences in the United States. *International Perspectives in Psychology: Research, Practice, Consultation* 2(2). 132–147. doi:10.1037/ipp0000003.

Although there has been an increase in enrollment of Muslim international students in college campuses in the United States over the past decade, few studies have examined the experiences of cultural adjustment among Muslim graduate international students. In the present qualitative study, the authors examined graduate students' experiences of acculturation, engagement with religion, and negotiation of social support in a new cultural environment. Semistructured interviews with 15 Muslim international students enrolled in graduate programs in the United States were analyzed using conventional content analysis. Five broad categories emerged from the data including: (1) diverse views of the new cultural environment, (2) social isolation, (3) experiences of discrimination, (4) religious identity, and (5) protective factors in adjusting to the United States. A number of themes within these broad categories provide new knowledge concerning stress and resilience experienced by participants.

Zysberg, Leehu & Tal Schenk. 2013. Creativity, Religiosity, and Political Attitudes. *Creativity Research Journal* 25(2). 228–231.

doi:10.1080/10400419.2013.783761.

Although theoretically proposed in the literature, the direct associations between political attitudes, religion, and creativity have rarely been explored. A convenience sample of 123 adults working in Israel filled out questionnaires assessing political-social attitudes, religiosity, and background factors (e.g., age, gender, education, and parents' education) associated with the aforementioned. The How Do You Think test was used to assess creativity in various life areas. Regressions and SEM analysis revealed associations between religiosity, political, and social attitudes, mother's education, and creativity.

1.4 SCIENTIFIC STUDY OF RELIGION: METHOD & THEORY

Amer, Mona M. & Anisah Bagasra. 2013. Psychological research with Muslim Americans in the age of Islamophobia: Trends, challenges, and recommendations. *American Psychologist* 68(3). 134–144. doi:10.1037/a0032167.

This article reviews challenges in conducting research with Muslim Americans in order to offer recommendations for culturally sensitive approaches that can enhance the growth of future scholarship. The authors first assess trends in psychological scholarship pertinent to Muslims in North America over the past two decades. A total of 559 relevant publications were identified through a PsycINFO database search. The 10 years post 9/11 saw a more than 900% increase in the annual number of publications, paralleling a national interest in the Muslim American community subsequent to the World Trade Center attacks. Researchers who conducted these studies faced numerous barriers, including unclear definition of the target sample, unavailability of culturally sensitive measures, sampling difficulties, and obstacles to participant recruitment. To navigate these challenges, the authors provide a framework for effective research design along the continuum of the research process from study conceptualization to dissemination of results.

Day, James M. & Paulo Jesus. 2013. Epistemic Subjects, Discursive Selves, and Dialogical Self Theory in the Psychology of Moral and Religious Development: Mapping Gaps and Bridges. *Journal of Constructivist Psychology* 26(2). 137–148. doi:10.1080/10720537.2013.759030.

This article charts various communalities and differences between cognitive-developmental and socio-cultural models in the psychology of moral and religious development, with particular attention to Hubert Hermans's model of the dialogical self. The authors propose that, despite marked differences, even oppositions, between conceptual models and visions of the human subject in these two ways of conceiving psychological functioning, the cognitivedevelopmental approach and the narrative-dialogical approach show meaningful correlations and overlap. Arguing for a "meta-dialogical" perspective benefiting from both cognitive-developmental and dialogical self-contributions, the article goes on to explore some implications for moral and religious education.

Krotofil, Joanna Maria. 2013. Religion, Migration, and the Dialogical Self: New Application of the Personal Position Repertoire Method. *Journal of Constructivist Psychology* 26(2). 90–103. doi:10.1080/10720537.2013.759021. The first part of this article proposes the combination of the personal position repertoire (PPR) with focus group discussion, as a method that gives better insight into the construction of meaning in the process of dialogical engagement with others. A research procedure whereby a focus group, including the participants and the researcher, follows the construction of the repertoire matrix is proposed as a means for capturing the encounter with the voices of "others." The application of this combined method is illustrated with case studies focusing on the position of religion within the self, in the context of an educational setting: a marriage preparation course run by the Catholic Church for Polish migrants in Great Britain. In the second part of the article, case studies are discussed with a focus on the presence and prominence of the collective voice of a religious institution in the dialogical selves of religious I-positions occurring when new voices are encountered and introduced in the relational dynamics of the self, showing, at the same time, the central role of power relations in that process. It is argued that complex, dynamic combinations of cultural and religious positions, illustrated by the case studies, indicate the contextual nature of the self and a prevailing tendency among new Polish migrants to develop multiple and flexible identities, rather than to become closed and congealed in a single, dominating position.

Lucchetti, Giancarlo, Alessandra Lamas Granero Lucchetti & Homero Vallada. 2013. Measuring spirituality and religiosity in clinical research: a systematic review of instruments available in the Portuguese language. *São Paulo medical journal* = Revista paulista de medicina 131(2). 112–122.

A systematic review was conducted to map out the spirituality and/or religiosity (S/R) measurement tools for use in the Portuguese language. Twenty instruments were found. Forty-five percent of these evaluated religiosity, 40% spirituality, 10% religious/spiritual coping and 5% S/R. Among these, 90% had been produced in (n=3) or translated to (n=15) Brazilian Portuguese and two (10%) solely to European Portuguese. Nevertheless, the majority of the instruments had not undergone in-depth psychometric analysis. Only 40% of the instruments presented concurrent validity, 45% discriminative validity and 15% a test-retest procedure.

PART 2. ARTICLES IN SPIRITUALITY & HEALTH RESEARCH

2.1 SPIRITUALITY & HEALTH: GENERAL HEALTH & WELL-BEING

Abel, Allison N., Lisa K. Lloyd & James S. Williams. 2013. The Effects of Regular Yoga Practice on Pulmonary Function in Healthy Individuals: A Literature Review. *Journal of Alternative and Complementary Medicine* 19(3). 185–190. doi:10.1089/acm.2011.0516.

The purpose of this review article is to review research on yoga's effects on pulmonary function. A comprehensive search was conducted that yielded 57 studies. Of these studies selections were made to include only experimental studies written in English, published in peer-reviewed journals after 1980, and investigating the effects of regular yoga practice on pulmonary function in healthy individuals participating in the studies. Yoga improved pulmonary function, as measured by maximum inspiratory pressure, maximum expiratory pressure, maximum voluntary ventilation, forced vital capacity, forced expiratory volume in 1 second, and peak expiratory flow rate, in all (n=9) but 1, study. Overall, pulmonary function appears to improve with a minimum of 10 weeks of regular yoga practice, and the magnitude of this improvement is related to fitness level and/or the length of time the subjects spend practicing pranayama (i.e., breathing exercises). In other words, greater improvements in pulmonary function are more likely to be seen in less-fit individuals and/or those that engage in longer periods of pranayama.

Baker, Louisa K.Rigazio-DiGilio. 2013. Evaluation of a Spiritually Based Child Maltreatment Prevention Training Program. *Counseling & Values* 58(1). 3–22. doi:10.1002/j.2161-007X.2013.00021.x.

The authors empirically evaluated a spiritually based 1-day child maltreatment training program. Pretest, posttest, and follow-up results indicated that participants' recognition of hypothetical maltreatment did not increase after training. Furthermore, although participants decreased their use of items known to dissuade decisions to report, they were less likely to report maltreatment posttraining and 1 month later. Focus group data revealed that participants felt more knowledgeable but insufficiently prepared to respond to maltreatment and that they needed opportunities to practice what they had learned. Suggestions for clergy, pastoral counselors, and mental health professionals working within spiritual communities are provided to inform curriculum advancements.

Baldacchino, Donia, Kristina Torskenaes, Mary Kalfoss, Josette Borg, Aaron Tonna, Clifford Debattista, Neville Decelis & Rodianne Mifsud. 2013. Spiritual coping in rehabilitation- a comparative study: part 2. British journal of nursing (Mark Allen Publishing) 22(7). 402–408.

Spiritual coping, which may or may not contain religiosity, may enhance adaptation of clients with chronic illness. Part 1 of this article presented the research methodology of this cross-sectional comparative study, which explored the spiritual coping of clients with chronic illness receiving rehabilitation services in Malta (n=44) (lower limb amputation: n=10, chronic heart disease: n=9, osteoarthritis in an institution: n=10 and in the community: n=15) and Norway (n=16) (post-hip/shoulder surgery: n=5; chronic heart disease: n=5; chronic pain: n=6). Data were collected from seven purposive samples by focus groups. Part 2 discusses the findings, which consist of one main spiritual coping theme and three sub-themes: "adopting religious coping strategies, relationship with God, and time for reflection and counting one's blessings." Commonalities were found in the findings except in one dimension, which was found only in the Malta group, that is, being supported by others with a similar condition. This difference may be a result of the environment in the rehabilitation centers, cultural, and geographical differences between the two countries. While considering the limitations of this study, recommendations are proposed to the rehabilitation and education sectors and further trans-cultural comparative longitudinal research with mixed method approach on various clients with acute, chronic and life-threatening illness. Barlow, Fiona, Jan Walker & George Lewith. 2013. Effects of Spiritual Healing for Women Undergoing Long-Term Hormone Therapy for Breast Cancer: A Qualitative Investigation. *Journal of Alternative and Complementary Medicine* 19(3). 211–216. doi:10.1089/acm.2012.0091.

The authors investigated whether Spiritual Healing could support patients with breast cancer undergoing long-term hormonal therapy. Spiritual Healing was provided by 4 healers registered with the National Federation of Spiritual Healers. Twelve patients with breast cancer undergoing long-term hormone treatment and who found the effects onerous, self-referred themselves and were given ten weekly sessions of approximately 40 minutes each. Data collected included participant's daily records, direct observations noted by healers, the researcher's field diary and a one-to-one semi-structured interview. Following intervention, the positive effects of Spiritual Healing included alleviation of the physical side-effects of their treatment, increased energy levels, enhanced well-being, emotional relaxation, and re-engagement with pre-cancer activities. Although one participant admitted considering a drug holiday prior to joining the study, none of the participants felt tempted to stop their hormonal treatments while receiving Spiritual Healing. These qualitative findings indicate that Spiritual Healing has the potential to support patients with breast cancer in the maintenance of their long-term orthodox treatments.

Bazarko, Dawn, Rebecca A Cate, Francisca Azocar & Mary Jo Kreitzer. 2013. The Impact of an Innovative Mindfulness-Based Stress Reduction Program on the Health and Well-Being of Nurses Employed in a Corporate Setting. *Journal of Workplace Behavioral Health* 28(2). 107–133. doi:10.1080/15555240.2013.779518.

This study implemented an innovative new model of delivering a Mindfulness-Based Stress Reduction (MBSR) program that replaces six of the eight traditional in-person sessions with group telephonic sessions (tMBSR) and measured the program's impact on the health and well-being of nurses employed within a large health care organization. As part of a nonrandomized pre-post intervention study, 36 nurses completed measures of health, stress, burnout, self-compassion, serenity, and empathy at three points in time. Between baseline (Time 1) and the end of the 8-week tMBSR intervention (Time 2), participants showed improvement in general health, decreased stress, decreased work burnout, and improvement in several other areas. Improvements were sustained 4 months later (Time 3), and individuals who continued their MBSR practice after the program demonstrated better outcomes than those that did not. Findings suggest that the tMBSR program can be a low cost, feasible, and scalable intervention that shows positive impact on health and well-being, and could allow MBSR to be delivered to employees who are otherwise unable to access traditional, on-site programs.

Black, David S., Steve W. Cole, Michael R. Irwin, Elizabeth Breen, Natalie M. St Cyr, Nora Nazarian, Dharma S. Khalsa & Helen Lavretsky. 2013. Yogic meditation reverses NF-kappa B and IRFrelated transcriptome dynamics in leukocytes of family dementia caregivers in a randomized controlled trial. *Psychoneuroendocrinology* 38(3). 348–355. doi:10.1016/j.psyneuen.2012.06.011.

In this study, forty-five family dementia caregivers were randomized to either Kirtan Kriya Meditation (KKM) or Relaxing Music (RM) listening for 12 min daily for 8 weeks and 39 caregivers completed the study. Genomewide transcriptional profiles were collected from peripheral blood leukocytes sampled at baseline and 8-week followup. Promoter-based bioinformatics analyses tested the hypothesis that observed transcriptional alterations were structured by reduced activity of the pro-inflammatory nuclear factor (NF)-kappa B family of transcription factors and increased activity of Interferon Response Factors (IRFs; i.e., reversal of patterns previously linked to stress). In response to KKM treatment, 68 genes were found to be differentially expressed (19 up-regulated, 49 downregulated) after adjusting for potentially confounded differences in sex, illness burden, and BMI. Up-regulated genes included immunoglobulin-related transcripts. Down-regulated transcripts included pro-inflammatory cytokines and activation-related immediate-early genes. Transcript origin analyses identified plasmacytoid dendritic cells and B lymphocytes as the primary cellular context of these transcriptional alterations. Promoter-based bioinformatic analysis implicated reduced NF-kappa B signaling and increased activity of IRF1 in structuring those effects.

Borders, Tyrone F. & Brenda M. Booth. 2013. Stimulant Use, Religiosity, and the Odds of Developing or Maintaining an Alcohol Use Disorder Over Time. *Journal of Studies on Alcohol and Drugs* 74(3). 369–377.

This study examined how stimulant use and religiosity are associated longitudinally with the odds of an alcohol use disorder (AUD) among a rural population-based cohort of stimulant users. Recent stimulant users (n=710) were recruited via respondent-driven sampling and were interviewed every 6 months over a 3-year period. Concurrent and lagged generalized estimating equations analyses were conducted to estimate how past-30-day crack cocaine, powder cocaine, and methamphetamine use; religiosity; and other covariates were associated with the odds of an AUD. At baseline, 56% of the participants met AUD criteria. The odds of an AUD declined significantly over time in the concurrent, but not the lagged, model. Crack cocaine use was associated with increased odds of an AUD in both models, although the strength of the concurrent association between an AUD and crack cocaine use declined over time. Powder cocaine use and more frequent church attendance also were concurrently associated with decreased odds of an AUD. Findings suggest that greater frequency of church attendance may be related to lower odds of the development or maintenance of an AUD.

Chang, Chih-Hao & Pei-Chen Lo. 2013. Effects of long-term dharma-chan meditation on cardiorespiratory synchronization and heart rate variability behavior. *Rejuvenation Research* 16(2). 115–123.

doi:10.1089/rej.2012.1363.

Remarkable changes in cardiorespiratory interactions are frequently experienced by Chan meditation practitioners following years of practice. This study compares the results of a study on cardiorespiratory interactions for novice (control group) and experienced (experimental group) Chan meditation practitioners. The effectual co-action between the cardiac and respiratory systems was evaluated by the degree of cardiorespiratory phase synchronization (CRPS). In addition, an adaptive-frequency-range (AFR) scheme to reliably quantify heart rate variability (HRV) was developed for assessing the regulation of sympathetic-parasympathetic activity and the efficiency of pulmonary gas exchange. The enhanced HRV method, named HRVAFR, can resolve the issue of overestimating HRV under the condition of slow respiration rates, which is frequently encountered in studies on Chan meditation practitioners. In the comparison of the three data sets collected from the two groups, the findings resulted in innovative hypotheses to interpret the extraordinary process of the rejuvenation of cardiorespiratory functions through long-term Dharma-Chan meditation practice. Particularly, advanced practitioners exhibit a continuously high degree of cardiorespiratory phase synchronization, even during rapid breathing. Based on post-experimental interviews with advanced practitioners, the activation of inner Chakra energy, during the course of Chan-detachment practice, frequently induces perceptible physiological-mental reformation, including an efficient mechanism for regulating cardiorespiratory interactions.

Chen, Kevin W., Christine C. Berger, Devang Gandhi, Eric Weintraub & C. W. Lejuez. 2013. Adding Integrative Meditation with Ear Acupressure to Outpatient Treatment of Cocaine Addiction: A Randomized Controlled Pilot Study. *Journal of Alternative and Complementary Medicine* 19(3). 204– 210.

doi:10.1089/acm.2011.0311.

Remarkable changes in cardiorespiratory interactions are frequently experienced by Chan meditation practitioners following years of practice. This study compares the results of our study on cardiorespiratory interactions for novice (control group) and experienced (experimental group) Chan meditation practitioners. The effectual co-action between the cardiac and respiratory systems was evaluated by the degree of cardiorespiratory phase synchronization.

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Cook, Erin Lane & Michael J. Silverman. 2013. Effects of music therapy on spirituality with patients on a medical oncology/hematology unit: A mixed-methods approach. *The Arts in Psychotherapy* 40(2). 239–244. doi:10.1016/j.aip.2013.02.004.

Despite considerable interest in the potential relationship between oncology and spirituality, it remains unclear how the spiritual wellbeing of patients is best addressed in health care environments. The purpose of this study was to determine the effect of three music therapy doses on spirituality in patients on a medical oncology/hematology unit (n=17). The researchers measured participants' faith, peace, and meaning by using the FACIT-Sp. tool at preand posttest during a randomized controlled design. The researchers also incorporated interviews from patients concerning potential effects of music therapy and spirituality. Quantitative results indicated significant betweengroup differences in peace and faith subscales, with participants in the music therapy condition having higher posttest means than participants in the control condition. Qualitative data tended to support the importance of music therapy in meeting spiritual needs: Results of a thematic analysis indicated music therapy helped participants feel closer to God and elevated their moods. Consistent with the literature base, participants noted that that spiritual needs should indeed be addressed during a person's time at the hospital.

Dhameja, Kanupriya, Savita Singh, M. D. Mustafa, K. P. Singh, Basu Dev Banerjee, Mukul Agarwal & Rafat S. Ahmed. 2013. Therapeutic Effect of Yoga in Patients with Hypertension with Reference to GST Gene Polymorphism. *Journal of Alternative and Complementary Medicine* 19(3). 243–249.

doi:10.1089/acm.2011.0908.

The present study was designed to investigate the association of glutathione S-transferase (GST) gene polymorphism with oxidative stress in hypertensive patients and the possible beneficial effect of yoga on them. Sixty (60) hypertensive individuals, between 30 and 60 years of age, were divided into two groups of 30 each. The yoga group was subjected to 50-60 minutes of yogic practices daily for 42 days, while the control group included the remaining 30 age-and sex-matched hypertensive individuals. GST gene polymorphism was analyzed using multiple allele specific polymerase chain reaction, and oxidative stress parameters were assessed biochemically. Assessment of blood pressure showed a statistically significant though modest reduction in the yoga group as compared to the control group. Malondialdehyde was observed to be significantly low, while antioxidant capacity in the form of GST showed an increasing trend and ferric-reducing ability of plasma was significantly increased in the subjects who practiced yoga.

King, Stephen D W, George Fitchett & Donna L Berry. 2013. Screening for religious/spiritual struggle in blood and marrow transplant patients. *Supportive Care in Cancer* 21(4). 993–1001. doi:10.1007/s00520-012-1618-1.

For this study, 178 blood and marrow transplant patients completed the Electronic Self-Report Assessment— Cancer which included the Rush Religious Struggle Screening Protocol and other measures of quality of life, pain, and depressive symptoms prior to transplant therapy. All participants were assessed by a social worker. Using the Rush Protocol, 18 % of the patients were identified as potentially experiencing religious/spiritual (R/S) struggle. R/S struggle was not reported in any social work assessments. In a multivariable model, potential R/S struggle was more likely in patients who were more recently diagnosed, male, and Asian/Pacific Islanders. There were no significant associations between potential R/S struggle and quality of life, pain, or depressive symptoms.

Lakkireddy, Dhanunjaya, Donita Atkins, Jayasree Pillarisetti, Kay Ryschon, Sudharani Bommana, Jeanne Drisko, Subbareddy Vanga & Buddhadeb Dawn. 2013. Effect of Yoga on Arrhythmia Burden, Anxiety, Depression, and Quality of Life in Paroxysmal Atrial Fibrillation The YOGA My Heart Study. *Journal of the American College of Cardiology* 61(11). 1177–1182. doi:10.1016/j.jacc.2012.11.060.

The purpose of this study was to examine the impact of yoga on atrial fibrillation (AF) burden, quality of life (QoL), depression, and anxiety scores. This single-center, pre-post study enrolled patients with symptomatic paroxysmal AF with an initial 3-month non-interventional observation period followed by twice-weekly 60-min yoga training for next 3 months. Results indicate that yoga training reduced symptomatic AF episodes, symptomatic non-AF episodes, asymptomatic AF episodes, and depression and anxiety, and improved the QoL parameters of physical functioning, general health, vitality, social functioning, and mental health domains on SF-36. There was significant decrease in heart rate, and systolic and diastolic blood pressure before and after yoga.

Manning, Lydia K. 2013. Navigating hardships in old age: exploring the relationship between spirituality and resilience in later life. *Qualitative Health Research* 23(4). 568–575. doi:10.1177/1049732312471730.

Research suggests that spirituality is important to a large percentage of the older adult population and serves as a promoter of healthy aging. In this qualitative research the author conducted and analyzed multiple interviews with 6 women aged 80 and older. Using multiple in-depth interviews the interplay between spirituality and resilience over the life course was explored. A grounded theory analysis of the 30 interviews was performed. The major finding is that participants used their spirituality as a tool to promote and maintain resilience in later life. The results are presented by the author as an interpretation of the participants' perceptions of their spirituality, and indicate their reliance on spirituality to overcome hardship over the life course.

Nakau, Maiko, Jiro Imanishi, Junichi Imanishi, Satoko Watanabe, Ayumi Imanishi, Takeshi Baba, Kei Hirai, Toshinori Ito, Wataru Chiba & Yukihiro Morimoto. 2013. Spiritual Care of Cancer Patients by Integrated Medicine in Urban Green Space: A Pilot Study. EXPLORE: The Journal of Science and Healing 9(2). 87–90.

doi:10.1016/j.explore.2012.12.002.

The purpose of the present study was to examine the effect of spiritual care of cancer patients by integrated medicine in a green environment. The study involved 22 cancer patients. Integrated medicine consisted of forest therapy, horticultural therapy, yoga meditation, and support group therapy, and sessions were conducted once a week for 12 weeks. Following intervention, participants displayed improved quality of life and reduced cancer-associated fatigue. Furthermore, some aspects of psychological state were improved and natural killer cell activity was increased.

Nam, Sanggon. 2013. The Effects of Religious Attendance and Obesity on Health by Race/Ethnicity. Osong Public Health and Research Perspectives 4(2). 81–88. doi:10.1016/j.phrp.2013.03.002. The objectives of this paper are to examine the effects of religion and obesity on health and determine how the relationship varies by racial/ethnic groups with data from the Panel Study of American Race and Ethnicity. The author found that subjects who attend religious services 1-2 time a year and 1-3 times a month are associated with increased odds of reporting better health. In whites, attending religious services 1-2 times a year are associated with increased odds of reporting better health and 1-3 times a month are also associated with increased odds of reporting better health and 1-3 times a month are also associated with increased odds of reporting better health and 1-3 times a month are also associated with increased odds of reporting better health and 1-3 times a month are also associated with increased odds of reporting better health and 1-3 times a month are also associated with increased odds of reporting better health and 1-3 times a month are also associated with increased odds of reporting better health and 1-3 times a month are also associated with increased odds of reporting better health and 1-3 times a month are also associated with increased odds of reporting better health than black. The frequency of religious services attendance of blacks and Hispanics are not associated with self-rated health. For BMI, being white is more positively associated with increased odds of reporting better health than black and Hispanic subjects. Although white subjects are less likely to attend religious services more frequently than black and Hispanic subjects, the influence on self-rated health in white subjects is more evidenced than other racial/ethnic groups.

Neighbors, Clayton, Garrett A. Brown, Angelo M. Dibello, Lindsey M. Rodriguez & Dawn W. Foster. 2013. Reliance on God, Prayer, and Religion Reduces Influence of Perceived Norms on Drinking. *Journal of Studies on Alcohol and Drugs* 74(3). 361–368.

The present research evaluates the extent to which reliance on God, prayer, and religion moderates the association between perceived social norms and drinking. Participants (1,124 undergraduate students) completed a crosssectional survey online, which included measures of perceived norms, religious values, and drinking. Perceived norms were assessed by asking participants their perceptions of typical student drinking. Drinking outcomes included drinks per week, drinking frequency, and typical quantity consumed. Regression analyses indicated that religiousness and perceived norms had significant unique associations in opposite directions for all three drinking outcomes. Significant interactions were evident between religiousness and perceived norms in predicting drinks per week, frequency, and typical quantity. In each case, the interactions indicated weaker associations between norms and drinking among those who assigned greater importance to religiousness.

Panczak, Radosław, Adrian Spoerri, Marcel Zwahlen, Matthias Bopp, Felix Gutzwiller & Matthias Egger. 2013. Religion and suicide in patients with mental illness or cancer. Suicide & life-threatening behavior 43(2). 213–222. doi:10.1111/sltb.12009.

In Switzerland, the highest rates of suicide are observed in persons without religious affiliation and the lowest in Catholics, with Protestants in an intermediate position. The authors examined whether this association was modified by concomitant psychiatric diagnoses or malignancies, based on 6,909 suicides recorded in 3.69 million adult residents 2001-2008. Suicides were related to mental illness or cancer if codes F or C, respectively, were mentioned on the death certificate. The protective effect of religion was substantially stronger if a diagnosis of cancer was mentioned on the death certificate and weaker if a mental illness was mentioned.

Qu, Su, Solveig Mjelstad Olafsrud, Leonardo A Meza-Zepeda & Fahri Saatcioglu. 2013. Rapid Gene Expression Changes in Peripheral Blood Lymphocytes upon Practice of a Comprehensive Yoga Program. *PloS one* 8(4). e61910. doi:10.1371/journal.pone.0061910.

The authors assessed possible rapid changes in global gene expression profiles in the peripheral blood mononuclear cells (PBMCs) in healthy people that practiced either a comprehensive yoga program or a control regimen. The experimental sessions included gentle yoga postures, breathing exercises, and meditation (Sudarshan Kriya and Related Practices [SK&P]) compared with a control regimen of a nature walk and listening to relaxing music. The results show that the SK&P program has a rapid and significantly greater effect on gene expression in PBMCs compared with the control regimen. These data suggest that yoga and related practices result in rapid gene expression alterations which may be the basis for their longer term cell biological and higher level health effects.

Saffari, Mohsen, Amir H Pakpour, Maryam K Naderi, Harold G Koenig, Donia R Baldacchino & Crystal N Piper. 2013. Spiritual coping, religiosity and quality of life: a study on Muslim patients undergoing haemodialysis. *Nephrology (Carlton, Vic.)* 18(4). 269–275. doi:10.1111/nep.12041.

This study examined the relationships between spiritual/religious, demographic and clinical variables and quality of life among 362 Iranian Muslims undergoing hemodialysis. The distribution of reported problems across dimensions of quality of life was: mobility (59.4%), usual activities (30.4%), self-care (21.3%), pain/discomfort (47.8%) and anxiety/depression (29.3%). Univariate analysis showed that factors such as age, sex, marital status, location, number of children, body mass index, serum albumin, having diabetes mellitus or other comorbidity, as well as spiritual/religious factors that were related to quality of life, health status or both. Regression models revealed that demographics, clinical variables and especially spiritual/religious factors explained about 40% of variance of quality of life and nearly 25% of the variance in health status.

Sawynok, Jana, Chok Hiew & Dana Marcon. 2013. Chaoyi fanhuan qigong and fibromyalgia: methodological issues and two case reports. *Journal of alternative and complementary medicine (New York, N.Y.)* 19(4). 383–386. doi:10.1089/acm.2011.0861.

In this case report, the authors report on two individuals with fibromyalgia of over 20 years' duration, who undertook training in Chaoyi Fanhuan Qigong (CFQ) and then practiced regularly over a 1-year period. They subsequently both undertook further training, and consolidated their health gains. Both observed major reductions in pain, improvements in sleep, mood, emotions, food and other allergies, and consider their condition essentially resolved. They have ceased taking several medications and have resumed their lives. The authors conclude that the case study approach provides data with respect to extent of practice, perseverance and long-term outcomes, and provides valuable insight into the potential of this self-care practice.

Shantakumari, Nisha, Shiefa Sequeira & Rasha El deeb. 2013. Effects of a yoga intervention on lipid profiles of diabetes patients with dyslipidemia. *Indian Heart Journal* 65(2). 127–131. doi:10.1016/j.ihj.2013.02.010.

The present study was conducted to assess the effectiveness of yoga in the management of dyslipidemia in patients of type 2 diabetes mellitus. This randomized parallel study was carried out in Medical College Trivandrum, Kerala, India. Hundred type 2 diabetics with dyslipidemia were randomized into control and yoga groups. The control group was prescribed oral hypoglycemic drugs. The yoga group practiced yoga daily for 1 h duration along with oral hypoglycemic drugs for 3 months. The lipid profiles of both the groups were compared at the start and at the end of 3 months. After intervention with yoga for a period of 3 months the study group showed a decrease in total cholesterol, triglycerides and LDL, with an improvement in HDL.

Sharpe, L., K. Nicholson Perry, P. Rogers, K. Refshauge & M. K. Nicholas. 2013. A comparison of the effect of mindfulness and relaxation on responses to acute experimental pain. *European Journal of Pain* 17(5). 742–752. doi:10.1002/j.1532-2149.2012.00241.x.

This study aimed to investigate the efficacy of mindfulness training in comparison with relaxation training on pain, threshold and tolerance during the cold pressor task. Undergraduate psychology students (n=140) were randomly assigned to receive reassuring or threatening information about the cold pressor. Participants were then re-randomized to receive mindfulness or a control intervention: relaxation training. Analyses confirmed that the threat manipulation was effective in increasing worry, fear of harm and expectations of pain, and reducing coping efficacy. Interaction effects revealed that mindfulness was effective in increasing curiosity and reducing decentring under conditions of high threat but not low threat. Other interactions on cognitive variables (attentional bias to

pain and self-focus) confirmed that mindfulness and relaxation appeared to exert influences under different conditions (i.e. mindfulness: high threat; and relaxation: low threat). Despite these cognitive effects being discerned under different conditions, there were no differences between mindfulness and relaxation on pain, tolerance or threshold in either threat group.

Sirilla, Janet & Janine Overcash. 2013. Quality of life (QOL), supportive care, and spirituality in hematopoietic stem cell transplant (HSCT) patients. *Supportive care in cancer: official journal of the Multinational Association of Supportive Care in Cancer* 21(4). 1137–1144. doi:10.1007/s00520-012-1637-y.

For many patients, a hematopoietic stem cell transplant (HSCT) can be challenging to physical and emotional health. Supportive care needs can be overwhelming for many patients and families. The purpose of this study was to evaluate the effect of quality of life (QOL), spiritual well-being, and supportive care resources post-HSCT. Three groups of HSCT patients were examined: allogeneic, autologous, and overall. In the sample (n=159), the autologous HSCT group reported the highest QOL scores. Spirituality scores increased for the autologous HSCT group at 90 days, but decreased for the overall and allogeneic groups. The type of supportive care resources most used were information from the physician and nurse, the Leukemia and Lymphoma Society Support as the most used form of support group, and Faith, Prayer and Spiritual Healing. QOL and spiritual well-being scores correlated best at 180 days (6 months) for autologous and allogeneic patients.

Song, Renliang, Chunhua Bian & Qianli D.Y. Ma. 2013. Multifractal analysis of heartbeat dynamics during meditation training. *Physica A: Statistical Mechanics and its Applications* 392(8). 1858–1862. doi:10.1016/j.physa.2012.11.050.

Researchers investigate the multifractality of heartbeat dynamics during Chinese CHI meditation in healthy young adults. The results show that the range of multifractal singularity spectrum of heartbeat interval time series during meditation is significantly narrower than those in the pre-meditation state of the same subject, which indicates that during meditation the heartbeat becomes regular and the degree of multifractality decreases.

Vermandere, Mieke, Jan De Lepeleire, Wouter Van Mechelen, Franca Warmenhoven, Bregje Thoonsen & Bert Aertgeerts. 2013. Spirituality in palliative home care: a framework for the clinician. Supportive Care in Cancer: Official Journal of the Multinational Association of Supportive Care in Cancer 21(4). 1061–1069. doi:10.1007/s00520-012-1626-1.

The purpose of this paper was to develop a consensus-based framework of the main elements of spiritual care in palliative home care. Experts from three stakeholder groups (physicians, professional spiritual care givers and researchers) representing two countries (Belgium and the Netherlands) participated in this study. The experts agreed to the 14 main elements of spiritual care in palliative home care: (1) being sensitive to patient's fear of the dying process; (2) listening to the patient's expectations and wishes about the end of life; (3) giving attention to patient's wishes about the design of the farewell; (4) offering rituals if the patient experiences them as meaningful; (5) listening to the stories, dreams and passions of the patient; (6) helping the patient find strength in inner resources; (7) connecting with the patient in truth, openness and honesty; (8) supporting communication and quality of relationships; (9) making sure the patient feels comfortable and safe; (10) seeing spirituality as an interwoven, though specific dimension; (11) caring for your own spirituality; (12) knowing and accepting your vulnerability; (13) being able to learn from your patient; and (14) having an interdisciplinary team that is there when needed.

2.2 Spirituality & Health: Mental Health

Ai, Amy L, Daniel Hall, Kenneth Pargament & Terrence N Tice. 2013. Posttraumatic growth in patients who survived cardiac surgery: the predictive and mediating roles of faith-based factors. *Journal of Behavioral Medicine* 36(2). 186–198. doi:10.1007/s10865-012-9412-6.

This paper aims to explore the effect of preoperative religious coping on long-term postoperative personal growth and potential mediation in this effect. Analyses capitalized on a preoperative survey and medical indices from the Society of Thoracic Surgeons' National Database of patients undergoing cardiac surgery. Participants in the current follow-up study completed a mailed survey 30 months after surgery. Hierarchical regression analysis was performed to evaluate the extent to which preoperative use of religious coping predicted growth at follow-up, after controlling for key demographics, medical indices, mental health, and protective factors. Predictors of posttraumatic growth at follow-up were positive religious coping and a living status without a partner. Medical indices, optimistic expectations, social support, and other religious factors were unrelated to posttraumatic growth. Including religious factors diminished effects of gender, age, and race. Including perceived spiritual support completely eliminated the role of positive religious coping, indicating mediation. Preoperative positive religious coping may have a long-term effect on postoperative personal growth, explainable by higher spiritual connections as a part of significancemaking. These results suggest that spirituality may play a favorable role in cardiac patients' posttraumatic growth after surviving a life-altering operation.

Ano, Gene. G. & Kenneth. I. Pargament. 2013. Predictors of spiritual struggles: an exploratory study. *Mental Health, Religion & Culture* 16(4). 419–434. doi:10.1080/13674676.2012.680434.

The purpose of the current study was to identify factors that predict spiritual struggles. It was hypothesized that factors from religious (e.g., God image, attachment to God, church attitudes, religious history), personal (e.g., neuroticism, pessimism, trait anger), social (e.g., social support, loneliness), and situational (e.g., negative appraisals) domains may predispose people to spiritual struggles during times of distress. Participants (309 undergraduate students) filled out questionnaires measuring relevant constructs and a two-step hierarchical multiple regression equation was generated separately for each of the four domains. Upon identifying significant predictors from each of the four domains, a final hierarchical regression equation revealed that: (1) more negative appraisals of a stressful situation, (2) an insecure ambivalent attachment to God, and (3) neuroticism significantly predicted unique variance in spiritual struggles beyond the effects of relevant religious variables, thus generally supporting the hypothesis that spiritual struggles are complex phenomena that stem from multiple factors.

Balbuena, Lloyd, Marilyn Baetz & Rudy Bowen. 2013. Religious Attendance, Spirituality, and Major Depression in Canada: A 14-Year Follow-up Study. *Canadian Journal of Psychiatry*. 58(4). 225–232.

This study examined the effect of religious attendance, self-declared importance of spiritual values, and selfidentification as a spiritual person on major depression. Data from 8 waves (1994 to 2008) of the longitudinal Canadian National Population Health Survey were used. People (n=12,583) who were not depressed at baseline (1994) were followed during 14 years. At baseline, monthly religious attenders tended to be older, female, and married, compared with occasional and nonattenders. Regression analysis revealed a 22% lower risk of depression for monthly attenders, compared with nonattenders, after controlling for age, household income, family and personal history of depression, marital status, education, and perceived social support. Neither self-reported importance of spiritual values nor identification as a spiritual person was related to major depressive episodes.

Barton, Yakov A., Lisa Miller, Priya Wickramaratne, Marc J. Gameroff & Myrna M. Weissman. 2013. Religious attendance and social adjustment as protective against depression: A 10-year prospective study. *Journal of Affective Disorders* 146(1). 53–57.

doi:10.1016/j.jad.2012.08.037.

This study examines the association of frequency of religious services attendance with subsequent depression, while accounting for the effects of social adjustment. Participants were 173 adult offspring of depressed and nondepressed parents, followed longitudinally over 25 years. Results indicate that frequent religious services attendance protected against subsequent depression at a trend level. High functioning social adjustment was found to protect against subsequent depression, especially within the immediate and extended family. Adults without a depressed parent who reported attending religious services at least once a month had a lower likelihood of subsequent depression. Among adults with a depressed parent, those with high functioning social adjustment had a lower likelihood of subsequent depression.

Buser, Juleen K. 2013. Stress, Spiritual Coping, and Bulimia: Feeling Punished by God/Higher Power. *Journal of Mental Health Counseling* 35(2). 154–171.

This study investigated the relationship between stress, spiritual coping, and bulimic symptoms in college students (n=605). Participants who felt punished by Go/Higher Power during difficult times reported more symptoms. This spiritual coping strategy also partly mediated the link between stress and bulimic symptoms; the link was partly explained by a coping style that involved beliefs about punishment by Go/Higher Power.

Buser, Juleen K.Parkins. 2013. "Made This Way for a Reason": Body Satisfaction and Spirituality. *Adultspan Journal* 12(1). 24–37. doi:10.1002/j.2161-0029.2013.00013.x.

Nine female participants shared their experiences of body satisfaction, spiritual beliefs, and the intersection of these domains. Using phenomenological inquiry, the authors identified 6 themes in participant interviews. The authors discuss ways in which this study extends previous research, in addition to providing suggestions for counseling practice.

Clark-Miller, Jason & Hallie C. Brady. 2013. Critical stress: Police officer religiosity and coping with critical stress incidents. *Journal of Police and Criminal Psychology* 28(1). 26–34. doi:10.1007/s11896-012-9112-8.

As a result of exposure to critical stress inducing incidents, police officers experience high rates of family disruption, alcohol abuse, domestic violence, and physical and psychological problems. This paper evaluates the ability of religion to mitigate the harmful consequences of critical stress using data obtained from a survey of metropolitan police officers (n=811). The authors found less religious officers used more adaptive coping strategies when confronted by critical stress incidents than their more religious counterparts. Furthermore, Protestants employed more adaptive strategies than Catholics.

Cook, Stephen W., Jamie D. Aten, Michael Moore, Joshua N. Hook & Don E. Davis. 2013. Resource loss, religiousness, health, and posttraumatic growth following Hurricane Katrina. *Mental Health, Religion & Culture* 16(4). 352–366. doi:10.1080/13674676.2012.667395.

This study examined associations among resource loss, religiousness (including general religiousness, religious comfort, and religious strain), posttraumatic growth (PTG), and physical and mental health among a sample of Mississippi university students soon after Hurricane Katrina hit the Gulf coast in 2005. Resource loss was negatively associated with health, but positively associated with PTG. Religious comfort was associated with positive outcomes, and religious strain was associated with negative outcomes. Religious comfort buffered the negative effects of resource loss on emotional health. Ancillary analyses indicated that associations between resource loss and health were mediated by religious strain.

Cougle, Jesse R., Christine Purdon, Kristin E. Fitch & Kirsten A. Hawkins. 2013. Clarifying relations between thought-action fusion, religiosity, and obsessive–compulsive symptoms through consideration of intent. *Cognitive Therapy and Research* 37(2). 221–231. doi:10.1007/s10608-012-9461-8.

Conflicting findings regarding the relations between thought-action fusion (TAF), religiosity, and obsessive compulsive disorder (OCD) may be due to a lack of clarity regarding the intent associated with the negative thoughts under consideration. In Study 1, researchers examined the perceptions of the immorality of intentional and unwanted morally-relevant thoughts (Moral TAF) and their relations with OCD symptoms, religiosity, and obsessive beliefs in a non-clinical sample. In Study 2, they randomly assigned participants to complete one of two versions of a previously used sentence neutralization task that was varied in terms of intent. Perception of the immorality of intentional negative thoughts but not unwanted negative thoughts was associated with Protestant/Catholic affiliation and greater prayer frequency, and perception of the immorality of unwanted thoughts was consistently associated with obsessive beliefs. Neither form of Moral TAF was associated with OCD symptoms, thought-action fusion, and scrupulosity, while reaction to the original intentional task was only associated with Moral TAF. Overall, the findings suggest that individuals differ in their perceptions of intentional to religiosity, while perceptions of understanding of OCD.

Danucalov, M. A. D., E. H. Kozasa, K. T. Ribas, J. C. F. Galduróz, M. C. Garcia, I. T. N. Verreschi, K. C. Oliveira, L. Romani de Oliveira & J. R. Leite. 2013. A yoga and compassion meditation program reduces stress in familial caregivers of Alzheimer's disease patients. *Evidence-based Complementary and Alternative Medicine: eCAM* 2013. 513149. doi:10.1155/2013/513149.

Familial caregivers of patients with Alzheimer's disease exhibit reduced quality of life and increased stress levels. The aim of this study was to investigate the effects of an 8-week yoga and compassion meditation program on the perceived stress, anxiety, depression, and salivary cortisol levels in familial caregivers. A total of 46 volunteers were randomly assigned to participate in a stress-reduction program for a 2-month period (yoga and compassion meditation program) (n=25) or an untreated control group for the same period of time (n=21). The levels of stress, anxiety, depression, and morning salivary cortisol of the participants were measured before and after intervention. The groups were initially homogeneous; however, after intervention, the groups diverged significantly. Unlike the control group, the intervention group exhibited a reduction in stress, anxiety, and depression levels, as well as a reduction in the concentration of salivary cortisol.

Exline, Julie J, Maryjo Prince-Paul, Briana L Root & Karen S Peereboom. 2013. The spiritual struggle of anger toward God: a study with family members of hospice patients. *Journal of Palliative Medicine* 16(4). 369–375. doi:10.1089/jpm.2012.0246.

The aim of this study was to assess the prevalence, correlates, and preferred coping strategies associated with anger toward God among family members of hospice patients. Surveys completed by family members of home-care patients (n=134) indicated that 43% of participants reported anger/disappointment toward God, albeit usually at low levels of intensity. Anger toward God was associated with more depressive symptoms, lower religiosity, more difficulty finding meaning, and belief that the patient was experiencing greater pain. Prayer was the most highly endorsed strategy for managing conflicts with God. Other commonly endorsed strategies included reading sacred texts; handling the feelings on one's own; and conversations with friends, family, clergy, or hospice staff. Self-help resources and therapy were less popular options. Ganga, Nima. S. & V. Raman Kutty. 2013. Influence of religion, religiosity and spirituality on positive mental health of young people. *Mental Health, Religion & Culture* 16(4). 435–443. doi:10.1080/13674676.2012.697879.

This study examines the influence of religion, religious behavior and perceptions of spirituality on positive mental health (PMH) of young people in Kerala, India. Survey data from 453 participants revealed a significant difference between scores of young people from different religions. Muslims had a low mean score, with two-way ANOVA showing significant difference by religion even after controlling for other relevant socio-demographic variables. Multivariate analysis showed that religious differences are mostly explained by the behavioral restrictions and opportunities for socialization that religion does or does not provide, with a strong gender overlay.

van Hooff, Madelon L.M. van & Matthijs Baas. 2013. Recovering by Means of Meditation: The Role of Recovery Experiences and Intrinsic Motivation. *Applied Psychology* 62(2). 185–210. doi:10.1111/j.1464-0597.2011.00481.x.

The effectiveness of meditation as a tool to recover from stress has already been widely established. However, less is known about the potential psychological mediating and moderating mechanisms affecting its effectiveness. The present study examined the mediating role of the recovery experiences 'relaxation', 'mastery', and 'detachment', and by studying the moderating role of intrinsic motivation. To that end, after completion of a stress-inducing speech preparation task, 100 participants were randomly assigned to either a 15-minute guided imagery meditation exercise or to a 15-minute radio interview on meditation. Subjectively experienced stress and serenity were included as measures of (recovery from) stress. These measures were completed after the speech preparation task and after the meditation exercise/ radio interview. Results showed that participants who meditated reported a larger increase in serenity and decrease in subjectively experienced stress than those who listened to the radio fragment. Furthermore, it turned out that this superior effect of meditation could be partly explained by the mediating effects of 'relaxation' and 'mastery' (but not 'detachment'). The recovery effects of meditation were also stronger for participants who were highly intrinsically motivated for this activity.

Hustoft, Hilde, Knut A. Hestad, Lars Lien, Paul Møller & Lars Johan Danbolt. 2013. "If I Didn't Have My Faith I Would Have Killed Myself!": Spiritual Coping in Patients Suffering From Schizophrenia. *International Journal for the Psychology of Religion* 23(2). 126–144. doi:10.1080/10508619.2012.688003.

Spirituality, religiousness, and existential thought were qualitatively investigated in six patients suffering from schizophrenia spectrum disorders. The patients in the present study were chosen on the basis of diversity as to how they experienced their spirituality to be of significance when coping with their disorder. The informants displayed many signs of spiritual struggle and transitional spiritual coping strategies, all of which seemed to be linked to hallucinatory experiences. Even though their spirituality met the criteria of religious delusions, the patients described their spirituality to have vital importance. The informants showed little spiritual pre-knowledge and seemed to be left alone without any clerical support in their spiritual struggle. This may underline the importance of including spiritual issues in the treatment of these patients.

Jang, Ji-Eun, Sung-Wan Kim, Seon-Young Kim, Jae-Min Kim, Min-Ho Park, Jung-Han Yoon, Hee-Young Shin, et al. 2013. Religiosity, depression, and quality of life in Korean patients with breast cancer: a 1-year prospective longitudinal study. *Psycho-Oncology* 22(4). 922–929. doi:10.1002/pon.3083.

Researchers investigated the association among religiosity and depression, anxiety, and quality of life in 284 women with breast cancer who were undergoing surgery. Measurements of religiosity and mental health were taken at baseline and at 1 year after surgery. The prevalence of depression at baseline and at 1 year was 22.5% and 16.5%, respectively. The religious groups did not differ significantly with respect to the prevalence of depression or

scores on psychiatric measures at either baseline or at 1 year. The prevalence of depression significantly decreased only in the Protestant group, from 30.1% to 15.7%. Scores on the Duke Religious Index (DRI) were significantly negatively correlated with scores on all of the anxiety and depression scales at 1 year after surgery in this group. In contrast, scores on the religious activity subscale of the DRI were significantly positively correlated with scores on the Hospital Anxiety Depression Scale at baseline or at 1 year among Catholic participants. The DRI scores of Protestant respondents were significantly positively correlated with scores on the European Organization for the Research and Treatment of Cancer Quality of Life Questionnaire Core 30 at 1 year after surgery.

Oshita, Daien, Koji Hattori & Miho Iwakuma. 2013. A Buddhist-based meditation practice for care and healing: An introduction and its application. *International journal of nursing practice* 19 Suppl 2. 15–23.

doi:10.1111/ijn.12040.

This paper outlines Buddhist-based meditation in terms of its spiritual, psychotherapeutic, physiological and neuroscientific perspectives. In the latter part of this paper, a pilot study is discussed, in which Japanese university students volunteered to practice meditation at home and complete questionnaires. T-tests were performed to compare with the non-meditated control group. Although only a small number in the experimental group completed the study, our analyses demonstrated that students benefited from meditation and showed significant increases in their sense of coherence, self-esteem and purpose in life.

Perich, Tania, Vijaya Manicavasagar, Philip B. Mitchell & Jillian R. Ball. 2013. The association between meditation practice and treatment outcome in Mindfulness-based Cognitive Therapy for bipolar disorder. *Behaviour research and therapy* 51(7). 338–343. doi:10.1016/j.brat.2013.03.006.

This study aimed to examine the impact of quantity of mindfulness meditation practice on the outcome of psychiatric symptoms following Mindfulness-based Cognitive Therapy (MBCT) for those diagnosed with bipolar disorder. Meditation homework was collected at the beginning of each session for the MBCT program to assess quantity of meditation practice. Clinician-administered measures of hypomania and depression along with self-report anxiety, depression and stress symptom questionnaires were administered pre-, post-treatment and at 12-month follow-up. A significant correlation was found between a greater number of days meditated throughout the 8-week trial and clinician-rated depression scores on the Montgomery-Asberg Depression Rating Scale at 12-month follow-up. There were significant differences found between those who meditated for 3 days a week or more and those who meditated less often on trait anxiety post-treatment and clinician-rated during the 8-week MBCT program was related to lower depression scores at 12-month follow-up, and there was evidence to suggest that mindfulness meditation practice was associated with improvements in depression and anxiety symptoms if a certain minimum amount (3 times a week or more) was practiced weekly throughout the 8-week MBCT program.

Quack, Johannes. 2013. "What do I know?" Scholastic fallacies and pragmatic religiosity in mental health-seeking behaviour in India. *Mental Health, Religion & Culture* 16(4). 403–418. doi:10.1080/13674676.2012.679358.

This paper draws on ethnographic fieldwork on psychiatrists and their patients (their care-givers and their communities) in North India. It addresses the questions as to when and why people approach psychiatrists and religious healers by arguing that approaches assessing "explanatory models" and other knowledge structures relevant to the people's health-seeking behavior should place more emphasis on the people's strong desire to get well, in any way possible. Secondly, the difference between beliefs rooted in the patients' life-worlds and explanations suggested to them by experts has to be acknowledged. These insights motivate a shift away from the concept

"religion" towards the differentiation between pragmatic and scholastic religiosities. This argument relates back to the Greek meaning of "pragma" understood by Hans-Georg Gadamer as "that within which we are entangled in the praxis of living".

Rees, Brian, Fred Travis, David Shapiro & Ruth Chant. 2013. Reduction in posttraumatic stress symptoms in Congolese refugees practicing transcendental meditation. *Journal of Traumatic Stress* 26(2). 295–298. doi:10.1002/jts.21790.

doi:10.1002/jts.21/90.

This matched single-blind pilot study tested the effect of Transcendental Meditation (TM) practice on symptoms of posttraumatic stress (PTS) in Congolese refugees. Following intervention, measurements of post-traumatic stress disorder decreased in the experimental group, and increased in the control group. Effect size was high. Compliance with TM practice was good. There were no adverse events.

Rosmarin, David H, Joseph S Bigda-Peyton, Sarah J Kertz, Nasya Smith, Scott L Rauch & Thröstur Björgvinsson. 2013. A test of faith in God and treatment: the relationship of belief in God to psychiatric treatment outcomes. *Journal of Affective Disorders* 146(3). 441–446. doi:10.1016/j.jad.2012.08.030.

Researchers examined relationships between belief in God and treatment outcomes, and identified mediating mechanisms. A prospective study was conducted with 159 patients in a day-treatment program at an academic psychiatric hospital. Belief in God, treatment credibility/expectancy, emotion regulation and congregational support were assessed prior to treatment. Results revealed that belief in God was significantly higher among treatment responders than non-responders. Higher levels of belief were also associated with greater reductions in depression and self-harm, and greater improvements in psychological well-being over course of treatment. Belief remained correlated with changes in depression and self-harm after controlling for age and gender. Perceived treatment credibility/expectancy, but not emotional regulation or community support, mediated relationships between belief in God and reductions in depression. No variables mediated relationships to other outcomes. Religious affiliation was also associated with treatment credibility/expectancy but not treatment credibility/expectancy.

Rushing, Nicole C., Elizabeth Corsentino, Jennifer L. Hames, Natalie Sachs-Ericsson & David C. Steffens. 2013. The relationship of religious involvement indicators and social support to current and past suicidality among depressed older adults. *Aging & Mental Health* 17(3). 366–374. doi:10.1080/13607863.2012.738414.

This study examined the relative influence of various conceptualizations of religious involvement, above and beyond the protective effects of social support, on current and past suicidality among depressed older adults. Participants were 248 depressed patients, 59 years and older, enrolled in the Neurocognitive Outcomes of Depression in the Elderly study. Church attendance, above and beyond importance of religion, private religious practices, and social support, was associated with less suicidal ideation; perceived social support partially mediated this relationship. Current religious practices were not predictive of retrospective reports of past suicide attempts. Church attendance, rather than other religious involvement indicators, has the strongest relationship to current suicidal ideation.

Spilman, Sarah K, Tricia K Neppl, M Brent Donnellan, Thomas J Schofield & Rand D Conger. 2013. Incorporating religiosity into a developmental model of positive family functioning across generations. *Developmental psychology* 49(4). 762–774. doi:10.1037/a0028418.

This study evaluated a developmental model of intergenerational continuity in religiosity and its association with observed competency in romantic and parent-child relationships across 2 generations. Using multi-informant data from the Family Transitions Project, a 20-year longitudinal study of families that began during early adolescence (n=451), researchers found that parental religiosity assessed during youths' adolescence was positively related to

youths' own religiosity during adolescence, which, in turn, predicted their religiosity after the transition to adulthood. The findings also supported the theoretical model guiding the study, which proposes that religiosity acts as a personal resource that will be uniquely and positively associated with the quality of family relationships. Especially important, the findings demonstrate support for the role of religiosity in a developmental process that promotes positive family functioning after addressing earlier methodological limitations in this area of study, such as cross-sectional research designs, single informant measurement, retrospective reports, and the failure to control for other individual differences.

Tomcsányi, Teodóra, Tamás Martos, András Ittzés, Katalin Horváth-Szabó, Tünde Szabó & János Nagy. 2013. Spiritual Transcendence and Mental Health of Psychotherapists and Religious Professionals in a Hungarian Adult Sample. *International Journal for the Psychology of Religion* 23(2). 161–170.

doi:10.1080/10508619.2012.714991.

Researchers examined whether components of spiritual transcendence can explain individual differences in mental health in a Hungarian adult sample (n=583), with a special focus on the associations in two subsamples, religious professionals and psychotherapists. Using the Spiritual Transcendence Scale (STS), it was found that religious professionals presented higher Prayer Fulfillment and Universality than psychotherapists; however, members of both professional groups scored higher than other professionals on these dimensions. By contrast, psychotherapists were superior to religious professionals in Connectedness. Moreover, higher Universality predicted better mental health, even after controlling for gender, age, profession, and basic personality traits. No interaction effects were found between profession and the subscales of the STS. Results suggest that the potential mental health benefits of spirituality, especially in form of a universal view of existence, are equally present in both specific professions and in the general sample, whereas the professions themselves still reflect differences both in spirituality and in well-being.

Varambally, Shivarama, Sumathi Vidyendaran, Mangala Sajjanar, Jagadisha Thirthalli, Ameer Hamza, H.R. Nagendra & B.N. Gangadhar. 2013. Yoga-based intervention for caregivers of outpatients with psychosis: A randomized controlled pilot study. *Asian Journal of Psychiatry* 6(2). 141–145. doi:10.1016/j.ajp.2012.09.017.

The current study aimed to test the efficacy of a brief yoga program as an intervention in caregivers of outpatients with functional psychotic disorders using a randomized controlled research design. Caregivers who agreed to participate in the study (n=29) were randomized into yoga (n=15) or wait-list group (n=14). They were assessed at baseline and at the end of 3 months. Patients who were randomized into the yoga group were offered supervised yoga training thrice a week for 4 weeks, after which they were instructed to practice at home for the next 2 months. Results showed significantly reduced burden scores and improved quality of life scores in the yoga group as compared to the wait-list group at the end of 3 months. There were no significant changes in anxiety and depression scores in caregivers, or psychopathology scores in patients.

2.3 SPIRITUALITY & HEALTH: METHOD AND THEORY

Briggs, Michele Kielty & Andrea L. Dixon. 2013. Women's Spirituality Across the Life Span: Implications for Counseling. *Counseling & Values* 58(1). 104–120. doi:10.1002/j.2161-007X.2013.00028.x.

The authors review the scholarly literature on women's spirituality to reveal the major themes women have identified as relevant to their spiritual journeys across the life span. Implications for counseling and ideas for practice are included after major themes are examined.

Cashwell, Craig S., J. Scott Young, Cheryl L. Fulton, Ben T. Willis, Amanda Giordano, Laura Wyatt Daniel, Jamie Crockett, B. Nicole Tate & Metoka L. Welch. 2013. Clinical Behaviors for Addressing Religious/Spiritual Issues: Do We Practice What We Preach? *Counseling & Values* 58(1). 45–58.

doi:10.1002/j.2161-007X.2013.00024.x.

To determine if counselors integrate clinical behaviors for addressing religious/spiritual issues in counseling consistent with their ratings of the importance of such behaviors, the authors conducted a national survey of American Counseling Association (ACA) members. Seventy-eight ACA members rated the importance of and frequency with which they engaged in a set of 30 clinical behaviors that were identified in the existing literature as addressing religious/spiritual issues within counseling. Results indicated possible disparities between importance and frequency ratings.

Chan, Christian S & Jean E Rhodes. 2013. Religious coping, posttraumatic stress, psychological distress, and posttraumatic growth among female survivors four years after Hurricane Katrina. *Journal of Traumatic Stress* 26(2). 257–265. doi:10.1002/jts.21801.

To determine if counselors integrate clinical behaviors for addressing religious/spiritual issues in counseling consistent with their ratings of the importance of such behaviors, the authors conducted a national survey of American Counseling Association (ACA) members. Seventy-eight ACA members rated the importance of and frequency with which they engaged in a set of 30 clinical behaviors that were identified in the existing literature as addressing religious/spiritual issues within counseling. Results indicated possible disparities between importance and frequency ratings. Potential barriers to counselors' utilization of religious and spiritually directed clinical behaviors were identified.

Deacon, Brett J., Amanda M. Vincent & Annie R. Zhang. 2013. Lutheran clergy members' responses to scrupulosity: The effects of moral thought–action fusion and liberal vs. conservative denomination. *Journal of Obsessive-Compulsive and Related Disorders* 2(2). 71–77. doi:10.1016/j.jocrd.2012.12.003.

The present study investigated moral thought-action fusion, view of God, and responses to a hypothetical parishioner with scrupulosity among 70 clergy members affiliated with liberal or conservative denominations of the Lutheran church. Pastors affiliated with the more conservative denomination evidenced higher moral thought-action fusion, belief in a micromanaging God, and responses to a scrupulous parishioner that risk reinforcing compulsive rituals and the fear of sin (e.g., admonitions of God's expectations for purity in thought and deed, advising regular confession of sinful thoughts). Moral thought-action fusion fully mediated denominational differences in potentially problematic responses to a scrupulous parishioner.

Doran, Frances & Julie Hornibrook. 2013. Women's experiences of participation in a pregnancy and postnatal group incorporating yoga and facilitated group discussion: A qualitative evaluation. *Women and Birth* 26(1). 82–86. doi:10.1016/j.wombi.2012.06.001.

This paper reports on a small qualitative research study which explored women's experiences of participation in a pregnancy and postnatal group that incorporated yoga and facilitated discussion. Fifteen women participated in individual, in-depth face-to-face interviews. Interviews were recorded and transcribed verbatim. Thematic analysis was undertaken to analyze the qualitative data. Six themes were developed, one with 3 subthemes. One theme was labeled as: 'the pregnancy and motherhood journey' and included 3 sub-themes which were labeled: 'preparation for birth', 'connecting with the baby' and 'sharing birth stories.' The other five themes were: 'feminine nurturing safe

space', 'watching and learning the mothering', 'building mental health, well-being and connections', the `'group like a rock and a seed' and 'different from mainstream'.

Dyer, Jacqueline E. Thurston & W. Bryce Hagedorn. 2013. Navigating Bereavement With Spirituality-Based Interventions: Implications for Non-Faith-Based Counselors. *Counseling and Values* 58(1). 69–84.

doi:10.1002/j.2161-007X.2013.00026.x.

The authors explore how spirituality is often avoided in secular counseling settings, discuss adverse effects of unresolved grief on clients' functioning, and propose the concept that spirituality can be used to help clients through the bereavement process. Finally, the authors offer research and clinically based interventions that counselors, particularly those who do not identify as faith-based, can use to incorporate spirituality into their work with bereaved clients.

Fallon, Kathleen M., Robert A. Dobmeier, Summer M. Reiner, Elaine J. Casquarelli, Lauren A. Giglia & Eric Goodwin. 2013. Reconciling Spiritual Values Conflicts for Counselors and Lesbian and Gay Clients. *Adultspan Journal* 12(1). 38–53. doi:10.1002/j.2161-0029.2013.00014.x.

Counselors and lesbian and gay clients experience parallel values conflicts between religious belief/spirituality and sexual orientation. This article uses critical thinking to assist counselors to integrate religious/spiritual belief with professional ethical codes. Clients are assisted to integrate religious/spiritual belief with sexual orientation.

Harper, Felicity W K, Andrea Nevedal, Susan Eggly, Carie Francis, Kendra Schwartz & Terrance L Albrecht. 2013. "It's up to you and God": understanding health behavior change in older African American survivors of colorectal cancer. *Translational Behavioral Medicine* 3(1). 94–103.

This study investigated the beliefs and attitudes of older African American colorectal cancer (CRC) survivors that may influence health behavior changes after treatment. Drawing from existing theories of health behavior change and cultural beliefs about health, a semi-structured interview guide was developed to elicit survivors' perspectives. Qualitative focus groups and interviews were conducted with 17 survivors. Using verbatim transcripts, thematic analysis was conducted to analyze patterns of responses. Transcripts were coded for seven categories (health behaviors, who/what motivates change, self-efficacy, fatalism, religion/spirituality, beliefs about cancer, race/ethnicity). Five themes emerged from the data (personal responsibility, resilience, desire for information, intentions to change, beliefs in divine control). Findings support the relevance of existing theories of health behavior change to older African American CRC survivors. Cultural considerations are suggested to improve interventions seeking to maximize changes in diet and exercise among this group of survivors.

Lakeman, Richard. 2013. Talking science and wishing for miracles: Understanding cultures of mental health practice. *International Journal of Mental Health Nursing* 22(2). 106–115. doi:10.1111/j.1447-0349.2012.00847.x.

In this paper, the argument that many beliefs held by mental health professionals might be considered to be based on faith rather than science is presented, and the view that culture provides a useful lens for understanding mental health services and these paradoxes is proposed. Clearly there is a grand mental health narrative or colonizing influence of biological psychiatry that in various ways affects all mainstream mental health services. Local health services and professional communities might be considered subcultures. Understanding how mental health professions and practice are embedded in culture might be useful in considering how practice changes and why. Culture and caring practices are mutually embedded in localized subcultures. Therefore, a rich description of context and history is necessary in publication, presentation, or other communications to enable genuine understanding by a global audience. Viewing mental health practice in a cultural context highlights the importance of values and differences, and encourages humility in the face of ambiguity. Masters, Kevin S. & Stephanie A. Hooker. 2013. Religiousness/spirituality, cardiovascular disease, and cancer: Cultural integration for health research and intervention. *Journal of Consulting and Clinical Psychology* 81(2). 206–216. doi:10.1037/a0030813.

For this article, individual studies and meta-analyses on the relations of religiousness/spirituality (R/S) with cardiovascular disease (CVD) and cancer were reviewed along with articles on the importance of culture to understanding R/S phenomena. Trends in the literature suggest that R/S predicts reductions in all-cause and CVD-related but not cancer mortality. R/S also shows relations with cardiovascular morbidity, and various dimensions of R/S show relations with cancer risk factors and well-being in cancer patients. Investigators have progressively studied more specific dimensions of R/S but have largely failed to consider them within religious cultural contexts.

Middleton, Kimberly R, Michael M Ward, Steffany Haaz, Sinthujah Velummylum, Alice Fike, Ana T Acevedo, Gladys Tataw-Ayuketah, Laura Dietz, Barbara B Mittleman & Gwenyth R Wallen. 2013. A pilot study of yoga as self-care for arthritis in minority communities. *Health and Quality of Life Outcomes* 11. 55.

doi:10.1186/1477-7525-11-55.

This paper presents a study protocol examining the feasibility and acceptability of providing yoga to an urban, minority population with arthritis. In an ongoing pilot study, a convenience sample of 20 minority adults diagnosed with either osteoarthritis or rheumatoid arthritis undergo an 8-week program of yoga classes. This pilot was undertaken to quantify measures of feasibility and acceptability that will be useful when evaluating future plans for expanding the study of yoga in urban, minority populations with arthritis.

Migdal, Lori & Douglas A MacDonald. 2013. Clarifying the relation between spirituality and wellbeing. *The Journal of Nervous and Mental Disease* 201(4). 274–280. doi:10.1097/NMD.0b013e318288e26a.

The present study used a sample of 247 university students to explore the relation of a multidimensional model of spirituality with several different forms of well-being and the association of both with a two-factor model of social desirability. Correlational and regression analyses revealed that, although there is some evidence of an association, it is generally of low effect size and seems to differ as a function of how spirituality is defined. More importantly, however, there was the finding that existential well-being, a concept often incorporated into definitions of spirituality and a part of the measurement model used in this study, is virtually uncorrelated with explicitly spiritual and religious variables but shows a pattern of association with measures of well-being and social desirability, which suggests that it would be better conceptualized as a form of well-being and not spirituality. The article concludes with a discussion of the meaning of the findings for understanding the spirituality-health literature and suggestions for future research.

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PART 3. BOOKS

3.1 SCIENTIFIC STUDY OF RELIGION, BRAIN, AND BEHAVIOR

- Talmont-Kaminski, Konrad. 2013. Religion as Magical Ideology: How the Supernatural Reflects Rationality. (Religion, Cognition and Culture). Acumen Publishing.
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Himelstein, Sam. 2013. A Mindfulness-Based Approach to Working with High-Risk Adolescents. Routledge.

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