



RESEARCH REVIEW

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

JUNE, 2012

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 652 articles, 143 articles have been retained from 62 journals. There are 27 pre-publication citations from 17 journals.

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PART 1: ARTICLES IN RELIGION, BRAIN, AND BEHAVIOR

1.1 SCIENTIFIC STUDY OF RELIGION: COGNITIVE NEUROSCIENCE

Tang, Yi-Yuan, Qilin Lu, Ming Fan, Yihong Yang & Michael I Posner. 2012. Mechanisms of white matter changes induced by meditation. *Proceedings of the National Academy of Sciences of the United States of America* 109(26). 10570–10574.
doi:10.1073/pnas.1207817109.

In previous studies, the authors have found that a form of mindfulness meditation, integrative body-mind training (IBMT), improved fractional anisotropy (FA) in areas surrounding the anterior cingulate cortex after 4-wk training more than controls given relaxation training. Reductions in radial diffusivity (RD) have been interpreted as improved myelin but reductions in axial diffusivity (AD) involve other mechanisms, such as axonal density. The current study indicates that after 4-wk training with IBMT, both RD and AD decrease accompanied by increased FA, indicating improved efficiency of white matter involves increased myelin as well as other axonal changes. However, 2-wk IBMT reduced AD, but not RD or FA, and improved moods. The authors conclude that the results demonstrate the time-course of white matter neuroplasticity in short-term meditation. This dynamic pattern of white matter change involving the anterior cingulate cortex, a part of the brain network related to self-regulation, could provide a means for intervention to improve or prevent mental disorders.

Tang, Yi-Yuan, Mary K Rothbart & Michael I Posner. 2012. Neural correlates of establishing, maintaining, and switching brain states. *Trends in Cognitive Sciences* 16(6). 330–337.
doi:10.1016/j.tics.2012.05.001.

In this review, researchers summarize recent research on three relatively well-described brain states: the resting, alert, and meditation states, exploring the neural correlates of maintaining a state or switching between states, and arguing that the anterior cingulate cortex and striatum play a critical role in state maintenance, whereas the insula

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has a major role in switching between states. Brain state may serve as a predictor of performance in a variety of perceptual, memory, and problem solving tasks. Thus, understanding brain states is critical for understanding human performance.

Zeidan, F, J A Grant, C A Brown, J G McHaffie & R C Coghill. 2012. Mindfulness meditation-related pain relief: Evidence for unique brain mechanisms in the regulation of pain. *Neuroscience Letters* 520(2). 165–173.
doi:10.1016/j.neulet.2012.03.082.

This review discusses the brain mechanisms involved in mindfulness meditation-related pain relief across different meditative techniques, expertise and training levels, experimental procedures, and neuroimaging methodologies. Converging lines of neuroimaging evidence reveal that mindfulness meditation-related pain relief is associated with unique appraisal cognitive processes depending on expertise level and meditation tradition. Moreover, it is postulated that mindfulness meditation-related pain relief may share a common final pathway with other cognitive techniques in the modulation of pain.

1.2 SCIENTIFIC STUDY OF RELIGION: EVOLUTION

Golec de Zavala, Agnieszka, Aleksandra Cichocka, Edward Orehek & Abdolhossein Abdollahi. 2012. Intrinsic religiosity reduces intergroup hostility under mortality salience. *European Journal of Social Psychology* 42(4). 451–461.
doi:10.1002/ejsp.1843.

Results of three studies indicate that intrinsic religiosity and mortality salience interact to predict intergroup hostility. Study 1, conducted among 200 American Christians and Jews, reveals that under mortality salience, intrinsic (but not extrinsic or quest) religiosity is related to decreased support for aggressive counterterrorism. Study 2, conducted among 148 Muslims in Iran, demonstrates that intrinsic religiosity predicts decreased out-group derogation under mortality salience. Study 3, conducted among 131 Polish Christians, shows that under mortality salience, priming of intrinsic religious concepts decreases support for aggressive counterterrorism.

Granqvist, Pehr, Berit Hagekull & Tord Ivarsson. 2012. Disorganized Attachment Promotes Mystical Experiences via a Propensity for Alterations in Consciousness (Absorption). *International Journal for the Psychology of Religion* 22(3). 180–197.
doi:10.1080/10508619.2012.670012.

In this article, the authors argue that mystical experiences are linked to disorganized attachment via a proposed mediator: the propensity to enter altered states of consciousness (absorption). Using a sample of predominantly religious/spiritual participants (n=62), they report that disorganized attachment, as identified with the Adult Attachment Interview, predicted lifetime occurrence of mystical experiences, and that this link was mediated by absorption. Alternative mediational models received less conclusive support. Also, more conventional aspects of religion (theistic beliefs and degree of general religiousness) were not related to disorganized attachment or absorption, supporting the discriminant validity of the mediational model. In the discussion, the authors argue that mystical experiences represent a non-pathological and potentially self-reparative “outcome” of disorganized attachment and the related propensity to experience alterations in consciousness.

Harmon-Vukić, Mary, M. Afzal Upal & Kelly J. Sheehan. 2012. Understanding the memory advantage of counterintuitive concepts. *Religion, Brain & Behavior* 2(2). 121–139.
doi:10.1080/2153599X.2012.672816.

Following on research suggesting that concepts that are only slightly counterintuitive are more memorable than concepts that are intuitive or overly counterintuitive, the authors conducted four experiments to better understand the cognitive processes that underlie memory for

counterintuitive concepts by recording both reading time and recall of intuitive and counterintuitive statements. Experiments 1 and 2 suggested that additional time spent processing material facilitates memory performance, even if that material is intuitive. However, the results from Experiments 3 and 4 indicate that time alone does not account for the memory advantage previously observed.

Hoverd, William James, Quentin D. Atkinson & Chris G. Sibley. 2012. Group Size and the Trajectory of Religious Identification. *Journal for the Scientific Study of Religion* 51(2). 286–303. doi:10.1111/j.1468-5906.2012.01643.x.

Using census data measuring the proportional size of religious groups in New Zealand, along with nationally representative data on self-reported psychological identification drawn from the New Zealand Attitudes and Values Study, researchers find that the relative size of religious groups or denominations within societies or nations influences variation in the extent to which group members psychologically identify with their religion. Members of smaller religious groups (less than 1.5 percent of the population) tend to strongly identify with their religion, whereas members of groups that are larger in size (over 6 percent of the population) tend to be less identified, on average. Religious group cohesion may be a dynamic process. Larger religious groups are less cohesive and experience more contested identities and ideological positions (average group identification is lower).

Matthews, Luke J. 2012. The recognition signal hypothesis for the adaptive evolution of religion: a phylogenetic test with Christian denominations. *Human Nature (Hawthorne, N.Y.)* 23(2). 218–249. doi:10.1007/s12110-012-9138-8.

The author proposes that religious denominations achieve indirect fitness gains for members through the use of ecologically arbitrary beliefs, rituals, and moral rules that function as recognition markers of cultural inheritance, analogous to kin and species recognition of genetic inheritance in biology. This recognition signal hypotheses could act in concert with either costly signaling or cultural group selection to produce evolutionarily altruistic behaviors within denominations. Using cultural phylogenetic analysis, it is shown that a large set of religious behaviors among extant Christian denominations supports the prediction of the recognition signal hypothesis that characters change more frequently near historical schisms. By incorporating demographic data into the model, it is shown that more-distinctive denominations, as measured through dissimilar characteristics, appear to be protected from intrusion by nonmembers in mixed-denomination households, and that they may be experiencing greater biological growth of their populations even in the present day.

Preston, Jesse Lee & Ryan S. Ritter. 2012. Cleanliness and godliness: Mutual association between two kinds of personal purity. *Journal of Experimental Social Psychology*. doi:10.1016/j.jesp.2012.05.015.

The present work examines the association between religion and cleanliness, as two representations of personal purity. Religious primes were found to activate cleanliness concepts in a word-stem completion task (Study 1), and increased the subjective value of cleaning products (Study 2). In a final study, cleaning primes increased ratings of religious value. These studies suggest a mutual association between religiousness and cleanliness, and that each may activate the other as goals for personal purity.

Rellihan, Matthew. 2012. Adaptationism and adaptive thinking in evolutionary psychology. *Philosophical Psychology* 25(2). 245–277. doi:10.1080/09515089.2011.579416.

Evolutionary psychologists attempt to infer our evolved psychology from the selection pressures present in our ancestral environments. Their use of this inference strategy, often called “adaptive thinking,” is justified by way of appeal to a rather modest form of adaptationism, according to which the mind’s adaptive complexity reveals it to be a product of selection. This article argues, on the contrary, that the mind’s being an adaptation is only a

necessary and not a sufficient condition for the validity of adaptive thinking, and that evolutionary psychology's predictive project is in fact committed to an extremely strong and highly implausible form of adaptationism. According to this "strong adaptationism," the macroevolutionary trajectory of a population is determined by, and therefore predictable on the basis of, the selection pressures acting upon it. Not only is this form of adaptationism prima facie highly implausible, it requires making a number of naïve and likely false assumptions concerning the nature of heritable phenotypic variation in natural populations. In particular, it assumes that phenotypic variation is inevitably small in its extent, unbiased in its direction, and copious in its quantity. Holding that it is unlikely that these conditions obtain as a general rule, and even more unlikely that they obtained in early human populations, the author concludes that there is little reason to believe that adaptive thinking can be used to infer the current structure of our minds from evidence of past selection pressures.

Rip, Blanka, Robert J Vallerand & Marc-André K Lafrenière. 2012. Passion for a cause, passion for a creed: on ideological passion, identity threat, and extremism. *Journal of Personality* 80(3). 573–602. doi:10.1111/j.1467-6494.2011.00743.x.

The type of ideological passion that underlies people's political or religious commitment was proposed to moderate the effect of social identity-threatening circumstances on their choice of activist tactics. Ideological passion was defined as a strong inclination toward a loved, valued, and self-defining cause, ideology, or group in which people invest considerable time and energy. Harmonious ideological passion was expected to promote peaceful activism and nonviolence partly because it is anchored in a strong and secure sense of identity—one that facilitates non-defensiveness in identity-threatening circumstances. Obsessive ideological passion, in contrast, was expected to engender hatred and aggressive extremism in identity-threatening circumstances partly because it is anchored in a strong, but insecure, sense of identity. Results from 2 studies, conducted with nationalist activists (n=114) and devout Muslims (n=111), supported these hypotheses.

Rounding, Kevin, Albert Lee, Jill A Jacobson & Li-Jun Ji. 2012. Religion replenishes self-control. *Psychological Science* 23(6). 635–642. doi:10.1177/0956797611431987.

Researchers have proposed that the emergence of religion was a cultural adaptation necessary for promoting self-control. Self-control, in turn, may serve as a psychological pillar supporting a myriad of adaptive psychological and behavioral tendencies. If this proposal is true, then subtle reminders of religious concepts should result in higher levels of self-control. In a series of four experiments, researchers consistently found that when religious themes were made implicitly salient, people exercised greater self-control, which, in turn, augmented their ability to make decisions in a number of behavioral domains that are theoretically relevant to both major religions and humans' evolutionary success. Furthermore, when self-control resources were minimized, making it difficult for people to exercise restraint on future unrelated self-control tasks, implicit reminders of religious concepts refueled people's ability to exercise self-control were found. Moreover, compared with morality- or death-related concepts, religion had a unique influence on self-control.

Strassmann, Beverly I, Nikhil T Kurapati, Brendan F Hug, Erin E Burke, Brenda W Gillespie, Tatiana M Karafet & Michael F Hammer. 2012. Religion as a means to assure paternity. *Proceedings of the National Academy of Sciences of the United States of America* 109(25). 9781–9785. doi:10.1073/pnas.1110442109.

The sacred texts of five world religions (Buddhism, Christianity, Hinduism, Islam, and Judaism) use similar belief systems to set limits on sexual behavior. The authors propose that this similarity is a shared cultural solution to a biological problem: namely male uncertainty over the paternity of offspring. Furthermore, they propose the hypothesis that religious practices that more strongly regulate female sexuality should be more successful at promoting paternity certainty. This hypothesis was tested using genetic data on 1,706 father-son pairs in a traditional African population in which multiple religions (Islam, Christianity, and indigenous) coexist in the

same families and villages. Results indicate that the indigenous religion enables males to achieve a significantly lower probability of cuckoldry (1.3% versus 2.9%) by enforcing the honest signaling of menstruation, but that all three religions share tenets aimed at the avoidance of extrapair copulation.

Terrizzi, John A., Natalie J. Shook & W. Larry Ventis. 2012. Religious conservatism: An evolutionarily evoked disease-avoidance strategy. *Religion, Brain & Behavior* 2(2). 105–120.
doi:10.1080/2153599X.2012.695514.

The behavioral immune system (BIS) is a cluster of psychological mechanisms (e.g., disgust) that encourage disease-avoidance. Out-group members have historically been a source of contamination. Consequently, evidence suggests that the BIS predicts negative attitudes toward out-groups. The purpose of the current research is to investigate whether religious conservatism mediates the relationship between the BIS and prejudice toward sexual minorities. Study 1 demonstrated that the disease-avoidant components of disgust (e.g., sexual and pathogen disgust), but not moral disgust, were positively correlated with religious conservatism. Additionally, the data supported a model in which religious conservatism mediated the relationship between disgust and prejudice toward homosexuals. In Study 2, the correlations and mediation model were replicated with a more diverse sample and different measures. The authors conclude that religious conservatism may be in part an evolutionarily evoked disease-avoidance strategy.

1.3 SCIENTIFIC STUDY OF RELIGION: PSYCHOLOGY AND CULTURE

Adamczyk, Amy. 2012. Investigating the Role of Religion-Supported Secular Programs for Explaining Initiation into First Sex. *Journal for the Scientific Study of Religion* 51(2). 324–342.
doi:10.1111/j.1468-5906.2012.01644.x.

This study examines the influence of involvement in religion-supported secular activities for shaping initiation into vaginal sex. Using two waves of data from the National Study of Youth and Religion, this study finds that among teens who have engaged in some of the precursors to first sex, namely, sexual touching, involvement in religion-sponsored secular activities is associated with lower odds of having first sex between W1 and W2. Conservative attitudes about sex outside of marriage explain, in part, the relationship. Conversely, network overlap, the number of friends who belong to a youth group, and pressure from friends and partners to have sex do not significantly mediate the relationship.

Barry, Carolyn McNamara, Laura M. Padilla-Walker & Larry J. Nelson. 2012. The role of mothers and media on emerging adults' religious faith and practices by way of internalization of prosocial values. *Journal of Adult Development* 19(2). 66–78.
doi:10.1007/s10804-011-9135-x.

Researchers investigated the role of emerging adults' (n=500) internalization of prosocial values as a mediator between maternal relationship quality and two types of media use (positive and negative) and religious faith and practices. Structural equation modeling results indicated that both maternal relationship quality and positive media were related positively and indirectly (by way of prosocial values) to religious faith, and maternal relationship quality was related positively and directly to religious faith. In contrast, negative media use was related negatively and directly (and indirectly by way of prosocial values) to religious faith.

Bartkowski, John P., Aida I. Ramos-Wada, Chris G. Ellison & Gabriel A. Acevedo. 2012. Faith, Race-Ethnicity, and Public Policy Preferences: Religious Schemas and Abortion Attitudes Among U.S. Latinos. *Journal for the Scientific Study of Religion* 51(2). 343–358.
doi:10.1111/j.1468-5906.2012.01645.x.

Research has demonstrated that white conservative Protestants are more opposed to abortion than their Catholic counterparts. At the same time, conservative Protestantism has made significant inroads among U.S. Latinos.

This study augments existing research on religion and racial-ethnic variations in abortion attitudes by comparing levels of support for legalized abortion among Catholic and conservative Protestant Latinos. Significantly greater opposition to abortion is found among religiously devout conservative Protestant Latinos when compared with their Catholic counterparts. Latino Catholicism, which functions as a near-monopolistic, highly institutionalized faith tradition among Hispanics, produces weaker antiabortion attitudes than those exhibited in Latino conservative Protestantism. Among Latinos, conservative Protestantism operates as a niche voluntaristic faith. These factors produce a religious schema that yields robust antiabortion attitudes.

Burris, Christopher T. & John K. Rempel. 2012. The crystal globe: Emotional empathy and the transformation of self. *Consciousness and Cognition: An International Journal*. doi:10.1016/j.concog.2012.06.002.

To test whether emotional empathy is linked to altered perceptions of self in relation to other and/or context, participants read one of two tragic news stories and then completed a self-report empathy measure, as well as an abridged version of Hood's Mysticism scale either before or after the article. Exposure to a needy other in the story tended to result in greater self-reported mystical experience. Men with a history of mystical experience reported more empathy, but the latter was disconnected from on-line reports of mystical experience. Women's history of mystical experience did not predict empathic responding overall, but their reported empathy was linked to on-line experiences of oneness, absorption into something larger, and space-time distortion with imputed religious significance.

Duffy, Ryan D., Blake A. Allan & Elizabeth M. Bott. 2011. Calling and Life Satisfaction Among Undergraduate Students: Investigating Mediators and Moderators. *Journal of Happiness Studies* 13(3). 469–479. doi:10.1007/s10902-011-9274-6.

The present study examined the relation of calling and life satisfaction among a diverse group of undergraduate students. In line with previous research, the presence of a calling weakly correlated with life satisfaction and moderately correlated with meaning in life. Three potential moderators of the calling-life satisfaction relation were tested: religiousness, living one's calling, and core self-evaluations. The relation of calling and life satisfaction was not different based on levels of religiousness or experiences of living one's calling. However, the relation of calling to life satisfaction was stronger for students with low core self-evaluations. Additionally, using a multiple mediation model, academic satisfaction and life meaning were found to fully mediate the calling-life satisfaction relation. Participants more likely to view their career as a calling were more satisfied in life because of attaining greater life meaning and satisfaction within the academic domain.

Dyer, Jennifer E. 2012. Loving thyself: a Kohutian interpretation of a "limited" mature narcissism in evangelical megachurches. *Journal of Religion and Health* 51(2). 241–255. doi:10.1007/s10943-012-9579-8.

Evangelical megachurches across the United States provide a subculture for core and committed members who immerse themselves in these communities of faith. This article argues that American evangelical megachurches fail to mitigate "the narcissism epidemic" in the dominant secular culture. Using object relations theory, the author discusses splitting as a psychological foundation for narcissism, and employing Heinz Kohut's self-psychology to analyze idealized, mirroring, and twinning self-objects in evangelical megachurches. Finally, given Kohut's categories for a mature narcissism, the author finds that Evangelicals achieve creativity, empathy, transcendence, humor, and wisdom, in part, but their ideological frameworks, organizational characteristics, and beliefs challenge a transformation to mature narcissism.

- French, Doran C., Urip Purwono & Philip C. Rodkin. 2012. Religiosity of adolescents and their friends and network associates: Homophily and associations with antisocial behavior. *Journal of Research on Adolescence* 22(2). 326–332.
doi:10.1111/j.1532-7795.2012.00778.x.

This study assessed the similarity of adolescents and their friends and peer network associates in religiosity and the extent to which these relationships were associated with antisocial behavior. The sample included 1,010 Indonesian 8th (13.37 years) and 10th grade (15.36 years) students. Adolescents were similar to their mutual friends and network associates in religiosity, and the religiosity of both friends and network associates added to male adolescents' self-religiosity in predicting antisocial behavior; these effects were not present for girls. Peers may associate with others similar to themselves in religiosity and these associations may partially explain why religious boys exhibit low levels of aggressive behavior.

- Friese, Malte, Claude Messner & Yves Schaffner. 2012. Mindfulness meditation counteracts self-control depletion. *Consciousness and Cognition* 21(2). 1016–1022.
doi:10.1016/j.concog.2012.01.008.

The present study investigated the short-term consequences of mindfulness meditation under conditions of limited self-control resources. The authors hypothesized that a brief period of mindfulness meditation would counteract the deleterious effect that the exertion of self-control has on subsequent self-control performance. Participants who had been depleted of self-control resources by an emotion suppression task showed decrements in self-control performance as compared to participants who had not suppressed emotions. However, participants who had meditated after emotion suppression performed equally well on the subsequent self-control task as participants who had not exerted self-control previously. This finding suggests that a brief period of mindfulness meditation may serve as a quick and efficient strategy to foster self-control under conditions of low resources.

- Klanjšek, Rudi, Alexander T Vazsonyi & Elizabeth Trejos-Castillo. 2012. Religious orientation, low self-control, and deviance: Muslims, Catholics, Eastern Orthodox-, and “Bible Belt” Christians. *Journal of Adolescence* 35(3). 671–682.
doi:10.1016/j.adolescence.2011.09.003.

Using adolescent samples from four cultures, the current study tested whether effects by religiosity on deviance varied by the nature of religiosity (intrinsic versus extrinsic) and by the cultural context (Bosnia & Herzegovina, Serbia, Slovenia, and the U.S.). Results indicated: a) that not every type of religiosity has a buffering effect on deviance; if one's religiousness is predominately instrumental (i.e. extrinsic), then its inhibiting effect is weak or does not exist; b) that the effect of intrinsic religiosity seemed more pronounced in the two surroundings that expressed the highest mean religiosity (U.S., Bosnia & Herzegovina), although results from follow-up analysis (Z-tests) largely supported a cultural invariance hypothesis. In addition, the intrinsic religiosity-deviance link was moderated by low self-control in each sample, except the Slovenian one. Finally, results indicated that low self-control only partially mediated the religiosity-deviance link.

- Lawson, Ronald & Ryan T. Cragun. 2012. Comparing the Geographic Distributions and Growth of Mormons, Adventists, and Witnesses. *Journal for the Scientific Study of Religion* 51(2). 220–240.
doi:10.1111/j.1468-5906.2012.01646.x.

Mormons, Adventists, and Witnesses have all felt called to take their teachings to the world and have experienced growth. However, they have varied considerably in both their geographic spread (i.e., where they have developed a presence over time) and also in where they have been more successful numerically. The result is sharply differing profiles: Adventists are concentrated more in the developing world; Witnesses and Mormons are proportionately stronger in the developed world, but in different parts of it. Within countries, Witnesses and Mormons are more urban, while Adventists are more concentrated in rural regions; Adventists also tend to be poorer than Witnesses

and especially practicing Mormons. The article explores why these differing patterns developed, expanding on a recently developed theoretical model by Cragun and Lawson that religious growth depends on the synchronization of supply and demand and their corresponding components.

Levenson, Robert W., Paul Ekman & Matthieu Ricard. 2012. Meditation and the startle response: A case study. *Emotion* 12(3). 650–658.
doi:10.1037/a0027472.

The effects of two kinds of meditation (open presence and focused) on the facial and physiological aspects of the defensive response to an aversive startle stimulus were studied in a Buddhist monk with approximately 40 years of meditation experience. The participant was exposed to a 115-db, 100-ms acoustic startle stimulus under the 2 meditation conditions, a distraction condition (to control for cognitive and attentional load) and an unanticipated condition (startle presented without warning or instruction). A completely counterbalanced 24-trial, single-subject design was used, with each condition repeated 6 times. Most aspects of the participant's responses in the unanticipated condition did not differ from those of a comparison group of 12 age-matched male controls. Both kinds of meditation produced physiological and facial responses to the startle that were smaller than in the distraction condition. Within meditation conditions, open presence meditation produced smaller physiological and facial responses than focused meditation. These results from a single highly expert meditator indicate that these 2 kinds of meditation can differentially alter the magnitude of a primitive defensive response.

Mastrianno, Heather A. 2012. The impact of Zen meditation on security and satisfaction in monogamous relationships. *Mental Health, Religion & Culture* 15(5). 495–510.
doi:10.1080/13674676.2011.587402.

The objective of this study was to evaluate the impact of Zen meditation on security and satisfaction in monogamous relationships. Levels of security and satisfaction as described by interpersonal theorist Harry Stack Sullivan, as well as meditation experience, were analyzed via survey data. Data were collected via the Internet from 405 men and women who were 18 years of age or older and had been in a monogamous relationship for one year or more. Results indicated that compared to meditators, nonmeditators appeared slightly more secure and satisfied in their relationships. This may reflect the fact that different forms of meditation share philosophical beliefs that encourage mindfulness, acceptance, and moderation.

Meares, Russell. 2012. The sense of the spirit as a form of conversation. *Asian Journal of Psychiatry* 5(2). 190–192.
doi:10.1016/j.ajp.2012.05.002.

Experiential evidence suggests that the main features of spiritual experience are euphoria, and a feeling of the expansion and unification of consciousness. A way towards understanding this state and how it might arise comes from a consideration of a state in which these features are lacking. Such a state is borderline personality disorder, central to which is a “painful incoherence” that is not merely “psychological” but can be demonstrated neurophysiologically. The phenomena of the borderline syndrome can be understood as failure of proper maturation of the experience of “self,” conceived as higher order consciousness in a notional hierarchy of consciousness. Spiritual experience is understood as a state “larger than self.” Since both the achievement of a sense of the spirit and recovery from borderline personality disorder (BPD) involve an ascent in a hierarchy of consciousness, they may have a common basis.

Meteyard, John D., Kirsty L. Andersen & Eric Marx. 2011. Exploring the Relationship between Differentiation of Self and Religious Questing in Students from Two Faith-based Colleges. *Pastoral Psychology* 61(3). 333–342.
doi:10.1007/s11089-011-0401-4.

The current study examined the relationship between two developmental constructs: differentiation of self (DoS) and religious quest (Quest). A sample of 233 tertiary students from two Christian faith-based education institutions in Australia completed the Quest Scale and the Differentiation of Self Inventory-Revised (DSI-R). Results revealed that DoS was not predictive of Quest when the sample was considered as a whole. However, when participants were categorized into two subgroups based on religious identification and practice, one dimension of DoS, emotional reactivity, was found to significantly predict Quest, in particular existential questioning, in the more highly religious group. Further, a second dimension of DoS, I-position, significantly predicted Quest, especially involving perception of religious doubt as positive, for individuals low in religiosity.

Ostafin, Brian D. & Kyle T. Kassman. 2012. Stepping out of history: Mindfulness improves insight problem solving. *Consciousness and Cognition: An International Journal* 21(2). 1031–1036. doi:10.1016/j.concog.2012.02.014.

Insight problem solving is hindered by automated verbal-conceptual processes. Because mindfulness meditation training aims at “nonconceptual awareness” which involves a reduced influence of habitual verbal-conceptual processes on the interpretation of ongoing experience, mindfulness may facilitate insight problem solving. This hypothesis was examined across two studies (n=157). Participants in both studies completed a measure of trait mindfulness and a series of insight and non-insight problems. Further, participants in Study 2 completed measures of positive affect and a mindfulness or control training. The results indicated that (a) trait mindfulness predicts better insight but not non-insight problem solving (both studies), (b) this relation is maintained when controlling for positive affect (Study 2), (c) mindfulness training improves insight but not non-insight problem solving (Study 2) and (d) this improvement is partially mediated by state mindfulness (Study 2).

Pennycook, Gordon, James Allan Cheyne, Paul Seli, Derek J Koehler & Jonathan A Fugelsang. 2012. Analytic cognitive style predicts religious and paranormal belief. *Cognition* 123(3). 335–346. doi:10.1016/j.cognition.2012.03.003.

An analytic cognitive style denotes a propensity to set aside highly salient intuitions when engaging in problem solving. The authors assess the hypothesis that an analytic cognitive style is associated with a history of questioning, altering, and rejecting (i.e., unbelieving) supernatural claims, both religious and paranormal. In two studies, researchers examined associations of God beliefs, religious engagement (attendance at religious services, praying, etc.), conventional religious beliefs (heaven, miracles, etc.) and paranormal beliefs (extrasensory perception, levitation, etc.) with performance measures of cognitive ability and analytic cognitive style. An analytic cognitive style negatively predicted both religious and paranormal beliefs when controlling for cognitive ability as well as religious engagement, sex, age, political ideology, and education. Participants more willing to engage in analytic reasoning were less likely to endorse supernatural beliefs. Further, an association between analytic cognitive style and religious engagement was mediated by religious beliefs, suggesting that an analytic cognitive style negatively affects religious engagement via lower acceptance of conventional religious beliefs. Results for types of God belief indicate that the association between an analytic cognitive style and God beliefs is more nuanced than mere acceptance and rejection, but also includes adopting less conventional God beliefs, such as Pantheism or Deism. Data are consistent with the idea that two people who share the same cognitive ability, education, political ideology, sex, age and level of religious engagement can acquire very different sets of beliefs about the world if they differ in their propensity to think analytically.

Richert, Rebekah A. & Erin Smith. 2012. The essence of soul concepts: how soul concepts influence ethical reasoning across religious affiliation. *Religion, Brain & Behavior* 2(2). 161–176. doi:10.1080/2153599X.2012.683702.

Current research on how humans conceptualize other humans has focused on the hypothesis that individuals have a dualistic conception of others, differentiating the functions of the body from the functions of the mind. Recent criticisms of this approach have suggested that this characterization of cognition is insufficient to account for the

common presence of a third intuition humans have about other humans, namely that other people have souls or spirits. The authors report on a study examining the nature of similarities and differences in the soul concept based on religious affiliation, and the implications of the soul concept for reasoning about beginning-of-life and end-of-life ethical dilemmas. Four hundred and nineteen undergraduate students completed a survey examining concepts of the soul, the mind, and reasoning about ethical dilemmas. The results suggest that adult soul concepts, but not mind concepts, are considered independent of the life cycle and are related to reasoning about ethical dilemmas independent of religious affiliation. These data lend empirical support to the hypothesis that the human tendency toward psychological essentialism provides a foundation for adults' concepts of the soul.

Sansone, Randy A, Amy R Kelley & Jeremy S Forbis. 2012. Perceptions of parental caretaking in childhood and religiosity/spirituality status in adulthood. *The Journal of Nervous And Mental Disease* 200(6). 542–544.

doi:10.1097/NMD.0b013e318257c822.

Relationships between parental caretaking quality in childhood and religiosity/ spirituality in adulthood, which are the focus of the present study, have undergone limited study. Using a cross-sectional sample of consecutive internal medicine outpatients, researchers examined in 308 participants three aspects of their parenting experience (i.e., number of different caretakers, whether caretakers were biological parents or not, perceived quality of parental caretaking) and level of religiosity/ spirituality over the past 12 months. Current level of religiosity/ spirituality did not correlate with the number of different caretakers or whether caretakers were biological parents or not. However, 6 of 12 FACIT-Sp-12 scales and the overall FACIT-Sp-12 score statistically significantly correlated with perceived quality of parental caretaking, with better parenting ratings associated with higher levels of self-reported religiosity/ spirituality. Findings suggest that better parenting in childhood is associated with higher levels of certain aspects of current religiosity/ spirituality in adulthood.

Schnitker, Sarah A., Tenelle J. Porter, Robert A. Emmons & Justin L. Barrett. 2012. Attachment Predicts Adolescent Conversions at Young Life Religious Summer Camps. *International Journal for the Psychology of Religion* 22(3). 198–215.

doi:10.1080/10508619.2012.670024.

The correspondence hypothesis maintains that people with secure parental attachments will experience gradual religious conversions, with internal working models of childhood attachment figures forming the basis of attachment to God. The compensation hypothesis predicts that people with insecure attachments will experience sudden and dramatic conversions as they seek a relationship with God to compensate for insecure attachment relationships. In Study 1, faith narratives from 162 adolescents were analyzed; associations between parental attachment and the type of conversion reflected in the narrative support both hypotheses. In Study 2, data were prospectively collected from 240 adolescents attending religious summer camps; after camp, 138 participants reported a gradual conversion and 21 reported a sudden conversion. Participants who rated themselves securely attached to their parents before camp were more likely to report a gradual conversion, supporting the correspondence hypothesis. Precamp insecure parental attachment did not predict the subsequent incidence of a sudden religious conversion.

Shariff, Azim F & Mijke Rhemtulla. 2012. Divergent effects of beliefs in heaven and hell on national crime rates. *PLoS one* 7(6). e39048.

doi:10.1371/journal.pone.0039048.

Though religion has been shown to have generally positive effects on normative 'prosocial' behavior, recent laboratory research suggests that these effects may be driven primarily by supernatural punishment. Supernatural benevolence, on the other hand, may actually be associated with less prosocial behavior. Here, these effects are investigated at the societal level, showing that the proportion of people who believe in hell negatively predicts national crime rates whereas belief in heaven predicts higher crime rates. These effects remain after accounting for a host of covariates, and ultimately prove stronger predictors of national crime rates than economic variables such as

GDP and income inequality. Expanding on laboratory research on religious prosociality, this is the first study to tie religious beliefs to large-scale cross-national trends in pro- and anti-social behavior.

Sharp, Shane. 2012. Prayer Utterances as Aligning Actions. *Journal for the Scientific Study of Religion* 51(2). 257–265.
doi:10.1111/j.1468-5906.2012.01638.x.

Social actors use prayer utterances (e.g., statements such as ‘prayed over,’ ‘prayed about,’ or ‘spent time in prayer’) as aligning actions that justify problematic or questionable courses of action and prevent possible negative characterizations. The prayer utterance functions as an aligning action in American society because of Americans’ beliefs and actions concerning the efficacy of prayer in solving problems and because prayer is viewed as a sign of personal morality and trustworthiness. Three examples of individuals who use the prayer utterance as an aligning action serve as illustrations of this argument (Oprah Winfrey, Alabama State Supreme Court Justice Sue Bell Cobb, and President Barack Obama). The author suggests that scholars should investigate the uses and functions of prayer utterances in social life and should also investigate the possible uses of other religious talk as aligning actions.

Woods, Orlando. 2012. Sri Lanka’s Informal Religious Economy: Evangelical Competitiveness and Buddhist Hegemony in Perspective. *Journal for the Scientific Study of Religion* 51(2). 203–219.
doi:10.1111/j.1468-5906.2012.01642.x.

Existing religious economy models maintain that as religious regulation increases, levels of interreligious competition decrease. But new understandings of the market dynamics of religious oligopolies necessitate new understandings of religious competitiveness. A relational model of competitiveness using the case of evangelical Christianity in Buddhist-majority Sri Lanka is proposed. In Sri Lanka the informal religious economy is defined by competitiveness among evangelical Christian groups and, although not recognized by the state, is closely regulated. The focus in this article is on the scalar determinations of evangelical competitiveness, patterns of secrecy and subterfuge, the formation of strategic extra-group networks that enable competitiveness, and outcomes of a relational model. Three insights are offered that can be used as a starting point for further work on religious oligopolies, informal economies, and relational understandings of religious competition.

Zahl, Bonnie Poon & Nicholas J. S. Gibson. 2012. God Representations, Attachment to God, and Satisfaction With Life: A Comparison of Doctrinal and Experiential Representations of God in Christian Young Adults. *International Journal for the Psychology of Religion* 22(3). 216–230.
doi:10.1080/10508619.2012.670027.

In this study the authors address the distinction between individuals’ doctrinal representations (or “head knowledge”) and experiential representations (or “heart knowledge) of God by identifying different predictor variables and outcomes for each of these types of representations. Self-report ratings were collected from 415 Christian young adults regarding how well trait words described God in two instructional conditions: what they “should believe that God is like” and what they “personally feel that God is like.” Experiential God representations were found to be less positive than doctrinal God representations. Positive doctrinal representations were predicted by Christian orthodoxy and avoidant attachment to God, whereas positive experiential God representations were predicted by each of Christian orthodoxy, religious commitment, and avoidant and anxious attachment to God. Critical doctrinal representations were predicted by anxious attachment to God, whereas critical experiential representations were predicted by both anxious attachment to God and self-esteem. Experiential representations and maternal attachment avoidance, but not attachment to God, predicted unique variance in satisfaction with life. Results affirm the importance of distinguishing between the two types of representations of God and highlight the relationships between attachment, representations of God, and satisfaction with life.

1.4 SCIENTIFIC STUDY OF RELIGION: METHOD & THEORY

Brenner, Philip S. 2012. Identity as a Determinant of the Overreporting of Church Attendance in Canada. *Journal for the Scientific Study of Religion* 51(2). 377–385.
doi:10.1111/j.1468-5906.2012.01640.x.

Recent work has demonstrated that Canadians overreport church attendance at rates similar to respondents in the United States. Overreporting in the United States has been attributed to the importance of religious identity; causes of Canadian overreporting have not been examined. This article draws upon Stryker's identity theory to explain why Canadian survey respondents overreport church attendance. The 2005 Canadian General Social Survey contains observed measures of attendance from both a conventional survey question and a time diary, allowing a direct and rigorous test of the identity explanation. Findings suggest that rates of Canadian overreporting, at about 50 percent, rival rates of overreporting in the United States. Moreover, like overreporting in the United States, Canadian overreporting may be affected by an identity process during the survey interview. Finally, implications for measuring religiosity in both countries are discussed.

Dias, Ivan A, Rodrigo H Willemart & Antonio C Marques. 2012. Does Evolution Matter?: A Case Study In Brazil Of The Effects Of An Evolutionary-Thinking Academic Atmosphere In Postgraduate Students' Belief In God/Religious Belief. *Anais da Academia Brasileira de Ciências* 84(2). 551–554.

Although the theory of evolution is more than 150 years old, a substantial proportion of the world population does not mention it when explaining the origin of human beings. The usual alternative conception is offered by creationism, one of the main obstacles to full acceptance of evolution in many countries. National polls have demonstrated that schooling and religiosity are negatively correlated, with scientists being one of the least religious professionals. In this article researchers analyzed both (1) the profile of 1st semester undergraduate students and (2), thesis and dissertations, concerning religious and evolutionary thoughts from Biology and Veterinary Schools at the largest university of South America. Results indicate that students of Biology are biased towards evolution before they enter university and also that the presence of an evolutionary-thinking academic atmosphere influences the deism/religiosity beliefs of postgraduate students.

Joshanloo, Mohsen. 2012. Investigation of the factor structure of spirituality and religiosity in Iranian Shiite university students. *International Journal of Psychology* 47(3). 211–221.
doi:10.1080/00207594.2011.617372.

One of the important challenges facing psychologists of religion pertains to the definition of religiosity and spirituality. One way of understanding the connection between these two concepts is to suppose that one of them is a subset of the other. Another useful and sensitive way, however, is to view spirituality and religiosity as overlapping constructs, sharing some characteristics but also retaining nonshared features. Empirical studies examining the factor structure of spirituality and religiosity are scant and almost all of them come from Western culture. These factor analytic studies generally confirm that religiosity and spirituality can best be described in terms of two distinct yet correlated factors. To date, no study has investigated the relationship between these two constructs in Islamic cultures. To redress this imbalance, confirmatory factor analysis was used to examine the factor structure of religiosity and spirituality in two Iranian Shiite samples using an extensive set of scales (including Santa Clara Strength of Religious Faith, Spiritual Involvement and Beliefs Scale – Revised, Spiritual Meaning Scale, and Spiritual Transcendence Scale). Two hypothetical models were tested: a model that viewed spirituality and religiosity as correlated but separate constructs and a model that combined the indicators of religiosity and spirituality into a single construct. In keeping with the results obtained in Western cultures, results of confirmatory factor analyses, conducted in Study 1 (n=225) and Study 2 (n=288), revealed that a two-factor model fitted the data better than a single-factor model.

Kaufmann, Eric. 2012. Primordialists and constructionists: a typology of theories of religion. *Religion, Brain & Behavior* 2(2). 140–160.
doi:10.1080/2153599X.2012.680025.

This article adopts categories from nationalism theory to classify theories of religion. Primordialist explanations are grounded in evolutionary psychology and emphasize the innate human demand for religion. Primordialists predict that religion does not decline in the modern era but will endure in perpetuity. Constructionist theories argue that religious demand is a human construct. Modernity initially energizes religion, but subsequently undermines it. Unpacking these ideal types is necessary in order to describe actual theorists of religion. Three distinctions within primordialism and constructionism are relevant: namely, those distinguishing (1) materialist from symbolist forms of constructionism; (2) theories of origins from those pertaining to the reproduction of religion; and (3) within reproduction, between theories of religious persistence and secularization. This typology helps to make sense of theories of religion by classifying them on the basis of their causal mechanisms, chronology, and effects. In so doing, it opens up new sightlines for theory and research.

Koch, Jerome R. & Alden E. Roberts. 2012. The protestant ethic and the religious tattoo. *Social Science Journal* 49(2). 210–213.
doi:10.1016/j.sosci.2011.10.001.

This research illustrates how basic ideas from Max Weber's Protestant Ethic and the Spirit of Capitalism are reflected in religious individuals' choices in obtaining tattoos. Qualitative responses to survey questions show that, among 60 university students who indicated they have one, religious tattoos reflect asceticism in their lives, point them to service (calling) in the name of God, or provide a level of assurance (or anxiety) regarding life after death. The authors offer this work as an illustration of how the essence of Weber's work persists in the popular culture of the 21st century.

Moberg, David. 2012. Expanding Horizons for Spirituality Research. *Review of Religious Research* 53(4). 513–514.
doi:10.1007/s13644-011-0037-y.

The article focuses on spirituality research and the 11 interrelated categories that describe spirituality. It states that spirituality is important in determining the essence of human nature. It adds that the relevance of theology must be clarified since it is involved in all spirituality research. It also mentions the need for in-depth investigation on the relationship between spiritualities and political issues. It also cites the factors that influence the investigations such as method, scope, and the limitations of each humanity and science. Moreover, it suggests the need for continued exploration of the essence of human nature to extend as well as to test the evidence from religions and sciences.

Roth, David L, Isaac Mwase, Cheryl L Holt, Eddie M Clark, Susan N Lukwago & Matthew W Kreuter. 2012. Religious involvement measurement model in a national sample of African Americans. *Journal of Religion and Health* 51(2). 567–578.
doi:10.1007/s10943-011-9475-7.

This study examined the factor structure of a brief measure of religious involvement developed previously in research with African American women. Telephone interview methods were used with a national sample of both African American women and men (n=2,370). Confirmatory factor analyses supported the distinction between religious beliefs and religious behaviors factors and indicated that the factor loadings were equivalent for women and men. Women reported higher levels of religious involvement than men. These results support the validity of this relatively brief instrument for assessing these two dimensions of religious involvement for both African American women and men.

Wildman, Wesley J., Richard Sosis & Patrick McNamara. 2012. The politics of field names. *Religion, Brain & Behavior* 2(2). 101–104. doi:10.1080/2153599X.2012.695888.

Most scientific research fields have covert or overt policing activities to handle boundary monitoring, quality assurance, and naming conventions. The field to which Religion, Brain & Behavior (RBB) makes its scientific contribution is no different in this regard, except that the field is young, it is moving fast and so is slightly disorganized, and it does not yet have a universally accepted name. Greater consensus around the use of names would help us avoid speaking past one another, and might help keep the ideologically loaded battles around naming to a tolerable minimum. With this in mind, the authors present a survey of the basic issues surrounding the naming of fields and subfields.

PART 2. ARTICLES IN SPIRITUALITY & HEALTH RESEARCH

2.1 SPIRITUALITY & HEALTH: GENERAL HEALTH & WELL-BEING

Bell, Caryn N, Janice V Bowie & Roland J Thorpe Jr. 2012. The interrelationship between hypertension and blood pressure, attendance at religious services, and race/ethnicity. *Journal of Religion and Health* 51(2). 310–322.
doi:10.1007/s10943-010-9346-7.

The relationships between race/ethnicity and hypertension or blood pressure (BP), as well as frequency of religious services attendance and hypertension/BP, are well documented. However, the association between these three factors is poorly understood. Using national data, this interrelationship was assessed in non-Hispanic whites and blacks, and Mexican-Americans (n=12,488). Compared to those who never attended services, whites who attended services weekly had lower odds of hypertension, as did blacks who attended more than weekly. There was no relationship between attendance and hypertension among Mexican-Americans.

Buck, Harleah G & Salimah H Meghani. 2012. Spiritual expressions of African Americans and Whites in cancer pain. *Journal of Holistic Nursing* 30(2). 107–116.
doi:10.1177/0898010111423420.

This articles describes and contrasts expressions and values about the use of spirituality for pain in African American (AA) and White (WH) oncology patients (n=42) using focus group methodology. AAs and WHs did not differ on demographics, pain status, or integrative therapies. Three spirituality themes emerged: 1) pain and distress as antecedents to the use of spirituality; 2) active and existential attributes of the use of spirituality; and 3) mobilization of internal and external resources as outcomes. There were commonalities between AAs and WHs but greater frequency of certain subthemes and keywords in AAs.

Burdette, Amy M., Janet Weeks, Terrence D. Hill & Isaac W. Eberstein. 2012. Maternal religious attendance and low birth weight. *Social Science & Medicine* 74(12). 1961–1967.
doi:10.1016/j.socscimed.2012.02.021.

Using data from the U.S. Fragile Families and Child Wellbeing study, researchers find that maternal religious attendance is protective against low birth weight; each unit increase in the frequency of religious attendance reduces the odds of low birth weight by 15%. Religious attendance is also associated with lower odds of cigarette use and poor nutrition, but is unrelated to mental health, alcohol use, illicit drug use, and prenatal care. Although lower rates of cigarette use help to mediate or explain 11% of the association between maternal religious attendance and low birth weight, no evidence was found to substantiate the mediating influence of mental health, alcohol use, illicit drug use, poor nutrition, or prenatal care.

Cavar, Mile, Damir Sekulic & Zoran Culjak. 2012. Complex Interaction of Religiousness with other Factors in Relation to Substance Use and Misuse Among Female Athletes. *Journal of Religion and Health* 51(2). 381–389.
doi:10.1007/s10943-010-9360-9.

Researchers studied the potential buffering effect of the complex socio-educational, sports, and religiousness factors in the protection against substance use and misuse, including cigarettes, analgesics, appetite suppressants, potential doping behavior, and binge drinking. The sample of subjects were 40 female athletes (22-26 years of age), using a strictly anonymous questionnaire. In combination with low sports experience, Strength of Religious Faith (SRF) has a significant buffering effect against binge alcohol drinking and consumption of appetite suppressants.

Chung, Sheng-Chia, Maria M Brooks, Madhur Rai, Judith L Balk & Sandeep Rai. 2012. Effect of sahaja yoga meditation on quality of life, anxiety, and blood pressure control. *Journal of Alternative and Complementary Medicine (New York, N.Y.)* 18(6). 589–596.
doi:10.1089/acm.2011.0038.

Researchers investigated the effect of Sahaja yoga meditation on quality of life, anxiety, and blood pressure control in 67 participants compared to 62 control participants. At baseline, the meditation group had higher quality of life than controls but similar anxiety level to controls. Within-group pre- versus post-treatment comparisons showed significant improvement in quality of life, anxiety, and blood pressure in the meditation group, while in controls, quality of life deteriorated and there was no improvement in blood pressure. The improvement in quality of life, anxiety reduction, and blood pressure control was greater in the meditation group. The beneficial effect of meditation remained significant after adjusting for confounders.

Dennis, Kristopher & Graeme Duncan. 2012. Spiritual care in a multicultural oncology environment. *Current Opinion In Supportive And Palliative Care* 6(2). 247–253.
doi:10.1097/SPC.0b013e328352ee4a.

The authors discuss the influence of culture on patients with cancer throughout the disease process by highlighting relevant reports in the literature. They find that health-related values vary widely across cultures, and the experience of spiritual care in oncology differs greatly across cultural groups. Although culture is generally recognized as an important health determinant that impacts the experience of care, the extent of different cultural influences is not well understood due to a paucity of relevant data, and reports on resources and educational strategies to optimize culturally competent spiritual care are similarly lacking.

Ford, Jason A & Terrence D Hill. 2012. Religiosity and adolescent substance use: evidence from the national survey on drug use and health. *Substance Use & Misuse* 47(7). 787–798.
doi:10.3109/10826084.2012.667489.

Using data from the National Survey on Drug Use and Health, researchers find that religiosity reduces the odds of tobacco use, heavy drinking, prescription drug misuse, marijuana use, and other illicit drug use. These associations are partially explained by respondent and peer attitudes toward substance use and, to a lesser extent, respondent psychological well-being. The influence of respondent substance use attitude is especially pronounced, explaining between 41% (marijuana) and 53% (tobacco) of the association between religiosity and substance use. In fully adjusted models, all mediators account for between 46% (marijuana) and 59% (tobacco) of the association between religiosity and substance use.

Grossoehme, Daniel H, Lisa Opiari-Arrigan, Rhonda VanDyke, Sophia Thurmond & Michael Seid. 2012. Relationship of adherence determinants and parental spirituality in cystic fibrosis. *Pediatric Pulmonology* 47(6). 558–566.
doi:10.1002/ppul.21614.

In a sample of parents of 28 children with cystic fibrosis (CF), researchers found that collaborative religious coping was associated with higher self-efficacy for completing airway clearance, for completing aerosolized medication administration, and for attitude towards treatment utility. Parents who attributed sacred qualities to their child's body (e.g., "blessed" or "miraculous") had higher mean scores for self-efficacy. Parents for whom God was manifested in their child's body (e.g., "My child's body is created in God's image") had higher mean scores for self-efficacy for airway clearance, aerosolized medications and treatment utility.

Gryczynski, Jan & Brian W Ward. 2012. Religiosity, heavy alcohol use, and vicarious learning networks among adolescents in the United States. *Health Education & Behavior: The Official Publication of the Society for Public Health Education* 39(3). 341–351.
doi:10.1177/1090198111417623.

This study examined the relationship between religiosity, heavy drinking, and social norms among U.S. adolescents aged 12 to 17 years, using the 2007 National Survey on Drug Use and Health (n=14,556). Based on a vicarious learning networks theoretical perspective, the effect of religiosity on heavy drinking behavior was hypothesized to be exerted indirectly through the norms of key reference groups in the social network (close friends and parents). Support was found for reference group norms as one underlying mechanism of the religiosity-alcohol relationship. Religiosity and nonpermissive drinking norms of parents, close friends, and peers maintained a strong protective association with adolescent heavy drinking.

Horton, Karissa D, Christopher G Ellison, Alexandra Loukas, Darcy L Downey & Jennifer B Barrett. 2012. Examining attachment to God and health risk-taking behaviors in college students. *Journal of Religion and Health* 51(2). 552–566.
doi:10.1007/s10943-010-9380-5.

Drawing on insights from attachment theory, this study examined whether three types of attachment to God (secure, avoidant, and anxious) were associated with health-risk behaviors, over and above the effects of religious attendance, peer support, and demographic covariates, in a sample of 328 undergraduate college students. Contrary to prior theory, secure attachment to God was not found to be inversely associated with recent alcohol or marijuana use, or substance use prior to last sexual intercourse. Instead, avoidant and anxious attachment to God are associated with higher levels of drinking; anxious attachment to God is associated with marijuana use; and avoidant attachment to God is associated with substance use prior to last sexual intercourse. These patterns are gender-specific; problematic attachment to God is linked with negative outcomes solely among men.

Kearney, David J., Meredith L. Milton, Carol A. Malte, Kelly A. McDermott, Michelle Martinez & Tracy L. Simpson. 2012. Participation in mindfulness-based stress reduction is not associated with reductions in emotional eating or uncontrolled eating. *Nutrition Research* 32(6). 413–420.
doi:10.1016/j.nutres.2012.05.008.

In a sample of 48 participants, researchers found no evidence that participation in MBSR was associated with beneficial changes in eating through reductions in disinhibited eating or significant changes in dietary intake. Following an MBSR intervention, there were no significant differences in the intake of energy, fat, sugar, fruit, or vegetables at either follow-up time point as compared with baseline. Enhanced mindfulness skills and reduced depressive symptoms were seen over time with medium to large effect sizes.

Kox, Matthijs, Monique Stoffels, Sanne P Smeekens, Nens van Alfen, Marc Gomes, Thijs M H Eijsvogels, Maria T E Hopman, Johannes G van der Hoeven, Mihai G Netea & Peter Pickkers. 2012. The influence of concentration/meditation on autonomic nervous system activity and the innate immune response: a case study. *Psychosomatic Medicine* 74(5). 489–494.
doi:10.1097/PSY.0b013e3182583c6d.

In this case study, researchers describe the effects of a particular individual's concentration/meditation technique on autonomic nervous system activity and the innate immune response. The concentration/meditation technique used by this particular individual seems to evoke a controlled stress response. This response is characterized by sympathetic nervous system activation and subsequent catecholamine/cortisol release, which seems to attenuate the innate immune response.

Lucchetti, Giancarlo, Mario F P Peres, Alessandra L G Lucchetti & Harold G Koenig. 2012. Religiosity and tobacco and alcohol use in a Brazilian shantytown. *Substance Use & Misuse* 47(7). 837–846.
doi:10.3109/10826084.2012.673142.

Based on interviews with 383 people, aged 18 years or more, randomly selected from the “Paraisópolis” shantytown in São Paulo, Brazil, researchers found that high religious attendance was associated with less alcohol

use, alcohol abuse, tobacco use, and combined alcohol/tobacco use, as well as less days consuming alcoholic beverages per week, controlling for confounding factors. Additionally, high non-organizational religious behavior was associated with less tobacco and combined alcohol/tobacco use.

Lutjen, Laura J, Nava R Silton & Kevin J Flannelly. 2012. Religion, forgiveness, hostility and health: a structural equation analysis. *Journal of Religion and Health* 51(2). 468–478.
doi:10.1007/s10943-011-9511-7.

The current study considers whether religious participation may have a positive influence on health by increasing forgiveness and diminishing hostility. A structural equation analysis of data collected from a national survey of 1,629 participants supported the hypothesized model that (a) religiosity is related to greater forgiveness, (b) greater forgiveness, in turn, is related to reduced hostility and finally, (c) reduced hostility is related to better subjective health.

Oh, Byeongsang, Phyllis N Butow, Barbara A Mullan, Stephen J Clarke, Philip J Beale, Nick Pavlakis, Myeong Soo Lee, David S Rosenthal, Linda Larkey & Janette Vardy. 2012. Effect of medical Qigong on cognitive function, quality of life, and a biomarker of inflammation in cancer patients: a randomized controlled trial. *Supportive Care In Cancer: Official Journal of the Multinational Association of Supportive Care in Cancer* 20(6). 1235–1242.
doi:10.1007/s00520-011-1209-6.

This study evaluates the effects of medical Qigong (MQ: combination of gentle exercise and meditation) on cognitive function (CF), quality of life (QOL), and inflammation in 37 cancer patients, compared to 44 control group cancer patients. Following the intervention, the MQ group self-reported significantly improved CF, impact of perceived cognitive impairment on QOL, and perceived cognitive abilities, compared to controls. The MQ group also reported significantly improved QOL compared to controls.

Powell-Young, Yolanda M. 2012. Household income and spiritual well-being but not body mass index as determinants of poor self-rated health among African American adolescents. *Research in Nursing & Health* 35(3). 219–230.
doi:10.1002/nur.21473.

This study was designed to determine whether selected anthropometric, psychological, lifestyle behavioral, and structural variables predicted poor self-rated general health in a cross-sectional nonclinical sample of 310 female African American adolescents. The odds of reporting poor self-rated health were 2-3 times greater for African American teens from lower socioeconomic households when compared to teens residing in higher socioeconomic households and for those reporting infrequent participation in activities that promote spiritual well-being compared to those who participate more frequently in activities that enhance spiritual health. Findings indicate that socioeconomic level and engagement in behaviors that enhance healthy spirituality appear to be the most salient predictors of self-rated health.

Rocha, K.K.F., A.M. Ribeiro, K.C.F. Rocha, M.B.C. Sousa, F.S. Albuquerque, S. Ribeiro & R.H. Silva. 2012. Improvement in physiological and psychological parameters after 6 months of yoga practice. *Consciousness and Cognition* 21(2). 843–850.
doi:10.1016/j.concog.2012.01.014.

The authors investigated the effects of yoga on memory and psychophysiological parameters related to stress, comparing yoga practice and conventional physical exercises in healthy men (previously yoga-naïve). Yoga practitioners showed improvement of the memory performance, as well as improvements in psychophysiological parameters. The present results suggest that regular yoga practice can improve aspects of cognition and quality of life for healthy individuals. An indirect influence of emotional state on cognitive improvement promoted by yoga practice can be proposed.

Shaltout, Hossam A., Janet A. Tooze, Erica Rosenberger & Kathi J. Kemper. 2012. Time, Touch, and Compassion: Effects on Autonomic Nervous System and Well-Being. *EXPLORE: The Journal of Science and Healing* 8(3). 177–184.
doi:10.1016/j.explore.2012.02.001.

This study tested the feasibility of delivering two lengths of time (10 and 20 minutes) and two strategies (tactile and nontactile) for a practitioner to nonverbally communicate compassion to subjects who were blind to the interventions. The practitioner maintained a meditative state during all interventions as reflected in lower respiratory rate, and subjects remained blind to the practitioner's meditative activity. Overall, interventions significantly decreased heart rate, and although other changes did not reach statistical significance, they were in the expected direction, with generally greater effects for the tactile than nontactile strategies and for 20-minute than 10-minute doses.

Tekur, P, R Nagarathna, S Chametcha, Alex Hankey & H R Nagendra. 2012. A comprehensive yoga programs improves pain, anxiety and depression in chronic low back pain patients more than exercise: an RCT. *Complementary Therapies In Medicine* 20(3). 107–118.
doi:10.1016/j.ctim.2011.12.009.

Researchers found that seven days intensive residential Yoga program reduced pain, anxiety, and depression, and improved spinal mobility in patients (n=80) with chronic low back pain (CLBP) more effectively than physiotherapy exercises.

Yeh, Shu-Chuan Jennifer & Mei-Ying Chang. 2012. The effect of qigong on menopausal symptoms and quality of sleep for perimenopausal women: a preliminary observational study. *Journal of Alternative and Complementary Medicine (New York, N.Y.)* 18(6). 567–575.
doi:10.1089/acm.2011.0133.

Results from an observational study with 70 participants (35 in intervention group) showed that Ping Shuai Qigong improved climacteric symptoms and sleep quality in perimenopausal women at 6 weeks and 12 weeks. The longer a person practiced this form of meditative exercise, the greater the improvement in sleeping quality and climacteric symptoms.

Zini, A, H D Sgan-Cohen & W Marcenes. 2012. Religiosity, Spirituality, Social Support, Health Behaviour and Dental Caries among 35- to 44-Year-Old Jerusalem Adults: A Proposed Conceptual Model. *Caries Research* 46(4). 368–375.
doi:10.1159/000338404.

The present study identified a strong statistical association between caries experience and religiosity (n=254 Jewish adults in Jerusalem). The direction of the association suggested that being religious had a protective effect on caries experience. A conceptual hierarchical approach suggests a pathway to explain the association between the level of religiosity and dental caries experience. In this study this association was mediated by extrinsic (i.e. social support) and intrinsic (i.e. spirituality) pathways.

2.2 SPIRITUALITY & HEALTH: MENTAL HEALTH

Britton, Willoughby B., Ben Shahar, Ohad Szepsenwol & W. Jake Jacobs. 2012. Mindfulness-Based Cognitive Therapy Improves Emotional Reactivity to Social Stress: Results from a Randomized Controlled Trial. *Behavior Therapy* 43(2). 365–380.
doi:10.1016/j.beth.2011.08.006.

Fifty-two individuals with partially remitted depression were randomized into an 8-week Mindfulness-Based Cognitive Therapy (MBCT) course or a waitlist control condition. Following intervention, MBCT was associated

with decreased emotional reactivity to social stress, specifically during the recovery (post-stressor) phase of the TSST. Waitlist controls showed an increase in anticipatory (pre-stressor) anxiety that was absent in the MBCT group. Improvements in emotional reactivity partially mediated improvements in depressive symptoms.

- Colzato, Lorenza S, Hilmar Zech, Bernhard Hommel, Rinus Verdonshot, Wery P M van den Wildenberg & Shulan Hsieh. 2012. Loving-kindness brings loving-kindness: the impact of Buddhism on cognitive self-other integration. *Psychonomic Bulletin & Review* 19(3). 541–545.
doi:10.3758/s13423-012-0241-y.

The authors compared Taiwanese Buddhists with well-matched atheists. Buddhists showed more evidence of self-other integration in the social Simon task, which assesses the degree to which people co-represent the actions of a coactor. This suggests that self-other integration and task co-representation vary as a function of religious practice.

- Hourani, Laurel L, Jason Williams, Valerie Forman-Hoffman, Marian E Lane, Belinda Weimer & Robert M Bray. 2012. Influence of Spirituality on Depression, Posttraumatic Stress Disorder, and Suicidality in Active Duty Military Personnel. *Depression Research and Treatment* 2012. 425463.
doi:10.1155/2012/425463.

In this study, data were drawn from the 2008 Department of Defense Survey of Health Related Behaviors Among Active Duty Military Personnel (n=24,000). High spirituality had a significant protective effect only for depression symptoms. Medium, as opposed to high or low, levels of spirituality buffered each of the mental health outcomes to some degree. Medium and low spirituality levels predicted depression symptoms but only among those with moderate combat exposure. Medium spirituality levels also predicted PTSD symptoms among those with moderate levels of combat exposure and predicted self-reported suicidal ideation/attempt among those never deployed. These results point to the complex relationship between spirituality and mental health, particularly among military personnel and the need for further research.

- Hsiao, Ya-Chu, Hsiu-Fang Wu, Li-Yu Chien, Chih-Ming Chiang, Yun-Hsiu Hung & Pi-Hui Peng. 2012. The differences in spiritual health between non-depressed and depressed nurses. *Journal of Clinical Nursing* 21(11-12). 1736–1745.
doi:10.1111/j.1365-2702.2011.03962.x.

Using a convenience sample of 283 female nurses at a hospital in northern Taiwan, researchers found that the spiritual health of the non-depressed nurses was better than that of the depressed nurses.

- Khamis, Vivian. 2012. Impact of war, religiosity and ideology on PTSD and psychiatric disorders in adolescents from Gaza Strip and South Lebanon. *Social Science & Medicine* 74(12). 2005–2011.
doi:10.1016/j.socscimed.2012.02.025.

Psychologists administered questionnaires to 600 adolescents from Gaza Strip and South Lebanon. Results indicated that trauma had differential effects on the psychological status of adolescents in both countries. Economic pressure was more predictive of PTSD and psychological distress in adolescents from Gaza. Differences in religiosity and ideology did not account for similar variation in stress response among adolescents from Gaza and South Lebanon. While higher levels of religiosity evidenced the greatest levels of depression and anxiety in adolescents from Gaza, religiosity had an attenuated effect on adolescents from South Lebanon. Ideology was negatively associated with depression and anxiety in Gaza strip adolescents, whereas it did not play a role for adolescents from South Lebanon.

- Koenig, Harold G. 2012. Religious versus Conventional Psychotherapy for Major Depression in Patients with Chronic Medical Illness: Rationale, Methods, and Preliminary Results. *Depression Research And Treatment* 2012. 460419.
doi:10.1155/2012/460419.

This paper (1) reviews the physical and religious barriers to CBT that disabled medically ill-depressed patients face, (2) discusses research on the relationship between religion and depression-induced physiological changes, (3) describes an ongoing randomized clinical trial of religious versus secular CBT in chronically ill patients with mild-to-moderate major depression designed to (a) overcome physical and religious barriers to CBT and (b) compare the efficacy of religious versus secular CBT in relieving depression and improving immune and endocrine functions, and (4) presents preliminary results that illustrate the technical difficulties that have been encountered in implementing this trial.

Koenig, Harold G, Faten Al Zaben & Doaa Ahmed Khalifa. 2012. Religion, spirituality and mental health in the West and the Middle East. *Asian Journal Of Psychiatry* 5(2). 180–182.
doi:10.1016/j.ajp.2012.04.004.

The authors review the latest research on religion, spirituality and mental health from Western countries and the Middle East, one largely Christian and the other largely Muslim. They found considerable overlap between these religious groups in beliefs, practices of worship, moral beliefs and values, and emphasis on family life (although also some distinct differences). Because of the similarity in belief and practice, it is not surprising that research on mental health and devout religious involvement in both these religious traditions has tended to produce similar results. Religious psychotherapies within these faith traditions have been developed and are now being refined and used in clinical trials to determine if integrating patients' religious resources into therapy is more or less effective than conventional therapies in relieving the symptoms of depression and anxiety.

Krause, Neal & R. David Hayward. 2011. Informal Support from a Pastor and Change in Hope During Late Life. *Pastoral Psychology* 61(3). 305–318.
doi:10.1007/s11089-011-0411-2.

Data from a survey of older adults indicate that (1) older people who encounter more stressful life events will seek out more informal emotional support from a member of the clergy; (2) older people who receive more support from a pastor will experience a stronger sense of God-mediated control (i.e., the belief that it is possible to work together with God to solve problems); and, (3) increases in God-mediated control over time will be associated with increases in hope over time.

Nkansah-Amankra, Stephen, Abdoulaye Diedhiou, Samuel Kwami Agbanu, Harry L K Agbanu, Nana Serwaa Opoku-Adomako & Philip Twumasi-Ankrah. 2012. A longitudinal evaluation of religiosity and psychosocial determinants of suicidal behaviors among a population-based sample in the United States. *Journal of Affective Disorders* 139(1). 40–51.
doi:10.1016/j.jad.2011.12.027.

Based on 9,412 respondents from four waves of National Longitudinal Study of Adolescent Health, researchers found that religious activity participation is associated with reduced suicidal behaviors among adolescents but this effect declines during emerging adulthood. Psychosocial supports particularly from fathers' have an enduring impact on reduced suicidal behaviors among adolescents and emerging adults.

Olson, Michael M., Dorothy B. Trevino, Jenenne A. Geske & Harold Vanderpool. 2012. Religious Coping and Mental Health Outcomes: An Exploratory Study of Socioeconomically Disadvantaged Patients. *EXPLORE: The Journal of Science and Healing* 8(3). 172–176.
doi:10.1016/j.explore.2012.02.005.

Positive religious coping (PRC) was significantly associated with and predictive of better mental health, in a study of 123 community mental health center patients. Conversely, negative religious coping (NRC) was found to be significantly associated with poorer mental health scores with gender, income, and ethnicity controlled for in the model. The relationship between NRC and inferior mental health outcomes was more robust than the relationship between PRC and improved mental health scores.

Prout, Tracy A., John Cecero & Dianna Dragatsi. 2012. Parental object representations, attachment to God, and recovery among individuals with psychosis. *Mental Health, Religion & Culture* 15(5). 449–466.

doi:10.1080/13674676.2011.581273.

A total of 46 outpatients diagnosed with schizophrenia or schizoaffective disorder participated in this study. Benevolent representations of mother and father were associated with recovery whereas punitive representations were negatively associated with recovery. Secure attachment to God amplified the association between benevolent representations of father and recovery. Secure attachment to God was found to buffer the relationship between mild-to-moderate punitive parental representations and recovery; however, this relationship was not evident for those with the most punitive parental representations.

Reese, Ashanté M, Roland J Thorpe Jr, Caryn N Bell, Janice V Bowie & Thomas A Laveist. 2012. The Effect of Religious Service Attendance on Race Differences in Depression: Findings from the EHDIC-SWB Study. *Journal Of Urban Health: Bulletin of the New York Academy of Medicine* 89(3). 510–518.

doi:10.1007/s11524-011-9659-1.

Researchers found that among individuals living in a low-income, integrated urban environment (n=1,408), race disparities in depression were eliminated after accounting for race differences in religious service attendance. This suggests religious service attendance may serve as a protective factor against depression for African-Americans.

Seol, Kyoung Ok & Richard M. Lee. 2012. The effects of religious socialization and religious identity on psychosocial functioning in Korean American adolescents from immigrant families. *Journal of Family Psychology* 26(3). 371–380.

doi:10.1037/a0028199.

This study examined religious identity as a mediator and moderator between religious socialization by parents, peers, and religious mentors and psychosocial functioning (i.e., social competence, internalizing and externalizing behavior problems) among 155 Korean American adolescents. Religious socialization by parents and peers were positively associated with adolescents' religious identity and social competence. Religious identity fully mediated the relationship between religious socialization by parents and social competence, and partially mediated the relationship between religious socialization by peers and social competence.

Sliwak, Jacek & Beata Zarzycka. 2012. The interplay between post-critical beliefs and anxiety: an exploratory study in a polish sample. *Journal of Religion and Health* 51(2). 419–430.

doi:10.1007/s10943-010-9367-2.

Results from an adult sample (n=83) suggest that three religiosity dimensions show significant relations with anxiety. Orthodoxy correlated negatively with suspiciousness and positively with guilt proneness. Among women, Historical Relativism negatively correlated with suspiciousness, lack of integration, general anxiety and covert anxiety. Among men, Historical Relativism positively correlated with tension and emotional instability, general anxiety, covert anxiety and overt anxiety. External Critique was correlated with suspiciousness by men.

Telles, Shirley, Nilkamal Singh & Acharya Balkrishna. 2012. Managing Mental Health Disorders Resulting from Trauma through Yoga: A Review. *Depression Research And Treatment* 2012. 401513.

doi:10.1155/2012/401513.

This paper reviews eleven studies indexed in PubMed in which mental health disorders resulting from trauma were managed through yoga including meditation. The aim was to evaluate the use of yoga in managing trauma-related depression, anxiety, PTSD and physiological stress following exposure to natural calamities, war, interpersonal violence, and incarceration in a correctional facility. An attempt was also made to explore possible mechanisms underlying benefits seen.

Varambally, Shivarama & B.N. Gangadhar. 2012. Yoga: A spiritual practice with therapeutic value in psychiatry. *Asian Journal of Psychiatry* 5(2). 186–189.
doi:10.1016/j.ajp.2012.05.003.

After a literature review, researchers conclude that yoga can lead to significant symptomatic improvements in psychiatric disorders, and describe the neurobiological effects which may underlie these changes.

Whitford, Hayley S & Ian N Olver. 2012. The multidimensionality of spiritual wellbeing: peace, meaning, and faith and their association with quality of life and coping in oncology. *Psycho-Oncology* 21(6). 602–610.
doi:10.1002/pon.1937.

This study explored associations between the recently proposed three-factor structure of the 12-item Functional Assessment of Chronic Illness Therapy-Spiritual Well-being subscale (Peace, Meaning, and Faith), quality of life (QoL), and coping in an oncology population of 999 newly diagnosed cancer patients. Analysis showed that Peace alone added 3% to the prediction of QoL and accounted for 15.8% of the overlap in Total Functional Assessment of Cancer Therapy-General scores. Meaning alone added 1.3% to QoL prediction and accounted for 5.8% in overlap. Faith did not significantly contribute to the unique prediction or overlap of QoL.

Williams, Gary L, Sharon Keigher & Agnes Virginia Williams. 2012. Spiritual well-being among older African Americans in a midwestern city. *Journal of Religion and Health* 51(2). 355–370.
doi:10.1007/s10943-010-9378-z.

Analysis of questionnaires completed by 500 elderly African-Americans in Milwaukee, Wisconsin found: (a) strong identification with religious institutions and high levels of attendance and participation in religious activities, (b) a substantial number felt support from fellow church members, and (c) strong reliance on spirituality and their sense of connection to God as sources of strength in coping with personal challenges.

2.3 SPIRITUALITY & HEALTH: METHOD AND THEORY

Al-Obaidi, Saud, James C Wall, Madhuri S Mulekar & Rebecca Al-Mutairie. 2012. The Reliability of Prayer-based Self-efficacy Scale to Assess Self-confidence of Muslims with Low Back Pain. *Physiotherapy Research International: The Journal For Researchers And Clinicians In Physical Therapy* 17(2). 110–120.
doi:10.1002/pri.522.

Researchers developed and tested the Islamic Prayer-based Self-efficacy Scale (IpbSeS) with 60 individuals with low back pain (LBP). Low back pain (LBP) may challenge an individual's self-confidence to perform usual daily activities such as Islamic daily prayer. Researchers found that the scale was a reliable instrument to assess the self-confidence of Muslims in the presence of LBP to pray.

AlRawi, Sara, Michael D. Fetters, Amal Killawi, Adnan Hammad & Aasim Padela. 2012. Traditional healing practices among American Muslims: Perceptions of community leaders in southeast Michigan. *Journal of Immigrant and Minority Health* 14(3). 489–496.
doi:10.1007/s10903-011-9495-0.

The authors conducted 12 interviews with American Muslim community leaders and found that traditional healing practices can be categorized into three domains: Islamic religious text based practices, Islamic worship practices, and folk healing practices. Each domain may further contain therapies such as spiritual healing, medicinal herbs, mind body therapy, and dietary prescriptions. Traditional healing practices are utilized in three capacities of care: primary, secondary, and integrative.

Altschuler, Andrea, Elana Rosenbaum, Peter Gordon, Sandra Canales & Andrew L Avins. 2012. Audio recordings of mindfulness-based stress reduction training to improve cancer patients' mood and quality of life--a pilot feasibility study. *Supportive care in cancer: official journal of the Multinational Association of Supportive Care in Cancer* 20(6). 1291–1297. doi:10.1007/s00520-011-1216-7.

This pilot study assessed whether it would be feasible for cancer patients receiving chemotherapy to listen to MBSR audio recordings individually during treatment and at home. Participants (n=23) were asked to listen to study CDs containing MBSR instructions at least 5 days/week for 3 months and to maintain study diaries of their meditation practices. Analysis showed that participants listened to study CDs an average of 39 times during the study. Participants reported subjectively that participation improved their mood and QoL.

Al-Yousefi, Nada A. 2012. Observations of Muslim physicians regarding the influence of religion on health and their clinical approach. *Journal of Religion and Health* 51(2). 269–280. doi:10.1007/s10943-012-9567-z.

From a questionnaire administered to 225 Muslim physicians in Saudi Arabia, 91% agreed that religion had a positive influence on health, but 62.2% thought that religion could lead to the refusal of medically indicated therapy. Over half of the physicians queried never asked about religious issues. Family physicians were more likely to initiate religious discussions, and physicians with high intrinsic religiosity were more likely to share their own religious views. Residents and staff physicians tended to avoid such discussions.

Bhagwan, Raisuyah. 2012. Glimpses of ancient hindu spirituality: areas for integrative therapeutic intervention. *Journal of Social Work Practice* 26(2). 233–244. doi:10.1080/02650533.2011.610500.

This paper surveys Hindu sacred scriptures, prayer and worship rituals, astrology, ayurveda and meditation and explores their potential to create integrative synergies with conventional social work therapy. It also highlights the important role of the Guru in the fabric of Hindu healing and the importance of validating this together with the other realms of Hindu spirituality in practice.

Blalock, Leigh & Rachel E Dew. 2012. A Pilot Survey of Clergy Regarding Mental Health Care for Children. *Depression Research and Treatment* 2012. 742410. doi:10.1155/2012/742410.

The current paper reports survey responses of 25 clergy from diverse religious traditions concerning mental health care in children. Overall, surveyed clergy support collaborations to improve childhood mental health. However, they vary considerably in their confidence with recognizing mental illness in children and perceive significant barriers to collaborating with mental health providers.

Bowen, Sarah. 2012. A compassionate approach to the treatment of addictive behaviors: The contributions of Alan Marlatt to the field of mindfulness-based interventions. *Addiction Research & Theory* 20(3). 243–249. doi:10.3109/16066359.2011.647132.

The author describes the work of Alan Marlatt in harm reduction and relapse prevention (RP), and shows how Mindfulness-Based Relapse Prevention (MBRP) offers a nonjudgmental, client-centered, and acceptance-based approach to the treatment of addictive behaviors. Research and foundational theory behind MBRP and similar mindfulness-based programs developed by other researchers in the field of addictive behaviors are reviewed.

de Bruin, Esther I., Maurice Topper, Jan G. A. M. Muskens, Susan M. Bögels & Jan H. Kamphuis. 2012. Psychometric properties of the Five Facets Mindfulness Questionnaire (FFMQ) in a meditating and a non-meditating sample. *Assessment* 19(2). 187–197. doi:10.1177/1073191112446654.

The factor structure, internal consistency, construct validity, and predictive validity of the Dutch version of the Five Facet Mindfulness Questionnaire (FFMQ-NL) were studied in a sample of meditators (n=288) and nonmeditators (n=451). Overall, the Dutch FFMQ demonstrated favorable psychometric properties, commensurate with its (original) English language version.

- Cobb, Mark, Christopher Dowrick & Mari Lloyd-Williams. 2012. What can we learn about the spiritual needs of palliative care patients from the research literature? *Journal of Pain and Symptom Management* 43(6). 1105–1119.
doi:10.1016/j.jpainsymman.2011.06.017.

The authors located 35 empirical studies regarding patients with a chronic disease unresponsive to curative treatment. Study populations were typically people with advanced-stage cancer, older than 60 years, who were English speaking, and with a Christian or Jewish religious affiliation, reflecting the predominance of Anglo-American studies. Studies fell into two groups: those that investigated the nature of spiritual experience and those that examined the relationship of spirituality with other phenomena. The evidence was insufficiently homogeneous to pool.

- Cornish, Marilyn A., Nathaniel G. Wade & Brian C. Post. 2012. Attending to religion and spirituality in group counseling: Counselors' perceptions and practices. *Group Dynamics: Theory, Research, and Practice* 16(2). 122–137.
doi:10.1037/a0026663.

An online questionnaire provided a description of how 242 experienced group counselors approach religion and spirituality in group counseling. Interventions that were less active and less directly tied to religious or spiritual practices were viewed as the most appropriate. Spiritual interventions were seen as more appropriate and were used more frequently than corresponding religious interventions. Counselors reported infrequent use of religious and spiritual interventions, even when they were viewed as appropriate. Counselors' degree of religious commitment and spirituality were positively correlated with appropriateness and use of religious and spiritual interventions. Finally, open-ended comments revealed that many counselors saw therapeutic value in discussing religion and spirituality in group counseling, but also cautioned against the negative interactions and unproductive group work that might occur as a result of such discussions.

- El Nawawi, Nora M, Michael J Balboni & Tracy A Balboni. 2012. Palliative care and spiritual care: the crucial role of spiritual care in the care of patients with advanced illness. *Current Opinion in Supportive and Palliative Care* 6(2). 269–274.
doi:10.1097/SPC.0b013e3283530d13.

This review summarizes key empirical research at the intersection of palliative care and religion/spirituality (R/S) in order to assess its validity as a domain of end-of-life care. Studies suggest that R/S plays an important role in coping with disease-related symptoms, improves quality of life, and impacts medical decision-making near death. Patients largely desire medical caregivers to take an active role in providing spiritual care, and patients likewise frequently experience multiple spiritual needs arising in the face of life-threatening illness.

- Frenk, Steven M & Mark Chaves. 2012. Proportion of US Congregations that have People Living with HIV. *Journal of Religion and Health* 51(2). 371–380.
doi:10.1007/s10943-010-9379-y.

In this study, the authors estimate the proportion of US religious congregations that have people living with HIV (PLWHIV) and examine whether congregations that are in contact with populations with high HIV prevalence and incidence rates are more likely to have PLWHIV using data from a nationally representative sample of congregations and the 2000 Census. Over 10,000 congregations have PLWHIV, and congregations containing,

open to, or located in areas with populations with high HIV prevalence and incidence rates are more likely to have them.

- Greenberg, Mark T. & Alexis R. Harris. 2012. Nurturing mindfulness in children and youth: Current state of research. *Child Development Perspectives* 6(2). 161–166.
doi:10.1111/j.1750-8606.2011.00215.x.

This article reviews the current state of research on contemplative practices with children and youth. It reviews contemplative practices used both in treatment settings and in prevention or health promotion contexts, including school-based programs. This review suggests that meditation and yoga may be associated with beneficial outcomes for children and youth, but the generally limited quality of research tempers the allowable conclusions.

- Holt, Cheryl L, Emily Schulz, Lee Caplan, Victor Blake, Vivian L Southward & Ayanna V Buckner. 2012. Assessing the role of spirituality in coping among African Americans diagnosed with cancer. *Journal of Religion and Health* 51(2). 507–521.
doi:10.1007/s10943-011-9453-0.

The purpose of this study was to report on the initial psychometric properties of instruments specific to the cancer context, assessing the role of spirituality in coping. Items were developed based on a theoretical model of spirituality and qualitative patient interviews. The instruments reflected connections to self, others, God, and the world. One hundred African American cancer survivors completed the instruments by telephone. The instruments showed adequate internal reliability, mixed convergent validity, discriminant validity, and interpretable factor structures.

- Hornborg, Anne-Christine. 2012. Designing Rites to Re-enchant Secularized Society: New Varieties of Spiritualized Therapy in Contemporary Sweden. *Journal of Religion and Health* 51(2). 402–418.
doi:10.1007/s10943-010-9356-5.

Detraditionalization in late modernity in Western society has affected the domains of both traditional religion and clinical psychotherapy. The authors describes how Sweden, which is said to be one of the most secularized societies in the world, has allowed the public domain to be colonized by new, spiritualized practices. Four common denominators seem to guide these practices: self-appointed leaders, individual-centered rites, realization of one's Self, and intense emotions. The author adds a fifth aspect: profit. Rites have become a commodity and are sold as liberating practices for burnt-out souls or for people in pursuit of self-realization.

- de Jager Meezenbroek, Eltica, Bert Garssen, Machteld van den Berg, Dirk van Dierendonck, Adriaan Visser & Wilmar B Schaufeli. 2012. Measuring spirituality as a universal human experience: a review of spirituality questionnaires. *Journal of Religion and Health* 51(2). 336–354.
doi:10.1007/s10943-010-9376-1.

In this review, the authors discuss ten questionnaires that address spirituality as a universal human experience, transcending specific beliefs. Questionnaires are evaluated with regard to psychometric properties, item formulation and confusion with well-being and distress. Although none of the questionnaires fulfilled all the criteria, the multidimensional Spiritual Well-Being Questionnaire is promising.

- Jansen, Eva & Claudia Lang. 2012. Transforming the self and healing the body through the use of testimonies in a divine retreat center, kerala. *Journal of Religion and Health* 51(2). 542–551.
doi:10.1007/s10943-011-9564-7.

In this article, researchers analyze the collective healing process that takes place on a weekly basis in the Divine Retreat Center (DRC) in Muringoor, Kerala. They argue that disease in the DRC is understood either as a psycho-somatic or as a spirito-somatic phenomenon. In contrast to other Charismatic communities, however, the body is the locus on which the medical effects of the healing become visible.

- Johnstone, Brick, Guy McCormack, Dong Pil Yoon & Marian L Smith. 2012. Convergent/Divergent validity of the brief multidimensional measure of religiousness/spirituality: empirical support for emotional connectedness as a “spiritual” construct. *Journal of Religion and Health* 51(2). 529–541.
doi:10.1007/s10943-011-9538-9.

The objective of this article is to determine the convergent/divergent validity of the Brief Multidimensional Measure of Religiousness/Spirituality (BMMRS) subscales by correlating it with the Temperament and Character Inventory (TCI) Self-Transcendence subscales. The cross-sectional analysis of 97 undergraduate/graduate students from a Midwestern university was made. The BMMRS appears to have adequate convergent/divergent validity, although the need exists to determine specific dimensions of spirituality. Inspection of the specific items of the BMMRS and TCI spiritual subscales that were most consistently correlated suggests the existence of a distinct spiritual construct that is best conceptualized as the experience of emotional connectedness to the divine, nature, and/or others.

- Kalish, Naomi. 2012. Evidence-based spiritual care: a literature review. *Current Opinion in Supportive and Palliative Care* 6(2). 242–246.
doi:10.1097/SPC.0b013e328353811c.

This article reviews spirituality and spiritual care literature from June 2010 to December 2011 that employ empirical research methods. The majority of patient-focused studies concentrate on oncology and palliative care patients. In the review period, studies of care giver perceptions and experience came from multiple disciplines, including medicine, nursing, and chaplaincy. A discrepancy exists between the provision of spiritual care and the theoretical commitment of practitioners to offer such care. Practitioners continue to view spiritual care as part of their role to a greater extent than they provide it. This is often attributed to the absence of consensus in the field regarding the definition of spirituality, a lack of clarity of disciplinary role, and inadequate education for nurses and doctors about spiritual care. Research has further indicated that care givers’ explorations of their own spirituality correlate with the provision of spiritual care. Although historically spiritual care has been most integrated into the care of palliative and oncology patients, researchers are developing and testing spiritual care assessment tools with other medical populations. In addition, they are evaluating these tools in diverse religious, cultural and national contexts.

- Knabb, Joshua J., Robert K. Welsh & Marjorie L. Graham-Howard. 2012. Religious delusions and filicide: a psychodynamic model. *Mental Health, Religion & Culture* 15(5). 529–549.
doi:10.1080/13674676.2011.594998.

The authors present a psychodynamic explanation for the complex crime of filicide motivated by religious delusions. They hypothesize that mothers with religious delusions commit acts of filicide due to the dynamic and reciprocal interaction between mental illness, psychological functioning, and the psychological role played by religion.

- Koenig, Harold G. 2012b. Commentary: why do research on spirituality and health, and what do the results mean? *Journal of Religion and Health* 51(2). 460–467.
doi:10.1007/s10943-012-9568-y.

After discussing why conducting research on religion and health is important, the author identifies a recently published research report that focuses on the relationship between religion/spirituality (R/S) and self-control, as well as the media coverage it received. He explores what the findings mean, how the media portrayed the findings, and problems that might result depending on how people applied those findings.

- Lucchetti, Giancarlo, Alessandra Lamas Granero Lucchetti, Mario F Peres, Frederico C Leão, Alexander Moreira-Almeida & Harold G Koenig. 2012. Validation of the Duke Religion Index: DUREL (Portuguese Version). *Journal of Religion and Health* 51(2). 579–586.

doi:10.1007/s10943-010-9429-5.

The purpose of the current study was to examine the psychometric properties of the Portuguese version of the Duke Religion Index (PDUREL) in a community setting (n=383). High internal consistency and significant correlational overlap indicates that the PDUREL is a valid and reliable scale.

Midlarsky, Elizabeth, Steven Pirutinsky & Florette Cohen. 2012. Religion, ethnicity, and attitudes toward psychotherapy. *Journal of Religion and Health* 51(2). 498–506.

doi:10.1007/s10943-012-9599-4.

Researchers compared older Jewish White people, non-Jewish Whites, and Black participants on attitudes relevant to psychotherapy. Results indicated that Jews had greater confidence in a therapist's ability to help, were more tolerant of stigma, and more open to sharing their feelings and concerns than participants in the other groups. Furthermore, initial differences between Whites and African Americans were lessened when Jewish identity was included in the analysis. Results suggest that Jewish culture is relatively accepting of psychotherapy, and that previous reports of different rates of mental health seeking attitudes and utilization by Whites and Blacks may be due, in part, to the inclusion of Jewish individuals in these samples.

Padela, Aasim I, Katie Gunter, Amal Killawi & Michele Heisler. 2012. Religious values and healthcare accommodations: voices from the American Muslim community. *Journal Of General Internal Medicine* 27(6). 708–715.

doi:10.1007/s11606-011-1965-5.

This study informs efforts to deliver high-quality healthcare to American Muslims in several ways. The authors note three specific healthcare accommodations requested by this community: (1) gender-concordant care, (2) halal food and (3) a neutral prayer space. Study participants reported stigmatization within the healthcare system and voiced the need for culturally competent healthcare providers.

Padela, Aasim I, Amal Killawi, Jane Forman, Sonya DeMonner & Michele Heisler. 2012. American Muslim perceptions of healing: key agents in healing, and their roles. *Qualitative Health Research* 22(6). 846–858.

doi:10.1177/1049732312438969.

Researchers conducted 13 focus groups at area mosques in southeast Michigan to explore American Muslim views on healing and to identify the primary agents, and their roles, within the healing process. Participants shared a God-centric view of healing. Healing was accessed through direct means such as supplication and recitation of the Qur'an, or indirectly through human agents including imams, health care practitioners, family, friends, and community. Human agents served integral roles, influencing spiritual, psychological, and physical health.

Puchalski, Christina M & Margaret Guenther. 2012. Restoration and re-creation: spirituality in the lives of healthcare professionals. *Current Opinion In Supportive And Palliative Care* 6(2). 254–258.

doi:10.1097/SPC.0b013e3283522223.

Professional guidelines recognize that medicine, nursing and other healthcare professions are vocations, not jobs. Reports indicate that physicians and other clinicians feel the current healthcare environment is too business-like yet, patient relationships continue to be the primary source of satisfaction for many clinicians. The authors find that professional development for healthcare workers should address spiritual development especially as it relates to the healthcare professional's sense of calling to their profession, the basis of relationship-centered care, and the provision of compassionate care.

Schmidt, Stefan. 2012. Can we help just by good intentions? A meta-analysis of experiments on distant intention effects. *Journal of Alternative and Complementary Medicine (New York, N.Y.)* 18(6). 529–533.

doi:10.1089/acm.2011.0321.

A meta-analysis was conducted to assess whether a positive distant intention can be related to some outcome in a target person. There is a specific simple experimental setup that tests such a basic assumption. The task is to focus attention and to indicate unwanted mind wandering by a button press while at the same time a second remote person is either supporting this performance or not according to a randomized schedule. The hypothesis of the positive effect of benevolent intentions is supported by the data. It is concluded that especially the intentional aspect common to all three different tasks reviewed may be responsible for these unorthodox findings. These findings may have implications for distant healing research and health care as well as for meditation performance.

Sinclair, Shane & Harvey M Chochinov. 2012. The role of chaplains within oncology interdisciplinary teams. *Current Opinion in Supportive And Palliative Care* 6(2). 259–268.
doi:10.1097/SPC.0b013e3283521ec9.

The authors describe how spiritual care professionals are increasingly recognized as integral members of interdisciplinary oncology teams. However, the full integration of spiritual care professionals within the standard practice of oncology interdisciplinary teams is lacking, as spiritual care services continue to be treated as ancillary services within cancer care organizations.

Tiew, Lay Hwa & Debra K Creedy. 2012. Development and preliminary validation of a composite Spiritual Care-Giving Scale. *International Journal Of Nursing Studies* 49(6). 682–690.
doi:10.1016/j.ijnurstu.2011.11.014.

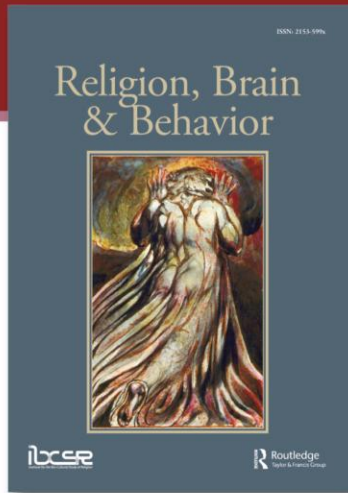
Researchers seek to develop and test the Spiritual Care-Giving Scale that measures student nurses' perceptions towards spirituality and spiritual care. After completion by 754 participants, the Spiritual Care-Giving Scale was found to be a valid and reliable instrument for measuring the multifaceted perspectives of spirituality and spiritual care in practice by students.

Tuck, Inez, Susan Carey Johnson, Maria I Kuznetsova, Carolyn McCrocklin, Marian Baxter & Linda K Bennington. 2012. Sacred healing stories told at the end of life. *Journal of Holistic Nursing: Official Journal of the American Holistic Nurses' Association* 30(2). 69–80.
doi:10.1177/0898010111418116.

This study used a spirituality measure and the PATS© storytelling intervention developed by the principal investigator to better understand the experience of being diagnosed with cancer and being told no further curative treatments are warranted. Storytelling allowed the seven study participants to share personal experiences and achieve a sense of connectedness and intimacy. The authors conclude that the use of the PATS© intervention is a way to facilitate physical, emotional, and spiritual healing and provide holistic end-of-life care.

Worthington Jr., Everett L., Yin Lin & Man Yee Ho. 2012. Adapting an evidence-based intervention to REACH Forgiveness for different religions and spiritualities. *Asian Journal of Psychiatry* 5(2). 183–185. doi:10.1016/j.ajp.2012.04.005.

In this article, the authors show that the REACH Forgiveness intervention can be accommodated to a variety of religious clients. They describe guidelines about what is essential to the treatment and what might be effectively modified to be acceptable to religious and spiritual clients embracing a variety of beliefs and practices.



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