This newsletter provides updates on research, news and events related to spirituality and health, including funding opportunities. Please forward to colleagues or students who might benefit. Our goal is to create a community of researchers, clinicians, clergy, and laypersons interested in spirituality and health and keep them informed and updated. An EVENTS CALENDAR concludes the newsletter and describes spirituality and health related presentations happening at Duke and around the world.

LATEST RESEARCH OUTSIDE DUKE

Is Religious Attendance Related to Blood Pressure in Norway?

Norway in Northern Europe is among the most secular countries in the world. According to the most recent Eurobarometer Poll in 2005, only 32% of Norwegian citizens say they "believe there is a God." According to the World Values Survey, approximately 5% attend religious services once a week or more (vs. 44% in the U.S.). What might be the relationship between religious involvement and physical health in that area of the world? Norwegian researchers examined relationships between religious attendance and blood pressure in a sample of nearly 36,000 adults (20,066 women and 15,898 men) participating in the Nord-Trondelag Health Study. The average diastolic blood pressure (DBP) was 71.0 in women and 76.7 in men; average systolic blood pressure (SBP) was 128.5 mmHg in women and 134.0 mmHg in men. Attendance at religious services at a frequency of more than 3 times/month was present in 3.8% of women and 3.4% of men. After controlling for confounders, DBP and SBP were inversely related to religious attendance in both women and men. The relationship with DBP demonstrated a gradient of effect (p<0.001) in both women and men. Compared to non-attendees, those attending more than 3 times/month had a 1.5 mmHg lower DBP among women and a 1.7 mmHg lower DBP among men; the difference for attending 1-3 times/month was 0.9 and 1.2 mmHg, respectively; and the difference for attending 1-6 times/month was 0.5 and 0.1 mmHg, respectively. Differences in SBP were 2.1 and 1.7 mmHg (women and men) for religious attendance 3 times/month or more, 0.3 and 0.1 for 1-3 times/month, and 0.6 and 0.6 for 1-6 times/6 months (there was no gradient of effect for SBP).


Comment: After control for confounders, religious attendance was inversely related to blood pressure even in a highly secular country like Norway. For diastolic blood pressure, the relationship showed a gradient of effect, with higher levels of religious attendance related to lower DBP in a stepwise fashion. Although the differences in blood pressure may appear small (2 to 3 mmHg), research indicates that if average BP could be reduced by 2-4 mmHg on a nationwide basis, this would result in a reduction of cardiovascular disease by 20% (which is anything but trivial).

Religious Struggle is Bad for Your Health

Investigators at the University of Connecticut followed 101 outpatients with severe congestive heart failure (stage III or IV CHF) for 3 months, examining the possible impact that religious struggles had on mental health, physical health, and use of health services. Religious struggle was measured by a 6-item scale (Exline’s brief Religious Strains Scale) with each item rated on a 0-10 metric: "I feel angry at God"; "I feel abandoned by God"; "I view God's actions as unfair"; "I feel God has let me down"; "I view God as unkind"; and "I believe that God disapproves of me." Mental health was measured as depressive symptoms (10-item CES-D), life satisfaction, and quality of life (mental health subscale of SF-12); physical health was assessed by the physical health subscale of the SF-12 and physical impairment from CHF; and use of health services was measured by nights hospitalized during the 3-month follow-up. Importance of religion was also assessed, along with daily spiritual experiences. Results indicated that the average religious struggles score at baseline was 3.65 per item (on 0-10 scale). Religious struggles were more common among younger patients and those with more medical co-morbidities. There was little change in religious struggles over the 3 months. At baseline, religious struggles were related to lower life satisfaction and greater depression, but surprisingly not worse physical health. After controlling for baseline mental health measures, age, education, and medical co-morbidities, religious struggles were unrelated to Time 2 mental health outcomes. After controlling for baseline physical health measures, age, education, and medical co-morbidities, religious struggle was marginally related to worse CHF functioning (p<0.10), but significantly related to greater nights spent in the hospital (p<0.05). The presence of religious struggles was a particularly strong predictor of health service use (more nights spent in the hospital) in those who indicated that religion was very important to them.


Comment: Although the short follow-up period limits the power to show an effect of religious struggle on mental and physical health outcomes, religious struggles were related to greater depression and lower life satisfaction at baseline. While there was no impact of religious struggle on change in mental and physical health, it did predict greater use of health services (days hospitalized), which was significantly greater in those for whom religion was very important. This is more evidence that religious struggles need to be addressed in clinical care, and suggests that chaplains could play an important role in helping CHF patients (especially younger patients) deal with religious struggles, which this study suggests may reduce use of acute hospital services (with substantial healthcare savings).

Does Religiousness Decrease the Relationship between Chronic Illness and Depression in Jews?

There is a well-known positive relationship between chronic physical illness and depressive symptoms. What is not known is how religiosity affects this relationship in those of Jewish faith. Researchers at Columbia University and McLean Hospital/Harvard Medical School identified a convenience sample of 89 Orthodox...
and 123 non-Orthodox Jews from the United States (83%), Canada (7%), Israel (6%), and other countries, in which these relationships were cross-sectionally examined. Physical health was assessed using the physical health summary component of the SF-12 (higher scores indicating better physical health); depressive symptoms were measured with the 10-item CES-D scale; and intrinsic religiosity was assessed with three intrinsic religiosity items from the Duke Religion Index. Results indicated that, as expected, there was a strong relationship between poor physical health (low scores on physical health) and higher depressive symptoms in the overall sample (B=-.24, p<0.001), and a strong inverse relationship between religiosity and depressive symptoms (B=-.57, p<0.001). Among those with low intrinsic religiosity, there was a strong relationship between physical health (low scores) and depressive symptoms (B=-0.42, p<0.001); however, among those with high intrinsic religiosity, there was no relationship between physical health and depressive symptoms (B=-0.08, p=0.29). Thus, high intrinsic religiosity completely buffered the effects of poor physical health on depressive symptoms in both Orthodox and non-Orthodox Jews. Next, researchers examined whether high social support mediated these effects of religiosity. They hypothesized that high social support would mediate the buffering effects of religiosity in non-Orthodox Jews, but not in Orthodox Jews. This was based on previous research showing that social religiosity is more important than personal religiosity to non-Orthodox Jews (whereas the reverse is true for Orthodox Jews). Social support was measured using a single item (“How often do you get the social and emotional support you need?”). Results indicated that social support completely mediated (explained) the moderating effects of intrinsic religiosity on the physical health-depressive symptoms relationship in non-Orthodox Jews; however, social support had no effect on this relationship in Orthodox Jews (who also scored significantly higher on intrinsic religiosity than non-Orthodox Jews).


Comment: Prior research has shown that depressive symptoms are higher among Jews than in other religious groups. These investigators found that poor physical health was associated with higher depressive symptoms in non-Orthodox and Orthodox Jews, but this effect was only present among those with low intrinsic religiosity. This buffering effect of religiosity was completely explained by higher social support in non-Orthodox Jews, but could not be explained by high social support in Orthodox Jews, where the effect was independent of social support.

Faith Community Participation and Use of Preventive Services

Investigators examined a national sample (USA) of 1,076 Presbyterians to explore relationships between use of preventive services (cholesterol screening, flu shots, colonoscopy) and participation and interactions within the religious community. Five aspects of religious community interaction were explored: frequency of religious attendance; church-based health activities (i.e., church related education about health activities); health discussions with other church members; presence of health providers in congregation; and church support for a healthy lifestyle (i.e., other members encouraging them to exercise, avoid cigarettes, eat healthy). Two health-related beliefs were also examined: beliefs about the sanctity of the body (i.e., body is temple of God, body used to do God’s will, etc.), and beliefs about God locus of health control (i.e., God in control of health outcomes). Uncontrolled analyses indicated positive relationships between frequency of religious attendance and use of each of the three preventive services, and negative relationships between beliefs about God being in control of health and use of each of these three preventive services. However, when age was controlled, the relationships between religious attendance and cholesterol screening, flu shots, and colonoscopy were reduced to non-significance. In contrast, despite controlling for demographics and other predictors, church-based health activities and health discussions with other church members emerged as significant and positive predictors of these preventive services. Interestingly, neither beliefs about the body as sacred (temple of God) nor beliefs about God being in control of health were significant predictors of preventive services in controlled analyses. The authors admitted, however, that the characteristics of this particular sample could have partly explained the results -- results that contrasted with previous research reporting a positive relationship between religious attendance and use of preventive services. This was a religiously active sample (80% attending religious services almost weekly or more often), with high socioeconomic status, and relatively high use of the preventive services assessed (66% to 77%).


Comment: Previous research has failed to determine why active members of faith communities use more preventive health services. The findings here suggest that church-based health activities (sermons on health topics, holding classes on health issues, distributing printed material related to health, sponsoring health programs or services) do make a difference. Likewise, health-related discussions with fellow church members are associated with greater use of preventive services, suggesting that information flow within religious congregations also helps to explain why disease screening and preventive services are more frequent among the religiously active. In contrast, conventional beliefs about the sacredness of the body and about God being in control of health appear to be less influential (again, though, these are cross-sectional associations).

Does Religious Motivation Influence Cardiovascular Reactivity?

Investigators at the University of Colorado and Brigham Young University assessed religious motivation and administered other measures of personality prior to laboratory testing of cardiovascular reactivity in 131 subjects. Participants were ages 40 to 70 (mean age 50, 70% female, 37% Catholic, 24% Protestant, and 24% no affiliation). Religious motivation was assessed using the 14-item Age Universal Intrinsic/Extrinsic – revised scale (Gorsuch & McPherson). This measure allows the creation of the following four categories: intrinsic, extrinsic, pro-religious (score high on both intrinsic and extrinsic items, i.e., rate high on all pro-religious items indiscriminately), and non-religious (score low on both intrinsic and extrinsic items). Only 7 subjects were in the extrinsic group, so this group was dropped from the analysis, leaving three groups to compare: Intrinsic (n=46), Pro-religious (n=41), and Non-religious (n=44). Results indicated that the Pro-religious group had the lowest cardiovascular reactivity in response to experimental stressors, compared to both Intrinsic and Non-religious (i.e., systolic blood pressure increase was 6.8 vs. 12.4 and 13.0, respectively, p<0.05). However, Intrinsic had a much more positive personality profile compared to either Pro-religious or Non-religious subjects: Intrinsic scored significantly higher on extraversion, agreeableness, compassion, sense of coherence, and self-rated physical health overall, and scored lower on hostility and aggression. Those who were indiscriminately Pro-religious were also less reliable in keeping appointments and appeared rushed during the experimental manipulation.

Citation: Masters KS, Knestel A (2011). Religious motivation and cardiovascular reactivity among middle aged adults: Is being pro-

Comment: Those who are indiscriminately Pro-religious when completing religious motivation scales like the Age Universal Scale are thought to be responding to questions without reading them carefully or thinking about what the questions are asking (since they rate both intrinsic AND extrinsic items in a positive manner). This is quite different from Intrinsics who rate intrinsic items high and extrinsic items low, suggesting that they are actually reading the questions and pursue religion as an end in itself, not as a means to another end (as do the Extrinsics). Interestingly, however, the Pro-religious group had the lowest cardiovascular reactivity.

**Religiosity, Self-Control, and Prison Deviance**

University of Alabama researchers surveyed a convenience sample of 208 paroled male prisoners living in work-release facilities in a mid-western state (paroled within the previous 6 months. The aim of this survey was to determine if there was a relationship between religiosity and deviant behavior while in prison, and to attempt to explain this relationship. Religiosity was measured by frequency of religious behavior: (1) private prayer, (2) watching religious TV, and (3) attending a religious class or group. Prison deviance while in prison was retrospectively assessed by asking about destroying prison property, getting in physical fights, carrying a weapon, and spending time in the disciplinary unit. An explanatory variable, self-control, was also assessed using a standard 24-item attitudinal index (Grasmick et al., 1993) with six dimensions: impulsivity, simple tasks, risk-seeking behavior, physical activity, self-centeredness, and volatile temper. Uncontrolled analyses revealed an inverse relationship between all three religious behaviors and prison deviance. When controlling for criminal history, age, ethnicity, and education, the inverse relationship between prison deviance and watching religious TV lost significance. Adding self-control to the model further explained the weak inverse relationship with private prayer, but could not account for the inverse relationship with religious attendance, which remained significant (p<0.05). Investigators concluded that two of three measures of religious behavior were spurious predictors of prison deviance after accounting for self-control, and that participation in religious services was the only religious activity that reduced prison deviance.


**Comment:** If controlling for self-control explains some of the relationship between religiosity and prison deviance, this does not mean that religiosity is a “spurious” predictor, but rather that self-control could help to explain how religious involvement influences prison deviance. Nevertheless, this rather modest study is important because it adds to the evidence that providing prisoners with opportunities for religious involvement might help to reduce problem behaviors in our ever increasingly crowded prison system.

**Prayer and Pain**

Dutch researchers examined the cross-sectional relationships between frequency of prayer and pain level in a convenience sample of 202 chronic pain patients participating in a national Dutch organization (Flemish Pain League). Those who completed the survey (45% response rate) were more likely to be women (71%), were age 52 on average, and had experienced chronic pain for an average of 15 years (cause of pain not reported). Religious affiliation was 32% Catholic, 26% “Christian,” 20% believers in “transcendent reality” but no religious affiliation, 17% agnostic or atheist, and 5% Muslim or Buddhist. Importance of religion was also assessed: 25% said it was not important, 31% indicated it was of minor importance, 28% important, and 16% very important.

Prayer was measured with a single question: “How often do you pray?” (never, seldom, sometimes, often). Pain severity (level of pain) was assessed with three questions, and pain tolerance (interference with functioning) with eight questions. Positive cognitive re-appraisal was also examined as a mediator and assessed using a 4-item scale from the COPE (Carver et al). Uncontrolled correlations revealed that prayer was unrelated to pain severity (r=-0.01), but was positively related to both pain tolerance (r=+0.18, p<0.05) and positive cognitive re-appraisal (r=+0.33, p<0.01). Regression modeling indicated that the relationship between prayer and pain tolerance was explained (mediated) by greater positive cognitive re-appraisal by those who prayed more. Moderator analysis showed that among those who indicated some degree of religious affiliation (n=166 vs. agnostics or atheists, n=35), relationships between prayer and both pain tolerance and severity were significant (positive for pain tolerance and negative for pain severity). Interestingly, there was some increase in pain severity with increased prayer among agnostics and atheists.

**Citation:** Dezutter J, Wachholtz A, Corveleyn J (2011). Prayer and pain: the mediating role of positive re-appraisal. *Journal of Behavioral Medicine* 34:542-549

**Comment:** Cross-sectional analyses like this one in prayer and pain studies always make it difficult to determine which variable is influencing the other. Usually, these studies find a positive correlation between prayer frequency and pain severity, since as pain increases, so does prayer as people turn to it as a coping response. Thus, the findings of this study are somewhat unexpected (particularly the inverse correlation with pain severity in those indicating a religious affiliation). In European studies where the populace is less religious than the USA, it takes a lot more distress before people turn to religion as a coping behavior; thus, religious activity often becomes marker for greater distress. The positive correlation between prayer and pain severity in agnostics and atheists here supports this observation.

**Did Religiosity Influence Health after September 11th?**

In a prospective study that assessed health status prior to the September 11th terrorist attacks, researchers examined whether religious/spiritual involvement assessed shortly after the attacks (November/December) predicted mental and physical health over the next 3 years, controlling for pre-9/11 health status. Participants were a representative US national sample of 890 adults. Religiosity was assessed by frequency of attendance at religious or spiritual services. Spirituality was measured using two intrinsic religiosity items from the 9-item Religious Orientation Scale (Gorsuch). Health outcomes included mental health (self-reported physician-diagnosed mental health ailments), cognitive intrusions (PTSD-like symptoms from the Impact of Events Scale), positive affect (8-item Diener scale), and physical health (count of self-reported physician-diagnosed health ailments, including infectious, musculoskeletal, and cardiovascular diseases). Age, gender, marital status, ethnicity, education, household income, 9/11-related exposure, stressful events, health risk behaviors, and somatization were controlled for using multi-level regression. Results indicated that attendance at religious/spiritual services predicted a 12% lower likelihood of developing new mental ailments (IRR=0.88, 95% CI 0.79-0.98, p<0.05), a greater likelihood of positive emotions (B=+0.12, p<0.001), and a reduced likelihood of cognitive intrusions (B=-0.07, p<0.05); intrinsic religiosity ("spirituality") was unrelated to onset of new mental ailments, positively related to the experiencing positive emotions (B=+0.09, p<0.01), but was also positively related to cognitive intrusions (B=-0.10, p<0.01). However, there was an interaction between intrinsic religiosity (IR) and time, such that cognitive intrusions decreased more rapidly with time in those with high IR compared to those with low IR (B=-0.10, p<0.01). With regard to future physical health ailments (controlling for pre-9/11 ailments),
religious/spiritual attendance predicted a 6% lower likelihood of developing musculoskeletal problems (IRR=0.94, 95% CI=0.88-0.99, p<0.05), whereas high intrinsic religiosity predicted a 17% lower likelihood of developing infectious diseases (IRR=0.83, 95% CI 0.69-0.99, p<0.05). Researchers concluded that public religious/spiritual involvement and spirituality (intrinsic religiosity) independently predicted health after September 11th, controlling for pre-event health status.


Comment: Although higher intrinsic religiosity ("spirituality") shortly after September 11th predicted greater cognitive intrusions (PTSD symptoms) over time, the decline in these symptoms over time were greater in those with high compared to those with low IR (perhaps indicative of turning to IR beliefs as a way to cope, which then consequently improved coping). A side point, however, the investigators implied that "religion" and "spirituality" each had distinct roles in predicting health after 9/11. However, they measured spirituality using two classic items assessing intrinsic religiosity. Thus, these findings apply primarily to religiosity.

NEWS

Handbook of Religion and Health (Second Edition)

According to Google Scholar, the 1st edition of the Handbook, published in 2001, is the most cited of any book or research article on religion and health in the past forty years (Google 2011). This new edition is completely re-written, and in fact, really serves as a second volume to the 1st edition. The 2nd edition focuses on the latest research published since the year 2000 and therefore complements the 1st edition that examined research prior to that time. Both volumes together provide a full survey of research published from 1872 through 2010 -- describing and synthesizing time. Both volumes together provide a full survey of research published from 1872 through 2010 -- describing and synthesizing time.

SPECIAL EVENTS

3rd European Conference on Religion, Spirituality and Health

The conference will be held in beautiful Bern, Switzerland, on May 17-19, 2012, at the University of Bern. The primary conference topic will be "Spiritual Care." Eckhard Frick Dr. Med, Professor for Spiritual Care at Ludwig-Maximilians-University in Munich, Germany, will present the Bern Lecture. Keynote speakers presenting are from Italy, Norway, the United Kingdom, Sweden, Switzerland, and the Netherlands, making this a truly trans-European conference. For more information go to website: http://www.eocrsh.eu/

Conference on Medicine and Religion (University of Chicago)

Responding to the Call of the Sick: Religious Traditions and Health Professionals Today is the title of this national conference to be held on May 23-25, 2012, at the Westin Hotel on Michigan Avenue in Chicago, IL. For more information about the conference, see website: http://pmr.uchicago.edu/events/2012-conference.

University of Pennsylvania's Spirituality Research Symposium

Penn Medicine's fifteenth annual Spirituality Research Symposium: "Spirituality & Palliative Care" is set for June 13, 2012, at the University of Pennsylvania's Biomedical Research Building II/III Auditorium. The program will run 8:00 AM - 12:30 PM. The event is FREE and open to all in the Health System, the University, and the local community. Featured speakers include Tracy A. Balboni, MD, MPH, and Michael J. Balboni, MDiv, ThD, PhD, from Harvard Medical School, Dana-Farber Cancer Institute, and Center for Psycho-Oncology and Palliative Care Research; whose work on spirituality and end-of-life care has included research on patients' experience of advanced illness, the role of spirituality in health care decision-making, and the effect of spiritual support on medical costs. For more information, go to website: http://www.uphs.upenn.edu/pastoral/events/spirit_research.html or call 215-662-2591.

Register now for 2012 Duke Spirituality & Health Research Workshops

Register now to ensure a spot and choice of mentors in one of our research workshops on spirituality & health during the summer of 2012. Dates are July 16-20 and August 13-17, 2012. This is the last year that full ($1100) tuition scholarships will be available for those with strong academic potential and financial hardships; there are 35 scholarships this year available for those in need. An abbreviated form of this workshop is also being offered in Switzerland on May 13-16, 2012, which can be combined with the 3rd European Conference on Religion, Spirituality and Health (see above). For more information, see website: http://www.spiritualityhealthworkshops.org/.

5th International Conference on Ageing and Spirituality

This Conference continues a series of international conferences that began in Canberra in 2000. The 2013 Conference, to be held in Edinburgh, Scotland, will explore resilience and creativity and their role in supporting the spiritual lives of older people. The conference planners are hoping to attract both those with an academic interest and expertise in the area from around the world, as well as those from the UK with more practical experience through involvement in the care industry or as informal carers. They intend to involve older people themselves within the program. The theme of the 5th Annual Conference on Spirituality and Ageing is 'Creativity in Spiritual Care'. This year’s conference is jointly sponsored by Faith in Older People and the Methodist Homes Association. The conference will be of interest to those coming from a faith based approach and those approaching spirituality from a secular one. Speakers include Baroness Julia Neuberger, Senior Rabbi of the West London Synagogue, Elizabeth MacKinlay from Charles Sturt University of Australia, Susan McFadden, from the University of Wisconsin, John Swinton from the University of Aberdeen. The call for papers and

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workshops is now open. See the following website for details: www.fiop-mha.events-made-easy.com.

2012 Summer Institute on Theology and Disability
The Third Annual Summer Institute on Theology and Disability is being held July 16-20 at Catholic Theological Union in Chicago. A core group of faculty/mentors who are leaders in the growing field of theology and disability will serve as speakers, discussion group leaders, responders and facilitators: Hans Reinders from the Netherlands, John Swinton from the UK, Tom Reynolds from Canada, Deborah Creamer from Denver, Erik Carter from Nashville, and Bill Gaventa from The Boggs Center. This group will be doing short presentations on the first day of the Institute followed by afternoon discussion groups with each speaker. On Tuesday through Friday, other guest faculty join the Summer Institute to deliver plenary presentations focused on a theme for each day: Biblical Studies, Families/Parents/Siblings, Religious and Spiritual Development, and Community Building. Afternoon workshops and discussion groups will be led by the speakers, the Summer Institute faculty, and other participants. Academic credit and CEUs for the Summer Institute for seminarians and clergy are being offered through Chicago Theological Seminary. For more information about the Summer Institute program, speakers, and registration are now available at http://bethesdainstitute.org/theology.

2012 CALENDAR OF EVENTS...

May
13-16  Spirituality and Health Research Workshop
Research Institute for Spirituality and Health
Harold G. Koenig, M.D.
Clinic SGM
Langenthal, Switzerland
Contact: Dr. Rene Hefi (Rene.Hefi@klinik-sgm.ch)

17  European Conference on Religion, Spirituality and Health
Multiple presenters from US and Europe
University of Bern
Bern, Switzerland
Contact: Dr. Rene Hefi or Dr. Jean-Marc Burgunder (http://www.ecrsh.eu/)

23  Religious Involvement, the Serotonin Transporter Promoter Polymorphism, and Substance Abuse in Young Adults
Rachel E. Dew, M.D., M.H.Sc.
Assistant Professor, Child and Adolescent Psychiatry, Duke University Medical Center
Center for Aging, Duke University Med Ctr, 3:30-4:30
Contact: Harold G. Koenig (koenig@geri.duke.edu)

23-25  Responding to the Call of the Sick: Religious Traditions and Health Professionals Today
Multiple presenters
University of Chicago
Westin Hotel, Michigan Avenue in Chicago, IL
Contact: http://pmr.uchicago.edu/events/2012-conference

FUNDING OPPORTUNITIES
Templeton Foundation Online Funding Inquiry (OFI)
The Templeton Foundation is accepting letters of intent for research on spirituality and health (Aug 1- Oct 15, 2012). If the funding inquiry is approved (applicant notified by Nov 26, 2012), the Foundation will ask for a full proposal that will be due Nov 27-Mar 1, 2013, with a decision on the proposal reached by June 21, 2013. More information: http://www.templeton.org/what-we-fund/our-grantmaking-process

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