



aging news

NEWSLETTER OF THE INSTITUTE ON AGING (IOA) | UNIVERSITY OF WISCONSIN-MADISON



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Schroepfer Receives Award for Work with the Terminally Ill

IOA Affiliate **Tracy Schroepfer** (Asst. Prof., Social Work, UW-Madison) has been awarded the **Association for Gerontology in Education in Social Work's 2009 Faculty Achievement Award**. This national award has been given early in Prof. Schroepfer's career for her work with terminally ill elders, which has made significant contributions. Her research seeks to ensure that no one who considers a hastened death does so because they are suffering unnecessarily in their dying process.

Prof. Schroepfer has conducted many face-to-face interviews with terminally ill elders, from which she has identified six mind frames toward dying. These show the inadequacy of the prior dual classification of either considering a hastened death or not. The six mind frames involve variations of either being ready or not ready for death, accepting it or not, wishing for death, actually considering a hastened death, and having or not having a plan to accomplish it. Elders who were not considering a hastened death spoke of feeling their family needed them or of still enjoying time with them, of not wishing to burden loved ones with their suicide, or of feeling that their life still had purpose. Others who were considering a hastened death were fearful of future pain, but also spoke of no longer enjoying life, being lonely or bored, feeling like a burden, or no longer being able to justify continuing to live. The issues raised by these terminally ill elders is challenging practitioners who work with them to look beyond the physical issues

of dying and to consider, as well, elders' psychosocial needs.

Prof. Schroepfer's research has also identified four critical events during which elders may have wished for a hastened death. The first mentioned by some respondents was when receiving a terminal diagnosis from their doctor. If they felt the news was delivered in an uncaring fashion and were not given sufficient time to ask questions, they often found themselves wishing for death, until someone else, such as family or social workers, gave them opportunities to deal with their emotions. The second critical event occurred when elders told

family or medical staff that they were in unbearable pain. These elders felt they were not listened to because no attempt was made to relieve their discomfort. The third critical event involved the elders' feelings regarding their experiences with chemotherapy, which they sometimes

viewed as worse than death. Again, they felt that their feelings about the treatment and, in some situations, their desire to cease treatment, were not heard by doctors or family. The last critical event involved dying in a distressing environment. This experience differed, as some elders found hospitals upsetting while others experienced extreme loneliness when dying at home. When elders' opinions of their environment were heard and they were moved to an appropriate location, they no longer considered hastening their death. These critical events all point to the need for those giving

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new findings from MIDUS

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The aim of MIDUS is to study successful aging as a long-term journey involving multiple factors (psychological, social, biological). The study began in 1995 with over 7000 participants, aged 25-74. Follow-up interviews, including new biological and neurological assessments, began in 2004. Over 200 publications have utilized MIDUS data. Most are archived at: midus.wisc.edu/findings



Some cope with stressful situations by soothing their emotions with food.

Smoking Can Worsen Your Mood

Approximately 21% of Americans continue to smoke, perhaps because most smokers believe it helps them alleviate stress. A recent MIDUS study, however, found that the opposite may actually be true. This study of 256 smokers, 25-73 years old, was the first to include a national sample in their examination of the relationship between stress (as experienced in the minor annoyances of daily life such as arguments or problems at work), one's resulting mood, and number of cigarettes smoked that day. Results showed that smoking more than usual was associated with worse moods on days with more stress. Analysis showed, however, that the worsened mood could not be attributed entirely to the number or severity of stressful events experienced. Instead, on bad days smokers may experience a "double whammy" of stress brought on by events, as well as by smoking itself.

In the stress induction model of smoking, smokers are seen to experience repeated nicotine withdrawal throughout the day. As withdrawal symptoms increase, mood worsens until it is alleviated by more smoking, thus providing a false sense that smoking improves your mood. The "double whammy" occurs

when the cycles of worsened mood brought on by nicotine withdrawal are compounded by the negative moods associated with increased stressful events, which in turn leads smokers to seek relief through more smoking, thus perpetuating a cycle of distress. The authors conclude that greater public health efforts are needed to dispel the myth that smoking makes you feel better and to provide smokers with alternative mechanisms to cope with stress.



Smokers may experience a "double whammy" of stress

brought on by events, as well as by nicotine withdrawal.

Source: Aronson, K.R., Almeida, D.M., Stawski, R.S., Kline, L.C., & Kozlowski, L.T. (2008). Smoking is associated with worse mood on stressful days: Results of a national diary study. *Annals of Behavioral Medicine*, 36, 259-269.

Family Violence May Lead to Obesity

MIDUS data were used in this study to examine whether experiences of childhood violence from parents are related to obesity in adulthood. Previous studies have either focused on sexual violence, or have not considered the type or amount of non-sexual violence. This study of 1650 MIDUS respondents looked at self reports of the frequency of psychological violence (swearing, threats, etc.) and physical violence (hitting, choking, etc.). Results showed that those who experienced both types of violence, with at least one having occurred frequently, had greater odds of experiencing adult obesity.

Further statistical analysis provided evidence of one of the causal processes behind this association. Results showed that this severe profile of violence was also linked to greater use of food in response to stress in adulthood

(as shown in agreement to the statement: "I eat more of my favorite foods to make myself feel better when experiencing a stressful event"). Stress and coping theories postulate that when faced with a stressor that is difficult to control (such as violence from parents), people will use emotion-focused coping, which aims to reduce distressing feelings instead of eliminating the stressor itself. One type of emotion-focused coping is the use of food to self-soothe. Thus, those who experience violence in childhood may learn to overeat as a means of dealing with the stress, which in turn may lead to later obesity. The authors conclude that mental health counseling may be needed in the treatment of obesity for those who experienced childhood family violence.

Source: Greenfield, E.A., & Marks, N.F. (2009). Violence from parents in childhood and obesity in adulthood: Using food in response to stress as a mediator of risk. *Social Science & Medicine*, 68, 791-798.



More frequent religious participation is linked to greater life satisfaction.

Religious Identity Linked to Mental Health

A number of research studies have demonstrated that more frequent formal religious participation is associated with better psychological well-being among adults. This study aimed to contribute to better understanding why people who report greater religious attendance also report, on average, better mental health. Although many factors have been suggested to explain this association (such as coping, meaning, and social support), few explanations have been tested empirically.

Drawing on classic theorizing regarding “the individual within the group” as well as “the group within the individual,” the authors hypothesized that those who exhibit greater religious service participation would have a stronger religious social identity (i.e., more closely identifying with one’s religious group) which would help to account for the mental health benefits of their participation.

Using data from the MIDUS study, the authors found that more frequent formal religious participation was linked to more positive affect, less negative affect, and greater life satisfaction. Further, the results supported the hypothesis that greater religious participation is linked to having a stronger religious social identity, and that this, in turn, is linked to better mental health. Having this stronger religious social identity may lead to a more beneficial evaluation of self, even greater benefits from interacting with others sharing the same social identity, and a greater sense of meaning and guidance for behavior— all of which may enhance psychological well-being.

Source: Greenfield, E.A. & Marks, N.F. (2007). *Religious social identity as an explanatory factor for associations between more frequent formal religious participation and psychological well-being. International Journal for the Psychology of Religion, 17*(3), 245-259.

Continued from page 1....

support to a terminally ill elder to have good listening skills, including being comfortable talking about a terminal illness and the resulting consequences, thrusting aside attempts to “fix” an elder’s feelings when they are down, and allowing space for the open expression of emotions. In the last three critical events, it was also important that the elder not be excluded from the decision-making process, for only they possessed first hand knowledge of how their experiences were affecting them.

In a second study, Prof. Schroepfer found that the more strategies used by elders to exercise control, the higher their reported quality of life in the dying process. In one strategy, elders sought to remain independent, which was often equated with having time alone, showing that it is important to ensure that they have a period of privacy each day. In another area, elders sought control through decision making. They did not feel a need to make decisions alone, nor were they focused on the import of the decisions, but they did want to make as many decisions as possible and to be supported in doing so. The elders appeared to realize that their world, and often their ability to exercise control, were constrained, and so adapted by focusing on areas still inside their world, and by being flexible in how they exercised control, as well as in how much control they exercised. In all, Prof. Schroepfer’s research has given family and practitioners many valuable tools to insure that the terminally ill have a quality dying process.

Sources: Schroepfer, T.A. (2006). *Mind frames towards dying and factors motivating their adoption by terminally ill elders. The Journals of Gerontology, 61B*(3), S129-S139.

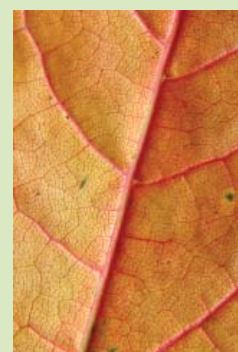
Schroepfer, T. (2007). *Critical events in the dying process: The potential for physical and psychosocial suffering. Journal of Palliative Medicine, 10*(1), 136-147.

Schroepfer, T.A., Noh, H., & Kavanaugh, M. (2009). *The myriad strategies for seeking control in the dying process. The Gerontologist, 49*(6), 755-766.



*Let life
be
beautiful
like summer
flowers
and death
be
like autumn
leaves.*

—Rabindranath Tagore



affiliate news

For more information on the work of IOA Affiliated Faculty and Researchers at the UW-Madison, see: www.aging.wisc.edu/research/affilindex.php

AGING NEWS FALL/WINTER 2009

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Subscriptions are free. Join our mailing list & view our back issues at: aging.wisc.edu/publications/newsletter.php

Submissions of related news can be sent to Theresa Berrie at: berrie@wisc.edu

Poorer Americans of All Ages Have Worse Health-Related Quality of Life



IOA Affiliate **Stephanie Robert** (Prof., Social Work, UW-Madison) is the lead author of a recent study that examined how socioeconomic status (as measured by income, education, and wealth/assets) is associated with health-related quality of life (as self-reported in a national telephone survey) in different age groups of U.S. adults. Although previous research has linked lower socioeconomic status to poorer health, as measured by disease and death rates, this study, of approximately 4000 adults aged 35-89 years, is the first to explore whether this association remains true for measures of overall health-related quality of life (HRQoL) and for all age groups. HRQoL quantifies overall health by combining observations of various self-reported domains of health (such as pain, physical function, social function, and mental health) into one summary index, as scored by a societal evaluation of how good or bad it would be to have these given health states.

Results showed that people at the lowest income range (a household income below \$20,000 annually) had worse HRQoL scores than those with greater income at all age levels. For example, those ages 35-44 with low income actually had worse health-related quality of life than those who were 75-89 years old but who were in the next highest income

range. The authors note that optimistic media reports of improved health trends among aging Americans overlook the fact that there is still very poor health among older adults who are economically disadvantaged. They

conclude that significant improvements in the level of health among the US population as a whole will only be possible if the poor health of those at the lowest income levels is addressed.

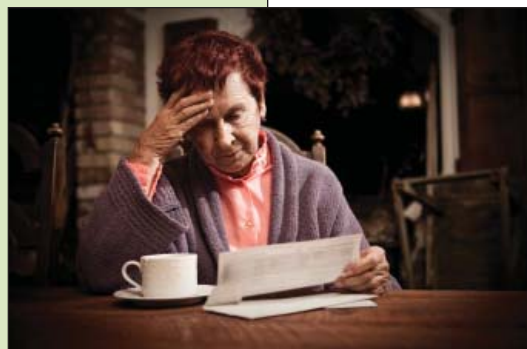
Low income Americans aged 35-44 have worse health-related quality of life than those aged 75-89

Source: Robert, S.A., Cherepanov, D., Palta, M., Dunham, N.C., Feeny, D., & Fryback, D.G. (2009). *Socioeconomic status and age variations in health-related quality of life: Results from the National Health Measurement Study. Journal of Gerontology: Social Sciences*, 64B(3), 378-389.

Gene Discovered for Age-Related Cataracts

Researchers in the Beaver Dam Eye Study have contributed to the discovery of a gene involved in age-related cataracts, which cause millions of cases of blindness and reduced vision worldwide. Affiliates **Barbara & Richard Klein** (Profs., Ophthalmology & Visual Sciences, UW-Madison) lead the study, which has been investigating the eye health of nearly 5000 Wisconsin residents since 1988.

Genetic analysis of several hundred Beaver Dam residents showed that a mutant version of the EPHA2 gene was present in families that tended to develop cortical cataracts, one of the three common age-related types of cataracts. Researchers believe that the normal gene maintains lens clarity while the mutant variations produce proteins that cloud the lens of the eye. A similar association was found among families in Britain and Australia, suggesting that the key human gene for cortical cataracts has been found and that there are likely different genetic factors associated with the different types of age-related cataracts. Scientists at Case Western Reserve have also developed mice strains that have a similar mutant gene, which may provide a useful model of how cortical cataracts develop in humans and how to alter that development. Scientists have previously





Wrinkles should merely indicate where smiles have been

—Mark Twain

discovered environmental risk factors that can lead to different types of cataracts, including diabetes, high blood pressure, smoking, and heavy alcohol intake. **Source:** Jun, G., Guo, H., Klein, B.E.K., Klein, R., Wang, J.J., et al. (2009). *EPHA2 is associated with age-related cortical cataract in mice and humans*. *PLoS Genet*, 5(7): e1000584. doi:10.1371/journal.pgen.1000584.

Vitamin D Affects Blood Pressure in Hispanics & African Americans

Several Affiliates, **Halcyon Skinner, Leonelo Bautista, and Corinne Engelman** (all from UW-Madison Population Health Sciences) were among the co-authors of a recent study of the link between low vitamin D and high blood pressure. Previous research has established this link in Caucasian populations, but this study examined whether it also holds true for Hispanics and African Americans, whose darker skin color acts as a natural sun screen, reducing the body's production of vitamin D. Over 1000 people, 18-81 years old, from three US recruitment centers, were analyzed, and significant associations between low vitamin D and high blood pressure were found (except when adjusting for body mass index). The authors conclude that these results could have important public health implications, because increased levels of vitamin D are easily attained through supplementation, and high blood pressure is a significant risk factor in heart disease, the leading cause of death in the United States. **Source:** Schmitz, K.J., Skinner, H.G., Bautista, L.E., Fingerlin, T.E., Langefeld, C.D., Hicks, P.J., Haffner, S.M., Bryer-Ash, M., Wagenknecht, L.E., Bowden, D.W., Norris, J.M., & Engelman, C.D. (2009). *Association of 25-hydroxyvitamin D with blood pressure in predominantly 25-hydroxyvitamin D deficient Hispanic and African Americans*. *American Journal of Hypertension*, 22(8), 867-870.

Dieting UW Primates Receive Continued Media Attention

The results of a 20-year study that connects eating a nutritious but reduced calorie diet to a healthier old age has received extensive media attention. The study, conducted at the Wisconsin National Primate Research Center on the UW-Madison campus, was on the front pages of the *New York Times*, the *LA Times*, and the *Boston Globe* and was broadcast on NPR, BBC, and the Voice of America. *CBS Evening News* included the story twice and, as reported in our last issue, it was featured on *60 Minutes*. During the 20-year course of the study, led by Affiliate **Richard Weindruch** (Prof., Medicine, Geriatrics & Gerontology, UW-Madison), some monkeys were allowed to eat freely while others were restricted to a diet of 30% fewer calories. Half of the unrestricted animals have died, whereas eighty percent of the dieting monkeys are still alive. The study has also shown that caloric restriction delays the onset of such age-related disorders as cancer, heart disease, and diabetes. **Source:** Colman, R.J., Anderson, R.M., Johnson, S.C., Kastman, E.K., Kosmatka, K.J., T. Beasley, T.M., Allison, D.B., Cruzen, C., Simmons, H.A., Kemnitz, J.W., & Weindruch, R. (2009). *Caloric restriction delays disease onset and mortality in rhesus monkeys*. *Science*, 325, 201-204.

Welcome New Affiliate: Bruce Barrett

Bruce Barrett (Assoc. Prof., Family Medicine, Anthropology & Population Health Sciences, UW-Madison) is researching the role of meditation and exercise in the prevention of colds and flu in older adults. During this Winter's cold season, he is running a randomized study of people over 50. For more information, see: www.coldstudy.org.



trainee news



UPCOMING EVENTS IN MADISON, WI

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For more details, see:
[aging.wisc.edu/
outreach](http://aging.wisc.edu/outreach)

Thomas Tubon, Jr. is a postdoc in Jerry Yin's lab in Genetics. He was recently accepted to a Gordon Research Conference (GRC) on Oxidative Stress and Disease, held this Spring in Lucca, Italy, with a limited attendance of 200 scientists from around the world. During the meeting, he received a **GRC Research Award** for the work he presented in one of several specialized poster sessions. In addition, his work was chosen as one of four outstanding abstracts by the meeting chairs for an oral presentation to the GRC forum.

Dr. Tubon's current research emphasizes how factors in nuclear transcription (the process whereby DNA synthesizes RNA) can alter aging and disease. He is focusing on Cyclic AMP Response Element Binding protein, a transcription factor which can affect long-term memory, adversely alter lifespan, and lead to characteristics reminiscent of many degenerative diseases of the brain, such as Alzheimer's and Parkinson's.

Dr. Tubon was also selected, from among a group of national applicants, to attend an annual summer training course, held at the Buck Institute for Experimental Age Research in Novato, California. The course provides intense exposure to current concepts in experimental aging research for 20 early-career investigators, and the opportunity to network with peers who have a shared interest in understanding the processes of aging and aging-related issues.

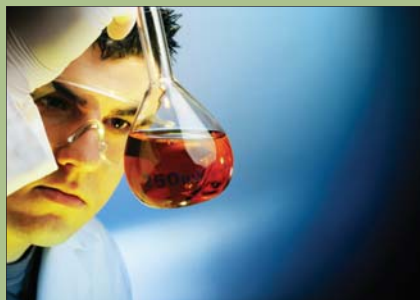


Richard Daniels has recently joined the grant as a post-doctoral trainee. He comes to us from St. Louis, where he was selected as a **Spencer**

T. and Ann W. Olin Fellow. This is the highest award given to a Washington University (WU) student in the biomedical sciences, in recognition for past achievements and the promise of a distinguished career. His graduate work was also recognized as the top thesis work in his department (WU Dept. of Neurology, 2006) and internationally in his field (at the biannual Neurobiology of *Drosophila* Meeting, 2007). Dr. Daniels is currently a trainee in Barry Ganetzky's genetics lab, where he is studying age-related degenerative diseases that affect the brain, such as Alzheimer's. He is focusing on early structural defects in brain nerve cell communication that likely contribute to later nerve cell death. He is developing a method using fruit flies (*Drosophila*) that will allow scientists to watch the loss of connections between nerve cells as the disease develops. The work may also provide a useful model for future studies of the molecular mechanisms of neurodegenerative diseases.



Christine Swanson has also recently joined our group. She is a pre-doctoral trainee in Marina Emborg's lab at the Wisconsin National Primate Research Center. Christine is studying whether Peroxisome proliferator-activated receptors (PPAR) can be targets for treatment of age-related neurological disorders such as Parkinson's disease (PD). Compounds which activate PPAR- γ seem to play a role in modulating cell metabolism, inflammation, and oxidative stress. Christine recently completed a study using pioglitazone, a compound that affects the PPAR- γ receptor, and is currently FDA approved to treat type 2 diabetes. The study showed that parkinsonian monkeys who received this drug displayed significant improvement in their symptoms. Based on these results, the drug will begin testing in humans with PD. Christine is also investigating other drugs as a potential treatment for PD and plans to examine the neuroprotective roles of PPARs and their distribution in the central nervous system to further confirm their role as a therapeutic target. In future studies, Christine hopes to determine if PPAR receptors change with age.



The Biology of Aging and Age-Related Diseases Training Grant

is administered by the IOA & has been funded by the National Institute on Aging since 1990. It supports four pre-doctoral & four post-doctoral trainees, who receive mentoring from UW-Madison researchers while learning to conduct aging research in their labs.

biologyofaging.wisc.edu

Our Annual Colloquium on Aging

We are happy to report that the popularity of our aging colloquium continues to grow. This outreach event is a key part of the IOA's effort to make cutting-edge aging research accessible to the general public. Attendance has grown through the years to over 360. This year registration was full after only two weeks, with a waiting list of 75 people! Because of its popularity, we have reserved a larger space for next year's event, so that all those who are interested should be able to attend. For those who weren't able to be with us this year, we hope to see your participation next year. For those who did attend, we send our thanks to everyone who helped make this year's event a success!



IS
GROWING
into
a bigger
space

Save the Date! Tuesday, September 21, 2010

The 22nd annual Institute on Aging Colloquium will be held in a larger space at Monona Terrace in Madison, WI to accommodate increased interest in the event. Registration for the colloquium will open in late July. If you are not on our mailing list, contact: aging.wisc.edu • aging@ssc.wisc.edu • (608) 262-1818

2009 New Investigator Award Winners

Awards are given to UW-Madison students or advanced trainees to recognize outstanding achievement in aging or life course studies. Winners receive a \$300 award at the IOA Colloquium & their research is showcased in the event's Poster Session.



In Biomedical Research:

Hilary Gerstein

Poster entitled: *Homer, a Neuronal Gene Involved in Age-Related Changes in Cognition*



In Psychosocial Research:

Jennifer Morozink

Poster entitled: *Education and Inflammation at Mid-Life: What are the Roles of Well-being and Depression?*



In Clinical/Applied

Research: **Trent Evans**

Poster entitled: *Impaired Blood Flow Response to Hypoxia in Older Adults*



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aging@ssc.wisc.edu

Before & After Cancer Recent years have seen a substantial increase in cancer survivors in the US. This has led to a growing interest in understanding their psychosocial concerns, including whether they are impaired (surviving with compromised functioning), resilient (returning to normal functioning), or thriving (exceeding pre-cancer functioning through such mechanisms as a transformed life philosophy).

A recent study improved upon previous research that has reported conflicting results about whether or not survivors lived with psychosocial impairments. The use of MIDUS data (see p. 2) gave investigators both a national sample and in-depth psychological measurements, either one of which has been missing from previous studies. Further, MIDUS longitudinal data provided the unique opportunity to study functioning before and after a cancer diagnosis.

398 cancer survivors were identified and compared to those with no cancer history. Results showed that survivors did demonstrate impairment in some areas, including mental health, mood, and some aspects of psychological well-being. Rather surprisingly, however, the analyses clarified

that while mental health declined after a cancer diagnosis, poorer functioning in other areas existed *prior* to diagnosis. Such findings might suggest that poorer psychosocial functioning plays a role in the development of cancer, perhaps through promoting behaviors that are known cancer risks, such as lack of exercise, overeating, and smoking.

Results also showed that cancer survivors returned to normal functioning in some areas, including social well-being, spirituality, and personal growth, thereby showing resilience. Aging also appeared to confer resilience. Younger people may be more traumatized by a cancer diagnosis because they do not expect to have cancer at an early age, and they may not have social support from friends dealing with similar illnesses. Older survivors, however, were more likely to report good psychological adjustment.

Source: Costanzo, E.S., Ryff, C.D., & Singer, B.H. (2009). Psychosocial adjustment among cancer survivors: Findings from a national survey of health and well-being. *Health Psychology, 28*(2), 147-156.

Older survivors were more likely to report good psychological adjustment.



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*Cherish all your happy moments:
they make a fine cushion
for old age.*

—Christopher Marley