



the Center Report

Cohen and Center on Aging Win Busse Award



Harvey Jay Cohen, MD
Director of Duke Center on Aging

Harvey Jay Cohen, MD, and the Duke Center for the Study of Aging and Human Development have won the 2010 Ewald W. Busse Award, which recognizes an individual or organization that has had a significant impact on enhancing the health status of older North Carolinians through efforts to

direct health-related policies and/or to provide leadership in developing innovative solutions to health care problems. The award was presented by the NC Division of Aging and Adult Services at the Aging Awards Reception on October 13, 2010, as part of the 2010 Governor's Conference on Aging in New Bern, NC.

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Faculty & Fellows Present Research at GSA

Over 100 Center faculty and fellows presented their research or participated in symposia at the 2010 Annual Scientific Meeting of the Gerontological Society of America (GSA) held in New Orleans, LA, last November 19-23. The theme of the meeting was "Global Aging Trends."

Two of our faculty were honored with awards: Linda K. George, PhD, was given the Distinguished Career Contribution to Gerontology Award by the Behavioral and Social Sciences Section (BSS); and Keith Whitfield was given the Outstanding Mentorship Award by the BSS.

G.T. Buhr, M. Yanamadala, J. Gontarz, B.J. Dotson, S.M. Williams, & E.S. McConnell presented a poster on **Interprofessional Quality Improvement (QI) Learning Activity for Senior Nursing Students and Geriatric Medicine Fellows**. They concluded that this innovative learning activity targeted fellows and nursing students, offering opportunities to improve teamwork and collaborative skills.

A. Chan, C. Malhotra, I.M. Woo, & C. Goh presented a paper on **Burden of Caregiving at the End of Life: An Exploratory Study among the Singapore Chinese**. They concluded that caregiver burden may be relieved by better

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Physical Activity May Increase Quality of Life and Function in Older Adults

Katherine S. Hall, PhD

As we age, we become increasingly susceptible to declines in physical function, often resulting in increased disability and functional dependence. Independent- (ILF) and assisted-living (ALF) facilities constitute the most rapidly growing type of residential care for elderly adults in the U.S. As the number of individuals entering these communities continues to increase, so too does our need to better understand the behavioral, functional, and psychosocial characteristics of this growing, and understudied, segment of the population. To date, much of the literature surrounding ILFs/ALFs has been limited to the structural aspects of these facilities or has focused on mental illness among residents, with few studies examining factors associated with successful aging (e.g., health behaviors, functional status, quality of life).

With these questions in mind, we recruited 106 older adults residing in ILFs and ALFs in the Midwestern area of the country to participate in a cross-sectional study of physical activity and health. As expected, these ILF and ALF residents demonstrated very low levels of physical activity (~3,000 steps/day), had restricted functional capabilities, and high levels of disability. Relative to psychosocial functioning, study participants reported moderate self-efficacy (or confidence) in their ability to perform daily activities without losing their balance. Despite these limited behavioral and functional profiles however, we were encouraged to see that these individuals still reported moderate levels of life satisfaction.

Examination of the associations among these variables indicated that increased physical activity was associated with better functional performance and increased balance confidence, which in turn, was associated with less disability. Finally, a significant, albeit modest, relationship was observed between disability and quality of life, such that less disability was associated with greater life satisfaction.

The results of this study suggest that physical activity is linked to important physical and psychological health outcomes, and as such, programs designed to increase daily activity



Katherine S. Hall, PhD
Postdoctoral Fellow

warrant consideration in retirement communities. The modest relationship observed between disability and quality of life suggests that other important factors play a role in judgments of life satisfaction and warrant further investigation. This study also highlights the importance of self-efficacy beliefs on individual perceptions of functional limitations and disability, demonstrating yet another potential focal point for future intervention to promote health and well-being.

This study represents a preliminary step toward developing our understanding of the behavioral, functional, and psychosocial characteristics of older adults residing in ILFs and ALFs and highlights several important areas for future study and clinical intervention.

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Ageism Widespread in USA and Canada

Erdman Palmore, PhD, Professor Emeritus at the Duke Center for the Study of Aging, in a keynote address to the Canadian Association of Gerontology, reported that acts of ageism are frequent in both the USA and in Canada. The speech was delivered in Montreal, Canada, on December 2, 2010.

The speech was part of a Symposium on “Spotlight on Images of Aging.” Palmore described four common types of negative images: medical, the “Peter Pan,” employers, and political images. Major sources of these negative images include “cultural lag,” selective perception, the media, birthday cards and jokes, and death anxiety.

He suggested several ways to change these negative images to more balanced images: education, testing for misconceptions, positive slogans, accenting positive aspects, organizing, and becoming a model of successful aging.

Palmore concluded by calling for a new “civil rights campaign” for elders.

ADDENDUM

The article on Keith Whitfield’s Mentorship Award in the Fall issue of the Center Report did not mention that the award was presented at the annual luncheon of the Behavioral and Social Science Section of the Gerontological Society of America on November 21, 2010, at New Orleans.



Linda George, PhD, presents award to Robert Clark, PhD, Professor of Economics, and N.C. State University

Clark Warns: Danger to Social Security and Medicare

Robert Clark, PhD, warned that there are dangers ahead for the Social Security, Medicare, and Medicaid systems unless their future problems are fixed soon. He sounded this warning at the George L. Maddox, Jr. annual lecture on September 30, 2010.

His lecture was titled, “Evolution of Retirement Plans in the 21st Century: Pensions and Retiree Health Plans.” He reviewed the general shift from defined benefit plans to defined contribution and cash balance plans, which may become inadequate if the contributions are not large enough. He also showed how projected increases in the number of retirees, together with projected increases in benefits and medical costs, could deplete the trust funds. This would require either increased taxes or decreased benefits, or both.

Clark received his MA and PhD in Economics from Duke University and is a Fellow of the TIAA-CREF Institute, the American Economic Association, the Gerontological Society of America, and the National Academy of Social Insurance.



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patient-doctor communication with families in hospitals and the provision of more information on support services for caregivers.

E. Corsentino, N.Sachs-Ericsson, & D.C. Steffens presented a poster on **Melancholic Depression Subtype and the Relationship to Cognitive Functioning in Late Life**. They concluded that comparing the effects of melancholic and non-melancholic depression on cognitive functioning over time may help us better understand the critical features of depression that confer risk for cognitive decline.

J. Day presented a paper on **Compassion Fatigue in Informal Caregivers**. She concluded that research is need to better understand the impact of compassion fatigue on informal caregivers, to identify informal caregivers at risk for compassion fatigue, and to provide an empirical basis for developing nursing interventions for caregivers experiencing compassion fatigue.

Q. Feng, D. Gu, Z. Zhen, Z. Xiong, P.W. Duncan, & J. Purser presented a paper on **ADL and IADL Disability Trends in Shanghai Older Adults, 1998 to 2008**. They concluded that functional health of Shanghai elders has significantly and consistently improved over the recent decade.

B. Kamholz presented a paper on **Pathophysiology of Delirium: Possible Mechanisms of Brain Damage In Critical Care Settings and Implications for Intervention**. It was concluded that the most basic mechanisms of cellular function may represent the final common pathophysiological pathway.

H. King & I.C. Siegler led a symposium on **Personality and Health Research in Adulthood and Old Age**. They concluded that the various methods employed in the studies illustrate the possibilities and versatility of examination of the links between personality and health.

A. Kulminski, I. Culminskaya, S.V. Ukraomstseva. L.G. Arbeev & A.I. Yashin presented a paper on **Systemic Genetic Determinants of Healthy Aging and Evolutionary Selection in Humans**. They concluded that there is an exceptional role of the systemic level of organismal organization in the process of human aging.

J.L. Locher, A. Ellis, J. Lawrence, L. Newton, C. Ritchie, K.S. Vickers, & C.W. Bales led a symposium on **Initial Findings from an Intervention to Improve Nutritional Status of Older Adults Receiving Home Health Services**. They concluded that the intervention

group increased caloric intake more than in the usual care group.

L. Martire, M.P. Stephens, J. Brach, F. Keefe, & R. Schulz presented a paper on **Daily Physical Activity and Change in Pain and Mood Over Different Time Intervals**. They concluded that while exercise programs for older adults are successful in reducing joint pain, enhancing function, and maintaining weight over the long term, the short-term effects are more complex.

C.F. Pieper, L.R. Landerman, & M.C. Morey presented a symposium on **The Relationship of Metabolites and Cytokines with Function and Physical Performance: Results from the Duke Pepper Center**. They concluded that using Principal Components Analysis and a meta-analysis consistency of relationships between and within studies can be seen

C.F. Pieper, R. Sloane, L.R. Landerman, K.M. Huffman, & W.E. Kraus presented a symposium on **Methods for Data Reduction of Biomarkers across Studies**. They found that Principal Components Analysis extracted 7 factors, and that loadings on the initial factors were remarkably consistent.

L. Porter, M. Rumble, F. Keefe, D. Davis, C. Scipio, and J. Garst presented a paper on **Attachment in the Context of Pain and Cancer: Implications for Patients and their Caregivers**. They

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Trying To “Look Younger” May Be Ageism

Recently there have been reports on TV that some of the women who had undergone face lifts, Botox treatments, lip and breast implants in order to look younger, have had second thoughts and are now undergoing surgery or other treatments to reverse these effects. They have decided that these effects are not worth the trouble they cause, including looking unnatural and strange.

There is nothing wrong with trying to look healthy and handsome. The problems come when this is confused with trying to “look younger” through artificial means such as plastic surgery.

Such surgery includes face lifts, “nose jobs”, “tummy tucks”, and wrinkle removal. Other attempts to remove wrinkle include Botox (Botulinum toxin) injections, chemical peels, and laser resurfacing.

The main problem with such procedures is that there may be unwanted side-effects, such as infections, mask-like faces, abnormal lumps, and even death. Furthermore most of the attempts to remove wrinkles produce only temporary effects at best.

But a more basic problem is that such attempts to deny one’s true age is like “passing” to deny one’s race or ethnicity. Denying one’s age is a common

form of ageism in our culture. It is a kind of socially acceptable form of pretension and deceit. Denying one’s age is a reflection of the more general problem of ageism in which old age is devalued and “youth” is equated with beauty, health, strength and other desirable characteristics.

I encourage our readers to be proud of their age, whatever it is, and to avoid trying to “look younger”.

**The opinions in this editorial are those of the editor and not necessarily those of the Duke Center for the Study of Aging.*

Genetics and Alzheimer’s Disease

By Erin L. Heinzen, Ph.D.*

Inheritance of the APOE e4 allele has consistently been shown to be the single most important risk factor for developing late-onset Alzheimer’s Disease (AD). While evidence suggests that the gene product of APOE is involved in the biochemical pathways associated with AD, no definitive data show that mutations of the APOE gene, one gene of many residing along the associated chromosomal interval, are responsible for the increased

disease risk. Recent simulations suggest that due to long range linkage disequilibrium, clusters of mutations that contribute to a signal of association may be located megabases away from the locus associated with the phenotype.

Under this model, it is possible that different, individually rare AD variants may be contributing to the APOE e4 association signal. Using novel technology which allows for

the comprehensive sequencing of the human genome, the Center for Human Genome Variation, in collaboration the Bryan Alzheimer’s Disease Research Center, is conducting an exploratory project to carefully investigate an extended region surrounding the APOE e4 locus for rare variants present in demented APOE e4 homozygotes.

***Assistant Research Professor
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Genome Variation**



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concluded that patient anxious and attachment styles were associated with higher levels of psychological distress and lower social functioning. Among spouses, anxious and avoidant attachment were associated with higher levels of caregiver strain, and avoidant attachment was also associated with lower levels of marital quality and self-efficacy.

J. Purser, D. Crosslin, S.C. Nelson, J.S. Johnson, E. Hauser, & S. Gregory led a symposium on **Comprehensive SNP Analysis of the Insulin Receptor Gene Using Sliding Window Haplotype Analysis**. They concluded that there are novel haplotype regions in candidate genes that are strongly associated with appendicular lean mass and walking speed.

N. Sachs-Ericsson, K. Sawyer, E. Corsentino, N. Collins, & D.C. Steffens presented a poster on **APOE e4 Status Moderates the Effect of Hippocampal Volume on Cognitive Decline in Depressed Older adults**. They concluded that future studies of cognitive impairment and decline should examine both individual and conjoint effects of putative risk factors.

L. Snyder & L.P. Gwyther led a symposium on **Expressions and Experiences of Resiliency in Persons with Dementia**.

This included four presentations which deepen our awareness of experiences and expressions of resiliency in persons with Alzheimer's and help to inform our practice with this population.

E.J. Tan, M. Carlson, T. Seeman, Q. Xue, L.P. Fried, E. Tanner, K.E. Whitfield, & G. Robek led a symposium on **Older Adult Volunteering as a Path Toward Healthy Aging and Community Living: A Review of Experience Corps[®] Baltimore City**. They concluded that the ability to increase and sustain increased physical activity among older African Americans through generative service suggest a potential avenue for embedding physical activity interventions in volunteer programs.

S.M. Thielke, H. Whitson, P. Diehr, A. O'Hare, P.H. Chaves, N. Zakai, A. Arnold, & A.B. Newman led a symposium on **Recovery from Pain and Exhaustion in Older Adults; The Cardiovascular Health Study**. They concluded that both pain and exhaustion remitted at least temporarily in most subjects.

K.E. Whitfield led a symposium on **Half-way Up the Ladder: Mid-Career Mentoring**. They concluded that mentorship up and down the career ladder for the mid career scholars is important.

H.E. Whitson, S. Hastings, L.R. Landerman, G. Fillenbaum, H. Cohen, and K. Johnson presented a paper on **Black-White Disparity in Disability: the Role of Selected Health Conditions**. They concluded that higher rates of obesity and diabetes in Black older Americans, even after controlling for demographic and socioeconomic variables, are important contributors to racial disparity in disability. On the other hand, the differences in Black-White disability rates is lessened by disabling conditions that are more common in whites, such as age-related macular degeneration and osteoporosis.

A.I. Yashin, K.G. Arbeeve, S.V. Ukraintseva, I. Akushevich, A. Kulminski, J. Kravchenko, D. Il'yasova, and D. Wu presented a paper on **New Predictors of Exceptional Health and Survival from Longitudinal Data**. They concluded that dynamic parameters describing age trajectories of physiological states could be considered as targets for preventive and treatment interventions aiming to improve population health and longevity.

F. Yong & K.E. Whitfield presented a poster on **Role of Social Context in African American Health: Evidence from CAATSA and Census Zipcode level data**. They concluded that the findings support both "social stress models" and "social disorganization theory."



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The award is named for Ewald W. Busse, MD, who was President Emeritus of the NC Institute of Medicine and the founding Director of the Duke Center for the Study of Aging and Human Development. Dr. Cohen has served as the Center's Director for the past 25 years. Dr. Gordon DeFries described Dr. Cohen as the "personification of 'medical statesman' when it comes to aging and aging-related science," and noted that few "individuals are held in such high regard by persons from either the science or the policy perspective in the field of aging."

The Duke Center for the Study of Aging and Human Development was established in the 1950s as one of the first five regional Centers on Aging, and is the only such center to have been continuously funded. The Duke Center is known regionally, nationally, and internationally for its work, which includes extensive research to understand the effects of aging, the Duke Longitudinal Studies of Normal Aging, the Older American Resources Study of Durham County, the Center's Post-doctoral Training Program, its Geriatric Education Center, the Geriatric Evaluation and Treatment Clinic, and the Duke Family Support Program.

Did You Know?

Which is the best answer to the following questions?

1. **Suicide rates among women tend to:**
 - a. Increase in old age.
 - b. Stay about the same.
 - c. Decrease in old age.
2. **Suicide rates among men tend to:**
 - a. Increase in old age.
 - b. Stay about the same.
 - c. Decrease in old age.
3. **When all the major types of mental impairment are added together, older people have:**
 - a. Higher rates than younger people.
 - b. About the same rates as younger people.
 - c. Lower rates than younger people

Answers:

1. **c.** Suicide rates among women tend to decrease after age 65. Part of the explanation is that older women tend to have more attempted suicides which are unsuccessful.
2. **a.** Suicide rates among men tend to increase after age 65. Part of the explanation is that older men tend to use more violent and therefore more successful forms of suicide.
3. **c.** Community studies of mental illness and impairment all find that persons over 65 have the lowest overall prevalence rates when the eight most common disorders are added together. The increase in cognitive impairment and dementia is more than countered by the decrease in such ailments as obsessive/compulsive disorders, schizophrenia, affective disorders, phobias, and substance abuse.

*Adapted from *The Facts on Aging Quiz*, 2nd Ed. by Erdman Palmore, NY: Springer Publishing Co., 1998.



Coming Events

February 10–11, 2011

25th Annual Joseph & Kathleen Bryan Alzheimer's Disease Research Center Conference at the Sheraton Imperial in the Research Triangle Park. Contact: Lisa Gwyther at lisa.gwyther@duke.edu.

March 17–20, 2011

"Living the Old Age We Imagine: Higher Education in an Aging Society." 37th Annual Meeting of the Association for Gerontology in Higher Education (AGHE) at the Hilton Cincinnati Netherland Plaza, Cincinnati, OH. Contact: meetings@aghe.org.

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