

The Psychological Science Agenda



A PUBLICATION OF THE AMERICAN PSYCHOLOGICAL ASSOCIATION SCIENCE DIRECTORATE
VOLUME 20, NUMBER 9, OCTOBER 2006
<http://www.apa.org/science/psa/homepage.html>



The Decade of Behavior Honors Scholars at Capitol Hill Briefing

by Anne Bettesworth

TABLE OF CONTENTS

Executive Director's
Column: The Archival
Literature 2

Science Briefs:
Mitigating the Impact
of Low Health
Literacy on Older
Adults' Self-care 3

In Memoriam - David
T. Lykken 5

Recipients Announced
for the 2006 APF/
COGDOP Graduate
Research
Scholarships in
Psychology 6

On October 5th, APA coordinated a congressional briefing highlighting award-winning research on making workplaces and public places safer. The Capitol Hill briefing for congressional and federal agency staff, titled "Workplace and Public Safety: The Role of Behavioral Research," was sponsored by the Decade of Behavior, the Society for Industrial and Organizational Psychology, and the National Communication Association. On behalf of the Decade of Behavior, Steven Breckler, Executive Director for Science at APA, honored David Hofmann (University of North Carolina – Chapel Hill), Michael Burke (Tulane University), and Charles Atkin (Michigan State University) for their significant contributions to this timely issue. Deborah Boehm-Davis, Chair of the Department of Psychology at George Mason University, moderated the panel of speakers.

Hofmann focused his remarks on the role of leadership and safety climate in improving workplace safety, and thereby in reducing organizational costs. He defined safety climate as "informal, shared perceptions regarding what is expected, rewarded, supported, and valued," and noted that research suggests safety climate is a successful predictor of accidents and injuries. Hofmann emphasized that leaders influence safety climate by establishing



Deborah Boehm-Davis, Charles Atkin, David Hofmann, and Michael Burke at the Decade of Behavior Briefing.

it as a priority within their organizations, which in turn motivates, via social exchange, the commitment of others to the ultimate goal of enhancing workplace safety.

Burke discussed how successful training interventions can improve safety performance, which he defines as actions that workers engage in to promote health and safety in their environment. Burke's research suggests that worker training is most successful when multiple techniques, such as lectures, behavioral role modeling, simulation, and follow-up training, are used together with dialogue. This approach, he has found, results in greater knowledge acquisition, improved performance, and reduced accidents, illnesses, and injuries.

continued on page 7...

EXECUTIVE DIRECTOR'S COLUMN

STEVEN BRECKLER, Executive Director for Science

The Archival Literature

For those of us who work in science and research, reliable access to the archival literature is essential. It is hard to imagine a thorough literature review, dissertation introduction, or graduate seminar that does not depend on journal articles published many decades ago. As scientists and scholars, the archival literature represents an important facet of our research infrastructure.



which digital content is now available can mask the cost associated with producing it. APA is committed to preserving the integrity of scientific publishing, leveraging advances in information technology in a way that also advances psychological science. ■

It is relatively easy to gain electronic access to journal articles published in the past 10 years – most are now produced electronically, and can be quickly located online. Getting hold of older literature can present a bigger challenge. Personal subscriptions only go back so far. Libraries are increasingly pinched for space, sending most of the older literature to storage facilities. If you quickly need a copy of the series of articles published by Thorndike and Woodworth in the 1901 issues of *Psychological Review*, you'll need access to an incredible library or otherwise count on speedy retrieval and delivery from storage. And if your luck is anything like mine, the one article you want will be missing from the archival volume.

Recognizing its responsibility to maintain the archive of psychological science, APA Publishing embarked on an ambitious project – to scan and digitize nearly all APA journals back to Volume 1, Issue 1. With little fanfare, APA announced in March of this year that the project had been completed. The historical collection of full-text APA journal articles was released, bringing the number of articles available to nearly 73,000. Still need those Thorndike and Woodworth articles from 1901? Not a problem – delivery to your desktop is just a few clicks away.

The historical collection is available right now through PsycARTICLES, along with the corresponding abstracts in PsycINFO. Many of the vendors who provide access to these APA database products have already updated their systems with the expanded library, and the others will be updated before the end of the year.

Creating electronic access to the historical collection of APA journals is an enormous contribution to the scientific community. We sometimes take for granted all that it takes to deliver high-quality scientific psychology journals, and to maintain that quality over time. APA has been doing it for over 100 years, creating a reliable infrastructure for scholarly publishing.

The historical collections project was completed as part of APA's mission to advance psychology as a science, which includes the diffusion of psychological knowledge through publications. It is offered without increasing the data fee beyond the current annual site license rates. It represents an investment in preserving our past so that our future remains bright.

The internet, search engines, and digital document formats have fundamentally altered the landscape of science and scholarly publishing. The ease with

Call for Applications for Positive Psychology Fellows Program

Are you interested in collaborating with leading Positive Psychology scholars? The Positive Psychology Templeton Fellows Program will gather together the best and brightest scholars by creating and funding collaborations with senior scholars.

The program encourages applications from early to mid-career scholars with a doctoral degree and graduate students pursuing a doctoral degree, from the disciplines of Psychology, Sociology, Philosophy, Anthropology, Theology, Neuroscience, Economics, History, Public Health and Medicine. Applicants can be from any country and there is no age limit.

The deadline to apply is December 15, 2006. Selected Fellows will be expected to live in Philadelphia for 6 to 8 weeks from May 14 to July 14, 2007. Stipends and living expenses are available.

For details, visit:

<http://www.ppc.sas.upenn.edu/ppfellows.pdf>

Mitigating the Impact of Low Health Literacy on Older Adults' Self-care

by Dan Marrow



Dan Marrow is associate professor at the University of Illinois at Urbana-Champaign with appointments in the Human Factors Division (Institute of Aviation) and the Beckman Institute for Advanced Science and Technology. He received a PhD in cognitive psychology from the University of California Berkeley, followed by a postdoctoral fellowship at Stanford University. His research interests include the impact of age-related differences in cognitive function on complex task performance, designing environments to support older adults in aviation and health care domains. He has been funded by NIH to investigate relationships between expertise and aging in pilot performance, and to develop communication strategies to improve older adults' self-care (medication adherence and appointment attendance). He is a member of APA Divisions 20 and 21, and serves on the editorial board of *Psychology and Aging*.

3

There is burgeoning interest in understanding the impact of health literacy on health care in the United States. Nearly 44 million adults are estimated to have inadequate health literacy, putting them at risk for unsuccessful self-care and poor health outcomes (DeWalt, Berkman, Sheridan, Lohr, & Pignone, 2004; Nielson-Bohlman, Panzer, & Kindig, 2004). Older adults are especially likely to have inadequate health literacy, compromising their health outcomes (Paasche-Orlow, Parker, Gazmararian, Nielson-Bohlman, & Rudd, 2005). Recent reviews emphasize the need to better understand health literacy in order to explain why older adults with inadequate health literacy have trouble accomplishing self-care and experience worse outcomes. Such knowledge would provide the foundation for developing strategies to mitigate effects of low health literacy on health outcomes (Nielson-Bohlman et al., 2004). Psychologists can help tackle this complex health care problem as members of multi-disciplinary research teams by providing expertise in behavioral science theory and methodology.

A framework for health literacy

Language comprehension is central to health literacy, which is commonly measured by tests requiring reading of health-related material (e.g., STOFHLA, Baker, Williams, Parker, Gazmararian, & Nurss, 1999; other abilities such as numeracy and comprehension of graphics are also important). Nonetheless, theories of comprehension have not been integrated with the concept of health literacy. We are developing a framework that helps integrate health literacy and health care systems with models of comprehension and cognitive aging (Morrow, Clark, Tu, Wu, Weiner et al., 2006). According to models of comprehension, people understand text such as medication instructions at multiple levels: At the surface level, they represent word-level meaning and syntactic form; at the textbase level, interconnections among word meanings are represented as ideas, which are integrated to represent the content explicitly conveyed by the text; at the situation model level, text content is integrated with knowledge to represent the situations described by the text

(Kintsch, 1998). The situation model is critical for translating language to action, such as learning how to take medication from instructions. The processes that produce these representations depend on general cognitive abilities such as working memory. Older adults are generally less successful than younger adults at creating textbase representations because of age-related declines in working memory and other cognitive abilities, but they are often adept at creating situation models in part because they know as much or more than younger adults about domains relevant to understanding the text (Wingfield & Stine-Morrow, 2000). However, this age-related strength highlights a dilemma for older adults with low health literacy: They are less able to offset typical age-related cognitive declines with knowledge relevant to comprehension because they tend to have limited knowledge about health topics (e.g., DeWalt et al., 2004).

continued on next page...

...continued from previous page

Improving health outcomes for older adults with health literacy

4 I've had the opportunity to collaborate with an inter-disciplinary team that includes pharmacists, gerontologists, and behavioral scientists on a project funded by the National Institute on Aging. Our goal is to improve medication use and health outcomes in a sample of older adults with diverse literacy and cognitive abilities, and diagnosed with heart failure (Murray, Young, Morrow, Weiner, Tu et al., 2004). We developed a patient-centered educational intervention that was compared to a usual care control group, with heart failure medication adherence electronically monitored over a 12-month period. Participants' medications were placed in pill bottles with lids containing computer chips that recorded when participants opened the containers. The intervention was pharmacy-based, reflecting the increasingly important role that pharmacists play in medication management for older adults (Hammond, Schwartz, Campbell, Remington, Chuck, et al., 2003). It involves written and spoken communication that addresses literacy and cognitive barriers to understanding how and why to take medication (Morrow, Weiner, Deer, et al., 2004). The written instructions are designed to be consistent with how older adults think about taking medication. They use simple language (reflected in high readability scores) to present only the information needed to safely take the medication. This information is organized according to a general procedural schema shared by older and younger adults, so that information order in the instructions matches patients' expectations. The instructions also contain pictorials that explicitly convey information about when and how much medication to take. Such instructions should support the ability to create a situation model for taking medication, despite age-related cognitive declines. We have found that older adults (varying in health literacy) better understood and remembered

these instructions than typical instructions for the same medications available in a large chain pharmacy, primarily because they better recalled the information conveyed by pictures as well as text (Morrow, Weiner, Young, Steinley, Deer et al., 2005). Patients with lower health literacy were especially likely to prefer the patient-centered instructions (Morrow, Weiner, Steinley et al., 2006). Consistent with our framework, health literacy differences in both comprehension and preferences were partly explained by differences in cognitive ability (e.g., processing speed). The spoken communication part of the intervention involved the pharmacist discussing with patients how to take their medications, following the same medication taking schema as in the written instructions, as well as helping to identify barriers to taking the medications.

The most important question is whether this patient-centered health communication helps patients with lower health literacy to successfully take their heart failure medications. Preliminary analysis of the medication adherence findings in our study suggests that participants with lower health literacy had lower adherence (Murray, Young, Hoke, Tu, Weiner, et al., 2006), which converges with other studies showing that lower literacy patients are less successful in accomplishing self-care tasks (e.g., DeWalt et al., 2004). Most important, our patient-centered intervention improved medication adherence, and mitigated differences in adherence associated with health literacy: Literacy differences were significant in the control, but not the intervention group.

Conclusions

Health literacy is a multi-faceted concept that explains differences in patients' self-care and health outcomes, especially among older adults with chronic illness. My colleagues and I are developing a framework that links health literacy to age-related differences in cognitive abilities relevant to comprehension and self-care. Guided by this framework, we developed a patient-

centered approach to improving health communication for older adults with inadequate health literacy, so that they better understand how to perform self-care tasks despite age-related declines in general cognitive abilities. We find that older adults with lower health literacy better understand and prefer medication instructions designed to reduce comprehension demands. The patient-centered intervention also improves medication adherence among older adults with CHF, with some evidence that it reduces disparities in adherence associated with health literacy differences.

This finding suggests that comprehension of self-care information mediates health literacy and self-care behaviors, although this link still needs to be directly tested. An important part of establishing this link will be to more precisely specify which comprehension processes and representations are impaired among patients with low literacy, and why (e.g., the role of cognitive ability and health knowledge). However, it is likely that improving patients' understanding of self-care tasks will not guarantee successful self-care. Patients may clearly understand how to take their medication, but forget to do so at the appropriate time. Cognitive abilities such as working memory and executive function are likely to play an important role in this prospective memory component of self-care (Insel, Morrow, Brewer, & Figueredo, 2006). Moreover, health literacy involves more than cognition, such as cultural and community resources. Interventions to improve self-care should build on these resources as well (Nielsen-Bohlman, et al., 2004).

Finally, our project highlights the important role that psychologists can play in tackling complex health care problems as members of multi-disciplinary teams.

References continued on page 8...

In Memoriam – David T. Lykken

David Lykken, whose studies of criminal behavior, polygraph testing and especially the genetics of personality in twins helped undermine some of the most cherished notions of social science, died September 15 at his home in Minneapolis.

David Thoreson Lykken was born in Minneapolis on June 18, 1928. At 17, he joined the Navy, and he later entered the University of Minnesota on the G.I. Bill.

After graduate work, he became a professor in the department of psychology and psychiatry at the university, where he spent the remainder of his career.

Lykken's wife, Harriet Betts, died last year. He is survived by three sons, Joseph, Batavia, Ill., Jesse, of Minneapolis, and Matthew, of Chicago, and 10 grandchildren.

Lykken's wide-ranging, 50-year career at the University of Minnesota was from the beginning an effort to distinguish the real, fundamental underpinnings of behavior from assumed motives. His graduate dissertation was a study of convicted criminals, showing that those described as "psychopathic" were more impulsive and less fearful than other convicts or noncriminals. These observations, never before documented, laid the groundwork for what is now a flourishing study of psychopathic behavior and its foundations.

Lykken later scrutinized one of the justice system's most widely used measures of intent, the lie detector, or polygraph. In a series of papers analyzing the test, he showed that the machine registered not deception but arousal, which can be the result of many emotional states, including guilt and indignation. Before Congressional committees, and in sometimes sharp

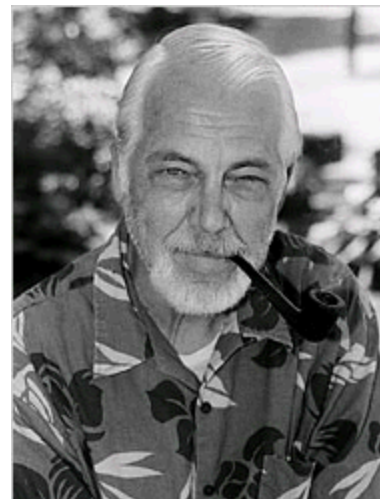
debate during court cases, he argued that the polygraph was a flawed instrument and often implicated innocent people. The shortcomings became widely known and led to changes in the laws governing admissible evidence.

Yet Lykken's career became most public in the 1980's, after he began studying adult twins who had been reared apart. He and two University of Minnesota colleagues, Thomas Bouchard and Auke Tellegen, tracked down and reunited more than 130 twins and documented striking similarities in the pairs' behavior and personal quirks. Some had been raised near each other in the same state but in different family environments; others had grown up in different countries. But their shared genetic inheritance trumped vast differences in their upbringing, the researchers found.

Lykken undertook the twin studies, he once said, because "any research one might think of doing with human subjects is likely to be more interesting if you do it with twins."

In a telephone interview on September 12, his co-author, Bouchard, said he had his own reasons for studying twins: "I was convinced some characteristics were heavily influenced by genes but that others were heavily influenced by environment," he said, and he wanted to prove it.

No such luck: the first pair of twins the research team recruited were known as the two Jims, very similar men given the same name by their adoptive families. They both owned a poodle with the same name. Another pair, middle-age women, both had a fear of water that they expressed by wading into an ocean or lake backward, up to their knees, before turning around to swim. A third pair, biological brothers, had grown up to be chiefs of their



David Lykken in 1999.

volunteer fire squads and unwittingly lived close to each other in the same state.

News accounts of the Minnesota Twin Study, as it came to be known, relished these tales of mirrored lives, but Lykken rarely trumpeted the anecdotes himself. He was as rigorous in public as he was in his writing and often turned away invitations to appear on television or to give speeches. He and his colleagues reminded interviewers that no one yet understood how genes could shape parallel lives in such different environments, and that the influence of genes could not be properly understood without further study. ■

Recipients Announced for the 2006 APF/COGDOP Graduate Research Scholarships in Psychology

by Nicolle Singer

6

Each year since 1996, the American Psychological Foundation (APF) and the Council of Graduate Departments of Psychology (COGDOP) have jointly offered graduate research scholarships to doctoral students whose research reflects excellence in scientific psychology. The fellowships are meant to assist graduate students of psychology with research costs, and are administered by the APA Science Directorate.

Two of the major awards within the program are the \$3,000 Ruth G. and Joseph D. Matarazzo Scholarship and the \$2,000 Clarence J. Rosecrans Scholarship. In addition to this, the foundation also gives several \$1,000 awards per year. Applications were reviewed by a committee of distinguished COGDOP members. The recipients that follow scored the highest on a number of criteria, including their description of the context of the research, research design, and the theoretical and applied value of the study.



Laura E. Knouse

Laura E. Knouse (University of North Carolina at Greensboro) is this year's Matarazzo Scholarship winner. The award will fund her dissertation research "Adult AD/HD, Metamemory, and Self-Regulation in Context." Little research has examined adult students with AD/HD, although the self-directed nature of higher education puts adults with this disorder at a clear disadvantage. This research examines how people with and without

AD/HD perform on a series of metamemory tasks. Since AD/HD is defined in part as a difficulty organizing tasks and activities, participants with this disorder are expected to perform poorly when the tasks require greater self-regulation.

Laura remarks that "The adults that participate in my study undergo over three hours of assessment in two separate sessions. The award will make it possible for me to compensate them for their time and effort... I am grateful to those who have participated so far and most say they are motivated by the possibility of helping other adults with this disorder. I hope that my research can provide clues to the most appropriate educational interventions for this population."

Sarah A. Palyo (State University of New York at Buffalo) is this year's Rosecrans Scholarship recipient, to assist with costs of her dissertation project "Resiliency in Response to an Analogue Stressor: Exploring the Relationship between Hardiness and Posttrauma Reactions." The funding will provide participant incentives and will cover the costs of online data collection. Sarah commented that "I am very honored to be chosen as a recipient of this award. The funding this award provides will help me to complete my dissertation."



Sarah A. Palyo

Data collection for this research began with a survey of all Psych 101 students in order to identify students who represent the entire spectrum of levels of hardiness. These students are then

exposed to a laboratory stressor and repeatedly tested over the next few days for symptoms of Posttraumatic Stress Disorder and coping strategies.

Additionally, the following students were awarded \$1,000 APF/COGDOP Scholarships.

Lisa M. Christian (The Ohio State University) received funding for her dissertation research "Stress, Depression, and Inflammatory Immune Responses During Pregnancy." While stress and depression have been linked to negative perinatal outcomes, this research is innovative in its implication of inflammation as the linking mechanism. In particular, this study examines the effects of psychosocial and biological factors on the reaction to influenza vaccinations. Lisa plans to use the funds to "include immune measures...that can be cost-prohibitive at the graduate level."

Sarah Frenkiel-Fishman (Concordia University, Quebec) received funding for her research, "A Longitudinal Study of Precursors of Theory of Mind." Around age 4-5, normally developing children gain a concept of their own and others' minds. This research seeks to specify some of the antecedents to this theory's development in children with and without autism. Sarah remarked that "As a PhD student in Psychology, APA has been an invaluable resource. I am therefore truly honored and grateful to be a recipient of this award."

Matthew C. Hocking (The University of Alabama) received an award to help fund his project: "Predictors of Coping Success in Children with Recurrent

continued on next page...

...continued from previous page

Abdominal Pain: The Influence of Executive Function and Attention Regulation.” This research investigates the role of children’s psychosocial characteristics, their coping abilities, and their management of recurrent pain. Matthew reports that “This award will enable me to conduct my dissertation research.” He also remarked that “Through my research, I hope to contribute to the literature on recurrent abdominal pain and to identify potential targets for intervention.”

Katherine H. Karlsgodt (University of California, Los Angeles) received funding for her dissertation project “Functional Magnetic Resonance Imaging of Verbal Working Memory in Schizophrenia.” This research investigates the genetic and memory circuitry mechanisms underlying schizophrenia in patients, their twins, and high risk non-schizophrenics. The award funds will allow Katherine to purchase needed data analysis tool for this research. She reports being “very pleased to find out that I was selected for an APF/COGDOP Scholarship. I was honored to be nominated and even more so to be chosen to receive an award.”

Jeffrey D. Karpicke (Washington University in St. Louis) was awarded a scholarship for his dissertation research “Students’ Use of Self-Testing as a Strategy to Enhance Learning.” This research examines how students monitor and regulate their learning, and the role of testing as a tool that can enhance learning and the retention of knowledge. Jeffrey remarks that “It is an honor to receive this award, and it will be a great help to me in completing my dissertation research.” The funds will be allocated to participant incentives and necessary software.

Meghan D. McAuliffe (University of Delaware) received an award to support her dissertation: “The Impact of Teaching Behavior on Children’s Peer Relations.” Peer acceptance is central to many aspects of well-being, although it is elusive for many children. This study examines the impact of teachers’

behavior and cognition on social preference among children. Meghan reports that “The funds will be essential to the execution of my study, and the recognition is encouraging toward the continued pursuit of my research interests.”

Beth Mechlin (University of North Carolina at Chapel Hill) received funding for her dissertation “Ethnicity and Pain: Biological and Psychosocial Factors.” Because African Americans experience chronic and clinical pain differently than White Americans, Beth has conducted research on whether members of this ethnic group also differ in their physiological response to pain. This study is designed to provide insight into ethnic differences in pain perception using noxious laboratory stimuli. The award will be used for participant compensation.

Ilke Oztekin (New York University) has received an APF/COGDOP Scholarship to fund her dissertation research “Behavioral and Neural Markers of Individual Differences in Working Memory Capacity.” To examine working memory, two experiments will evaluate differences between participants high and low on working memory capacity using a speed-accuracy tradeoff procedure. Another experiment will use fMRI to identify the neural pathways implicated in these differences. Ilke reports that “I will use this award to support participant fees for my dissertation experiments.”

Elizabeth J. Rahn (University of Georgia) has been awarded a Scholarship for her research project “Central Sites of Action for Cannabinoid Modulation of Chemotherapy-induced Painful Neuropathy.” Chemotherapy often induces painful side-effects that are resistant to conventional treatment options. This study will examine the use of a synthetic drug to block neuropathic pain. Elizabeth reports that “This information will better enable researchers to exploit the analgesic properties of cannabinoids.” Funds will assist with the purchase and housing of animals.

Lisa M. Sontag (University of Florida) received funding for her dissertation research “Understanding the Impact of Adolescent Peer Experiences on Psychosocial Adjustment.” Adolescents vary in their risk for adjustment problems in middle school. This research examines the ways stressful peer experiences and off-time pubertal maturation influence adjustment and elicit coping strategies. Lisa remarks that “This award provides students with a great opportunity to pursue new and exciting research while easing a bit of the financial burden.”

Jenny C. Su (University of Minnesota) was awarded an APF/COGDOP Scholarship for her dissertation research project “Cultural Differences in Emotion Regulation: The Effects of Emotional Suppression on Well-Being.” Two studies will examine the impact of emotional suppression on well-being, contrasting Asians born and raised in Asia with Asians born and raised in North America. The first study will be survey-based and the second will be a laboratory manipulation of emotional suppression. The funding will be used for participant incentives. ■

7

NIH Loan Repayment Program

Just a reminder that the NIH is accepting applications for its Loan Repayment Program (LRP) through December 1, 2006. General information about the program can be found at:

<http://www.lrp.nih.gov/about/extramural/>

Psychologists have fared very well in this program since its inception. Our examination of that data has been part of a larger effort to identify mechanisms for early career support as discussed in the July issue of SPIN:

<http://www.apa.org/ppo/issues/earlycareer0706.html>

References

- Andrus, M. R., & Roth, M. T. (2002). Health literacy: A review. *Pharmacotherapy, 22*, 282-302.
- Baker, D. W., Williams, M. V., Parker, R. M., Gazmararian, J. A., & Nurss, J. (1999). Development of a brief test to measure functional health literacy. *Patient Education and Counseling, 38*, 33-42
- 8 DeWalt, D. A., Berkman, N. D., Sheridan, S., Lohr, K. N., & Pignone, M. P. (2004). Literacy and health outcomes: A systematic review of the literature. *Journal of General Internal Medicine, 19*, 1228-1239.
- Gazmararian, J. A., Baker, D. W., Williams, M. V., Parker, R. M., Scott, T. L., Green, D. C., Fehrenbach, S. N., Ren, J., & Koplan, J. P. (1999). Health literacy among medicare enrollees in a managed care organization. *JAMA, 281*, 545-551.
- Hammond RW, Schwartz AH, Campbell MJ, Remington TL, Chuck S, et al. (2003). Collaborative drug therapy management by pharmacists. *Pharmacotherapy, 23*, 1210-25.
- Insel, K.C., Morrow, D.G., Brewer, B.B., & Figueredo, A.J. (2006). Cognitive function and medication adherence. *Journal of Gerontology: Psychological Sciences 60B*, P102-P107.
- Kintsch, W. (1998). *Comprehension: A paradigm for cognition*. New York, NY: Cambridge University Press.
- Morrow, D.G., Clark, D., Tu, W., Wu, J., Young, J., Weiner, M., Steinley, D., & Murray, M. (2006). Correlates of health literacy in older adults with chronic heart failure. *The Gerontologist*. In press.
- Morrow, D.G., Weiner, M., Deer, M., McGuire, P., Young, J., Dunn, S., & Murray, M. (2004). Patient-centered instructions for medications prescribed for the treatment of heart failure. *The American Journal of Geriatric Pharmacotherapy, 2*, 44-52.
- Morrow, D.G., Weiner, M., Steinley, D., Young, J., & Murray, M. (2006). Patients' experience with instructions and health literacy influence preferences for written heart failure medication instructions. *Journal of Aging and Health*. In press.
- Morrow, D. G., Weiner, M., Young, J., Steinley, D., Deer, M., & Murray, M. (2005). Improving medication knowledge among older adults with heart failure: A patient-centered approach to instruction design. *The Gerontologist, 45*, 545-552.
- Murray, M.D, Young, J., Hoke, S., Tu, W., Weiner, M., Wu, J., Smith, F., & Morrow, D.G. (2006, Nov). Effects of a multilevel pharmacy-based intervention on medication adherence and health outcomes in low-income patients with heart failure: Results of a randomized, controlled trial. *American College of Physicians Foundation 2006 Health Communication Conference*, Washington D.C.
- Murray, M. D., Young, J., Morrow, D. G., Weiner, M., Tu, W., Hoke, S., Clark, D., Stroupe, K., Wu, J., Deer, M., Bruner-England, T., Sowinski, K., Smith, F. A., Oldridge, N., Gradus-Pizlo, I., Murray, L., Brater, C., & Weinberger, M. (2004). Methodology of an ongoing, randomized, controlled trial to improve drug use for elderly patients with chronic heart failure. *The American Journal of Geriatric Pharmacotherapy, 2*, 53-65.
- Nielsen-Bohlman, L., Panzer, A. M., & Kindig, D. A. (2004). *Health literacy: A prescription to end confusion*. Washington, DC: The National Academies Press.
- Paasche-Orlow, M.K., Parker, R.M., Gazmararian, J.A., Nielsen-Bohlman, L.T., & Rudd, R.R. (2005). The prevalence of limited health literacy. *Journal of General Internal Medicine, 20*, 175-184.
- Schillinger, D., Grumbach, K., Piette, J., Wang, F., Osmond, D., Daher, C., Palacios, J., Sullivan, G. D., & Bindman, A. B. (2002). Association of health literacy with diabetes outcomes. *JAMA, 288*, 475-482.
- Wingfield, A., & Stine-Morrow, E. A. L. (2000). Language and speech. In F. I. M. Craik & T. A. Salthouse (Eds.), *The handbook of aging and cognition* (pp. 359-416). Mahwah, NJ: Erlbaum ■
-
- continued from page 1...
- In the final presentation, Atkin described effective communication campaign strategies for improving health and safety. Some such successful media campaign strategies are accentuating the positive, addressing the competition, using media combinations, and fine-tuning fear appeals. Atkin suggested that a sophisticated approach improves the odds for success and adds to the value of campaign investment.
- If you would like to read more about how behavioral research can inform workplace and public safety, please see the below Powerpoint presentations. ■

View Hofman's presentation at:
<http://www2.apa.org/science/DOB-Hofmann.ppt>

View Burke's presentation at:
<http://www2.apa.org/science/DOB-Burke.ppt>

View Atkin's presentation at:
<http://www2.apa.org/science/PromisingStrategies.ppt>

SCIENCE DIRECTORATE STAFF

Steven Breckler, *Executive Director for Science*
 Virginia E. Holt, *Assistant Executive Director for Science*
 Geoffrey Mumford, *Assistant Executive Director for Science*
 Anne Bettesworth, *Science Policy Associate*
 Stephanie Cox, *Outreach and Development Coordinator*
 Marianne Ernesto, *Director, Testing & Assessment*
 Halah Gordon, *Administration Manager*
 Stephanie Johnson, *Director, Applied Psychological Science*
 Heather Kelly, *Senior Legislative & Federal Affairs Officer*
 Patricia Kobor, *Senior Science Policy Analyst*
 Deborah McCall, *Science Programs Manager*
 Sangeeta Panicker, *Director, Research Ethics Office*
 Clare Porac, *Senior Scientist*
 Karen Studwell, *Senior Legislative & Federal Affairs Officer*
 Kymberly Thornton, *Administrative Assistant*
 Kirk Waldroff, *Science Website Manager*
 Suzanne S. Wandersman, *Director, Governance Affairs*
 Jennifer Webb, *Science Programs Associate*

APA SCIENCE DIRECTORATE WEBSITE:
www.apa.org/science

Science Directorate Email Address: science@apa.org

PSYCHOLOGICAL SCIENCE AGENDA

Psychological Science Agenda is published monthly by APA's Science Directorate. Dedicated to promoting and serving scientific psychology, *Psychological Science Agenda* provides news about national scientific policy developments, examines policy issues affecting and affected by the behavioral research community, and highlights the advocacy efforts of the Science Directorate on behalf of research and academic psychologists. *Psychological Science Agenda* also features news of APA's governance and program initiatives relating to scientific and academic psychology, and provides valuable, timely information about funding opportunities for research psychologists.

Psychological Science Agenda is distributed free to 30,000 psychologists, members of Congress and their staffs, key officials in federal agencies that fund behavioral research and use its findings, institutional libraries, and science writers in the national media.

To obtain a subscription to *Psychological Science Agenda*, contact the Science Directorate at: American Psychological Association, Science Directorate, 750 First Street, NE, Washington, DC 20002-4242.

Phone: (202) 336-6000 Fax: (202) 336-5953.
 TDD: (202) 336-6123. E-mail: science@apa.org.

BOARD OF SCIENTIFIC AFFAIRS

Ronald T. Brown, (Chair)

Sandra Graham
 Barbara Landau
 Hazel R. Markus
 Liora P. Schmelkin
 Norman E. Spears
 Lois Tetrick
 John R. Weisz
 Alice Young

EXECUTIVE DIRECTOR FOR SCIENCE

Steven Breckler

EXECUTIVE EDITOR

Virginia E. Holt

PSYCHOLOGICAL SCIENCE AGENDA WEBSITE:
www.apa.org/science/psa/homepage.html

PSA Email Address: psa@apa.org