

associated with smaller HF-HRV decline and larger increase in negative affect response. These findings support the growing recognition that the capacity to adapt to stressors is a function of multiple, overlapping regulatory systems. Further, there may be stronger functional dependencies among regulatory domains in the context of stress. Aging affects multiple regulatory domains, and can be accompanied by exposure to chronic stressors known to affect health, such as spousal dementia caregiving. As such, integrative models of stress adaptation are needed to identify intervention targets that promote adaptive capacity and well-being in older adults.

#### DTLA-A NEW SCREENING TEST FOR LANGUAGE IMPAIRMENT IN AGING

J. Macoir<sup>1,2</sup>, M. Fossard<sup>3</sup>, L. Lefebvre<sup>4</sup>, L. Monetta<sup>1,2</sup>, A. Renard<sup>5</sup>, T. Tran<sup>6</sup>, M.A. Wilson<sup>1,2</sup>, 1. *Laval University, Quebec city, Quebec, Canada*, 2. *Centre de Recherche de l'Institut Universitaire en Santé Mentale de Québec, Quebec City, Quebec, Canada*, 3. *Université de Neuchâtel, Neuchâtel, Switzerland*, 4. *Université de Mons, Mons, Belgium*, 5. *Centre Leenaards de la mémoire, Lausanne, Switzerland*, 6. *Université de Lille, Lille, France*

Compared to cognitive functions such as working memory and executive functions, language appears to be mostly resistant to age-related decline. However, language is affected in the early stages of major forms of dementia and language deficits are at the core of the clinical portrait of primary progressive aphasia. Primary care providers are frequently faced with patients whose main complaints concern language problems in everyday and professional life. Up to now, no brief, accurate, screening test, which could be applied during routine office visits, was available for language deficits in neurodegenerative diseases. The aim of this study is to fill this important need by developing a handy, sensitive and brief detection test for language impairments in adults and aging. In this presentation, we describe the psychometric properties of the DTLA (Detection Test for Language impairments in Adults and Aging), a new screening test developed in four French-speaking countries (Belgium, Canada, France and Switzerland). We first present the development phase of the DTLA, then we provide normative data for healthy, community-dwelling, French-speaking people from the four countries. Finally, we report data on the convergent and discriminant validity of the DTLA as well as on its test-retest and internal consistency reliability. The use of the DTLA could improve the diagnosis of neurodegenerative diseases, especially those in which language is primarily affected. Ultimately, this will permit patients and their families to receive adequate services at an earlier stage of the disease.

#### EFFECTS OF MILD COGNITIVE IMPAIRMENT ON LINGUISTIC COMMUNICATION: A PILOT STUDY

N. Mahendra<sup>1</sup>, M. Ifah<sup>2</sup>, 1. *San Jose State University, Fremont, California*, 2. *California State University East Bay, Hayward, California*

Mild cognitive impairment (MCI) is a nosological entity increasingly recognized as a prodrome of dementia. As distinct types of MCI have been identified, it is well recognized that other cognitive functions besides memory are frequently affected. Linguistic communication measures are important cognitive biomarkers and our objective was to study the

effects of healthy older adults and persons with MCI on a language battery. Our secondary objective was to identify which language tasks might have greater clinical utility in identifying and quantifying MCI.

Subsequent to obtaining informed consent, we assessed 10 persons with MCI and compared their performance to healthy older adults and published norms for persons with Alzheimer's disease. Participants' medical history was obtained; hearing, vision and affect screened; cognitive function assessed, followed by administering a standardized language battery - the Arizona Battery for Communication Disorders of Dementia (ABCD; Bayles & Tomoeda, 1993). This test has been especially validated for distinguishing between the linguistic communication profile of young and old controls versus persons with AD.

Performance of persons with MCI was documented on 14 subtests of linguistic communication, mapping onto 5 broad constructs of Mental Status, Memory, Language Expression, Language Comprehension and Visuospatial Construction. Our results demonstrated that linguistic communication tasks that require episodic recollection (e.g. word learning, story recall), and more generative, narrative responses on discourse tasks (e.g. tasks requiring object description and concept definition) were especially sensitive to language changes accompanying MCI. Simpler tasks of linguistic communication (e.g. word or sentence reading comprehension; confrontation naming) did not reveal any differences from healthy older controls. Implications of these results for clinical assessment of persons with MCI will be discussed.

#### THE IMPACT OF NOISE AND WORKING MEMORY ON ONLINE PROCESSING OF SPOKEN WORDS: EYETRACKING EVIDENCE

B.M. Ben-David<sup>1,4</sup>, G.M. Nitsan<sup>1,3</sup>, A. Wingfield<sup>2</sup>, 1. *Interdisciplinary Center Herzliya, Herzliya, Israel*, 2. *Brandeis University, Waltham, Massachusetts*, 3. *Haifa University, Haifa, Israel*, 4. *University of Toronto, Toronto, Ontario, Canada*

Among the complaints of older adults is a difficulty in speech recognition, especially in noisy backgrounds. This difficulty can interfere with maintenance of health and quality of life and can potentially affect the rate of cognitive decline. A central research question in speech recognition in older adults is the extent to which difficulties stem from bottom-up, sensory declines that degrade the speech input, and to what extent they stem from an age-related reduction in working memory.

We used eye-tracking as an on-line measure of spoken word recognition. Listeners hear spoken instructions that relate to an object presented in the visual display, while their eye movements are recorded. For example, hearing "touch the candle," with four objects displayed: candle, candy, dog and bicycle. As the speech signal unfolds, several alternatives are activated in response to phonemic information, i.e., CAND leads to *candy* and *candle*. In order to successfully achieve word identification, one has to inhibit phonological alternatives. Using eye-tracking, we tracked, in real-time, as the listener shifts his or her focus between *candle* and *candy*. We manipulated working memory load by using the digit pre-load task, where participants have to retain either one

(low-load) or four (high-load) spoken digits for the duration of a spoken word recognition trial.

We will present three separate studies. The data show that both noise and working memory can delay speech processing. With younger adults, data suggest that the two effects may interact. Preliminary data with older adults will be discussed.

#### THE SURVIVAL ADVANTAGE OF READING BOOKS

A. Bavishi, M. Slade, B. Levy, *Yale University School of Public Health, New Haven, Connecticut*

Although books can expose people to new people and places, whether books also have health benefits beyond other types of reading materials is not known. This study examined whether those who read books have a survival advantage over those who do not read books and over those who read other types of materials, and if so, whether cognition mediates this book reading effect. The cohort consisted of 3635 participants in the nationally representative Health and Retirement Study who provided information about their reading patterns at baseline. Cox proportional hazards models were based on survival information up to 12 years after baseline. A dose-response survival advantage was found for book reading by tertile ( $HR_{T_2} = 0.83$ ,  $p < .0001$ ,  $HR_{T_3} = 0.77$ ,  $p < .0001$ ), after adjusting for relevant covariates including age, sex, race, education, comorbidities, self-rated health, wealth, marital status, and depression. Book reading contributed to a survival advantage that was significantly greater than that observed for reading newspapers or magazines ( $t_{T_2} = 98.8$ ,  $p < .0001$ ;  $t_{T_3} = 4956$ ,  $p < .0001$ ). Compared to non-book readers, book readers had a 4-month survival advantage at the point of 80% survival. Book readers also experienced a 20% reduction in risk of mortality over the 12 years of follow up compared to non-book readers. Cognitive score was a complete mediator of the book reading survival advantage ( $p = .04$ ). These findings suggest that the benefits of reading books include a longer life in which to read them.

#### IMPACT OF SOCIAL SUPPORT ON COGNITIVE FUNCTION IN CHINESE ELDERLY: ONE-YEAR FOLLOW-UP COHORT STUDY

S.L. Lin, *Department of Social Work, Chinese University of Hong Kong, Hong Kong, Hong Kong*

Background: The maintenance of cognitive function is the key dominant of older age wellbeing. Promoting successful cognitive aging is a major public concern to individuals and the field of public health. This study examines the association between perceived social support and cognitive function in a representative community sample of 82 Hong Kong Chinese Elderly.

Methods: Baseline data collection was completed in 2005 and included a 180-min face-to-face interview covering detailed assessments of physical and cognitive performance (Chinese version of Dementia Rating Scale, CDRS), health status, social support (from three types of network members including their children, relatives, and friends), and other life-style characteristics. The cohort was subsequently reevaluated in 2006, with reassessments of cognitive function.

Result: The mean age was 69 years old for the participants, of whom 78.05% were female. In the multiple linear regression, controlling for demographics variables, medical conditions, pulmonary function, grip strength, blood pressure,

Body Mass Index, and leisure activities, greater baseline social support from children was a significant predictor of better cognitive function (changes in adjusted CDRS for age and education) at the 1-year follow-up. Among three types of social support network, perceived children's willingness to offer help was strongest predictor.

Conclusion: Consistent with Western studies, social support from family is important for elderly Chinese people in Hong Kong. Strengthening social support among family members are highly recommended for preserving cognitive function during aging.

#### ACTIVITY INTERESTS AND TALENTS IN RELATION TO COGNITIVE PERFORMANCE: A PROSPECTIVE STUDY

B.P. Trubenstein<sup>1</sup>, B.C. Haberstick<sup>2</sup>, R. Corley<sup>2</sup>, S.J. Wadsworth<sup>2</sup>, C.A. Reynolds<sup>1</sup>, 1. *Psychology, University of Colorado - Riverside, Riverside, California*, 2. *University of Colorado - Boulder, Boulder, Colorado*

Past research shows lifespan activity engagement provides multiple benefits to physical, emotional and cognitive health into late life. We investigated the prospective relationships between self-reported activity interests and talents with cognitive performance in a subset of participants taking part in the ongoing Colorado Adoption/Twin Study of Lifespan behavioral development and cognitive aging (CATSLife). Initial analyses evaluated associations of interest/talents, and cognitive performance beginning in late adolescence and approaching midlife (16 to 36 years;  $N = 852$ ). Individuals rated 20 activities as to interests and talents (1=not at all to 5=very much). Activity types were classified into artistic (writing, music, visual arts), physical (team sports, swimming, skiing), or practical (cooking, carpentry, mechanics), and were correlated across assessments ( $r$ 's = .230 - .767). Cognitive performance was assessed from a battery of 14 tasks spanning verbal, spatial, memory and speed domains. Interests and/or talents in arts were positively correlated with better immediate and delayed performance on the Names and Faces Memory Task at years 16, 21, and 30 ( $r$ 's = .091 - .232). Interests and/or talents in physical and practical activities correlated with performance on the Card Rotations spatial task across assessments ( $r$ 's = .123 - .204), and practical activities with the Paper Form Board spatial task ( $r$ 's = .109-.274). These initial findings hint at possible influences, or environmental selection, of activity engagement and maintenance of memory and spatial abilities. We will extend analyses to the full CATSLife sample, consider activity and cognitive performance trajectories in tandem, and compare findings to the international literature.

#### SELECTIVE ATTENTION IN AGE-ASSOCIATED MEMORY IMPAIRMENT: AN ERP STUDY IN VISUAL SEARCH

A. Bujn<sup>1</sup>, L. Lorenzo-López<sup>1</sup>, A. Maseda<sup>1</sup>, R. López-López<sup>1</sup>, C. Diego-Diez<sup>1</sup>, V. Valdíglesias<sup>2</sup>, J. Millán-Calenti<sup>1</sup>, 1. *Gerontology Research Group, Instituto de Investigación Biomédica de A Coruña (INIBIC), Complejo Hospitalario Universitario de A Coruña (CHUAC), SERGAS, Universidade da Coruña, A Coruña, Spain*, 2. *DICOMOSA Group, Department of Psychology, Area of Psychobiology, Universidade da Coruña, A Coruña, Spain*