DTLA-A NEW SCREENING TEST FOR LANGUAGE IMPAIRMENT IN AGING

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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

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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 aphasias. 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

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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

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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