The think fast study – A randomized controlled study to improve speed of processing in adults with HIV-associated neurocognitive disorder

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Between 52-59% of adults with HIV experience HIV-Associated Neurocognitive Disorder (HAND), and both the frequency and severity of such disorders may increase with advancing age. Unfortunately, few pharmacological or behavioral interventions have been shown to be effective. This presentation reviews the overall rationale and development of speed of processing training, a computerized cognitive training program, to improve this specific cognitive ability as well as everyday functioning and quality of life in adults aging with HIV. Although this protocol has been shown to improve speed of processing, everyday functioning, and quality of life in normal, community-dwelling older adults in the Advanced Cognitive Training In Vital Elderly (ACTIVE) study, its efficacy in adults aging with HIV has not been established. Based on our prior work, this current study consists of a pre-post two-year longitudinal experimental design whereby 264 adults with HAND are randomly assigned to one of three training conditions: 1) 10 hours of laboratory-based Speed of Processing Training, 2) 20 hours of laboratory-based Speed of Processing Training, or 3) 10 hours of a standardized computer-contact control (sham) condition. Thus, the description of this randomized, longitudinal clinical trial covers the following: 1) rationale for speed of processing training in those with aging with HIV; 2) overview of overall study design; 3) inclusion/exclusion criteria and diagnosing HAND; 4) cognitive/functional assessment battery; and 5) examination of biomarkers (e.g., IL-6, BDNF). In conclusion, related cognitive interventions are suggested as they may utilize similar features of this current RCT protocol to examine their efficacy.

Biography

David E Vance is a Psychologist at the University of Alabama at Birmingham and is studying Cognitive Remediation and Aging with HIV. He has +180 peer-reviewed publications. He received a White House invitation to attend the first forum on aging with HIV and has participated as an invited member of the USA National Institutes of Health Think Tank – Working Group on HIV and Aging. Recently, he was awarded a 2.8 million dollar grant from the USA National Institute of Mental Health titled, “An RCT of speed of processing training in middle-aged and older adults with HIV.”

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