

## **Socioeconomic Status: An Overlooked Factor When Describing Cognitive Function in PLWHA**

S.E. Karpiak, R.A. Shippy, P. Rowell, D. Dorfman, A.J. Applebaum ACRIA,  
Mt Sinai School of Medicine, NYU

**Background:** HIV-related dementia afflicted 20% of PLWHA before the advent of anti-retroviral therapy. The incidence of ADC has declined since HAART. However, research studies continue to assess whether cognitive function is impacted by HIV, ART, or other variables. In this study we find that socioeconomic status as a significant contributing factor, often overlooked in other research.

**Methods:** This study assessed the cognitive function of an older cohort, using a matched sample design. The cohort represents today's HIV/AIDS epidemiology in NYC. Using a standard battery of neuropsychological tests, the study enrolled 114 middle-aged individuals 40 - 60 years of age: 78 PLWHA and 36 HIV-negative adults, matched on sociodemographic variables.

**Results:** There were no significant differences between pre-morbid intelligence and current cognitive function, both between- and within-groups. On all tests, the PLWHA scored lower than the comparison group, but not significantly lower for WAIS subtests, Rey Auditory Verbal Learning or Trailmaking. Significant differences were found only on Grooved Pegboard and Finger Tapping ( $p < .01$ ). The additive effects of the many small differences did impact the aggregate score for cognitive function, thereby making the two groups significantly different ( $p < .001$ ). Nonetheless, both the PLWHA and the comparison group scored below published normative data ( $Z_s = -1.08$  and  $-0.61$  respectively).

**Conclusions:** The study underlines the need to address the fact that today's PLWHA are, in the majority, individuals from disadvantaged socioeconomic environments. The income, housing, education, nutrition and social conditions of this group may well have a greater impact on cognitive function than HIV or HAART. This study finds that the base-line cognitive function of groups at-risk for HIV may already be well below the population mean.