AnthroTronix

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New Study Highlights Adverse Effect on Neurocognitive Tests in Military Population

SILVER SPRING, Md. – A first-of-its-kind study of active-duty military using DANA[TM], a mobile, neurocognitive assessment tool, found that scores on self-administrated psychological assessments had a negative impact on a variety of neurocognitive tests. The study, "Computerized cognitive testing norms in active-duty military personnel: Potential for contamination by psychologically unhealthy individuals," published in *Applied Neuropsychology: Adult,* suggests that effects of the increased incidence of behavioral health issues in active-duty military should be controlled for when determining normative datasets in this population.

Researchers administered DANA[TM] to 808 active-duty service members, ages 18-64 with 71 percent being male. Study participants self-administered three clinical psychological assessments — Posttraumatic Stress Disorder Checklist-Military (PCL-M), the Patient Health Questionnaire 8 (PHQ-8) to assess depression, and the Pittsburgh Sleep Quality Index (PSQI). The researchers then examined performance on eight cognitive tests to evaluate the effect of self-reported sleep disturbance, depression and Post-Traumatic Stress Disorder (PTSD).

"PTSD, depression, and disturbed sleep are common psychological issues affecting military personnel," said AnthroTronix CEO Cori Lathan. "What we found was a direct negative impact on cognitive function when study participants self-reported these issues. These factors may distort normative data in this population and should be considered along with basic demographic characteristics."

Results showed that 13 percent of participants scored within clinical range on the PCL-M (score ≥34 for "moderate PTS"), six percent within clinical range on the PHQ-8 (score ≥10 for "major depression"), and 48 percent within clinical range on the PSQI (score ≥5 for "poor sleep quality"). Researchers observed that PCL-M scores were also negatively associated with performance on many neurocognitive tests and associations among PCL-M, PHQ-8, and PSQI scores.

Discussing a potential implication of the results, Lathan notes, "You can't treat an average. When testing cognition in active-duty military, it is hard to control for all the relevant variables, so to get the most sensitivity out of the test you should look at an individual. It is critical that when trying to apply better metrics around this or the broader population's health status, we need to bring a personalized approach to 21st century research."

AnthroTronix's DANA[TM] is an FDA cleared clinical neurocognitive assessment tool that uses a smartphone or tablet to measure and monitor changes in a person's brain/cognitive function. The app can help clinicians track cognitive function for conditions such as depression, dementia/Alzheimer's Disease, and Post-Traumatic Stress Disorder.

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AnthroTronix, an engineering research and development company, produces human-centered technologies that advance health, communication, education, and defense. We develop innovative, research-based technologies that influence change and enhance lives around the world. Our company has been recognized among Inc. Magazine's "5000 Fastest Growing Companies" and selected by the World Economic Forum as a Technology Pioneer company. For more information on us, visit www.atinc.com, follow us on Twitter at @AnthroTronix, or connect with us on LinkedIn.