

Frequency and predictors of self-reported prospective memory complaints in individuals infected with HIV

Steven Paul Woods^{a,*}, Catherine L. Carey^b, Lisa M. Moran^a,
Matthew S. Dawson^a, Scott L. Letendre^c, Igor Grant^a,

The HIV Neurobehavioral Research Center (HNRC) Group

^a Department of Psychiatry, University of California, San Diego, United States

^b Department of Psychiatry, University of California, San Francisco, United States

^c Department of Medicine, University of California, San Diego, United States

Accepted 27 December 2006

Abstract

Failures of episodic retrospective memory (RetM) are among the most frequently reported cognitive complaints endorsed by individuals living with HIV infection. The present study sought to examine the nature, frequency, and determinants of self-reported complaints of prospective memory (ProM) in HIV, which is a singly dissociable and ecologically relevant aspect of episodic memory involving the execution of future intentions. Seventy-five HIV seropositive individuals and 60 seronegative volunteers were administered the Prospective and Retrospective Memory Questionnaire (PMRQ) as part of extensive neuropsychological, psychiatric, and medical research assessments. The HIV sample endorsed more frequent ProM complaints in daily life than the seronegative group, particularly on items requiring self-initiated cue detection and retrieval. Within both study groups, ProM complaints were significantly more frequent than RetM complaints. Although the HIV sample was impaired relative to the seronegative group on an objective, performance-based ProM test, self-reported ProM complaints did not correspond to actual ProM abilities. However, greater frequency of self-reported ProM complaints was moderately associated with increased fatigue, as well as with symptoms of anxiety and depression. Consistent with prior research on RetM in HIV, results indicate that affective distress contributes to a metamemory deficit for HIV-associated ProM impairment, which highlights the potential importance of assessing both self-reported and performance-based ProM in clinical and research neuroAIDS evaluations.

© 2007 National Academy of Neuropsychology. Published by Elsevier Ltd. All rights reserved.

Keywords: Human immunodeficiency virus; Neuropsychological assessment; Self-report; Fatigue; Episodic memory; Metacognition

Individuals infected with the human immunodeficiency virus (HIV) commonly endorse cognitive complaints in their daily lives, such as problems with multitasking, organizing day-to-day activities, and quickly processing complex information (e.g., Maj et al., 1994; Stern et al., 1991). Complaints of episodic memory are perhaps the most frequently reported cognitive difficulties in HIV (e.g., Maj et al., 1994). Although objective HIV-associated memory impairments are modestly related to self-reported memory complaints (e.g., Bassel, Rourke, Halman, & Smith, 2002), metamemory

* Corresponding author at: HIV Neurobehavioral Research Center (0847), University of California, 150 West Washington Street, 2nd floor, San Diego, California 92103, United States. Tel.: +1 619 543 5004; fax: +1 619 543 1235.

E-mail address: spwoods@ucsd.edu (S.P. Woods).

deficits (i.e., misconceptions regarding one's own memory capabilities) are nevertheless common in HIV. Increased symptoms of depression (Rourke, Halman, & Bassel, 1999a; Rourke, Halman, & Bassel, 1999b; van Gorp et al., 1991) and fatigue (Millikin, Rourke, Halman, & Power, 2003) best predict the over-reporting of objective HIV-associated memory deficits, whereas mild anosagnosia (i.e., under-reporting of a genuine memory impairment) is related to executive dysfunction (e.g., Rourke et al., 1999b).

An important distinction is now being made between two primary components of episodic memory: viz., retrospective memory (RetM) and prospective memory (ProM). RetM, which historically has been the exclusive focus of objective and self-reported memory research in HIV, refers to the recollection of past experiences in response to overt prompts (e.g., standard tests of list learning and recall measure RetM). RetM is a necessary, but not sufficient component of ProM, which denotes the ability to execute a future intention in the absence of explicit cues (i.e., "remembering to remember"). Examples of ProM in daily life include remembering to take a medication at a particular time of day or remembering to purchase groceries on the way home from work. ProM is hypothesized to be a stronger contributor to the independent performance of several instrumental activities of daily living (IADL) than RetM (e.g., medication adherence; Park & Kidder, 1996). As such, research is needed to better understand the nature, extent, and predictors of HIV-associated ProM deficits and complaints.

Recent studies using objective tests of ProM indicate that HIV infection is associated with a breakdown in the strategic (i.e., executive) encoding and retrieval aspects of retrieving future intentions. Carey, Woods, Rippeth, Heaton, Grant, & The HNRC Group (2006) were the first to publish evidence of performance-based ProM impairment in HIV, which was characterized by deficient time- and event-cued ProM, but normal performance on a multiple-choice recognition posttest. HIV-associated ProM impairment correlated with worse performance on measures of strategic verbal encoding, working memory, executive functions, and complex information processing speed. The ecological relevance of HIV-associated ProM impairment on objective tasks is supported by preliminary data regarding its association with engagement in high-risk behaviors (e.g., injection drug use; Martin et al., *in press*) and medication nonadherence (Beauvais, Raskin, Dieckhaus, Miller, & Rosen, 2005) in HIV-infected polysubstance users. Importantly, the neuropathogenesis of HIV-associated ProM impairment may be dissociable from RetM as evidenced by data showing that biomarkers of macrophage activation and axonal injury predict ProM, but not RetM in HIV (Woods et al., 2006). As such, ProM may capture a unique and ecological aspect of cognitive functioning that is ubiquitous in daily life but not currently probed by traditional memory assessment techniques.

Formal assessment of ProM may therefore become integral to the clinical evaluation of neuropsychological functioning in persons infected with HIV. Although the literature on objective ProM impairment in the laboratory is steadily growing, no prior studies have examined whether HIV-infected persons subjectively experience ProM failures in their daily lives or whether such complaints relate to objective, performance-based ProM abilities. Therefore, the current study was conducted to evaluate these important questions, as well to identify the medical, psychiatric, and cognitive determinants of self-reported ProM complaints in HIV. It was hypothesized that: (1) both ProM and RetM complaints are more common in individuals infected with HIV versus seronegative volunteers; (2) ProM complaints are more frequent in persons with advanced HIV disease; (3) ProM complaints are modestly associated with neuropsychological deficits on objective tests of ProM, RetM, working memory, and executive functions; and (4) ProM complaints are associated with increased symptoms of affective distress, particularly depression and fatigue.

1. Method

1.1. Participants

The study sample included 75 HIV seropositive persons (HIV+) as indicated by enzyme linked immunosorbent assays and a Western Blot confirmatory test and 60 seronegative healthy comparison volunteers (HC). All HIV+ participants and 57% of the HC sample ($n = 34$) were recruited to participate in a Federally-funded, observational study of ProM in HIV, whereas the remaining 43% ($n = 26$) of the HC participants were evaluated as part of their participation in the HIV Neurobehavioral Research Center. As such, not all ancillary measures (e.g., non-ProM cognitive tasks) were available for these 26 HCs. The University Human Research Protections Program approved these studies. Potential participants were excluded if they reported a history of psychiatric (e.g., mental retardation, psychotic disorders, learning disabilities, attention-deficit/hyperactivity disorder, and bipolar disorder) or neurological (e.g., seizure disorders, closed head injuries with loss of consciousness greater than 15 min, and central nervous system neoplasms or opportunistic

متن کامل مقاله

دریافت فوری ←

ISIArticles

مرجع مقالات تخصصی ایران

- ✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
- ✓ امکان دانلود نسخه ترجمه شده مقالات
- ✓ پذیرش سفارش ترجمه تخصصی
- ✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
- ✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
- ✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
- ✓ دانلود فوری مقاله پس از پرداخت آنلاین
- ✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات