

Emotional (but not Social) Loneliness Tied to Cognition in Older People With HIV

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Emotional loneliness, but not social loneliness, was significantly linked to objective cognitive function in older people with well-controlled HIV infection (PWH), even when researchers accounted for sociodemographic factors and the effects of depressive symptoms [1]. This 42-person study by researchers at Northeastern University and Johns Hopkins University also found that after adjustment for depressive symptoms, neither emotional nor social loneliness was related to subjective cognition.

Northeastern/Hopkins collaborators noted the loneliness occurs with and exacerbates an array of mental, physical, and cognitive conditions. And older PWH run high risks of both loneliness and cognitive impairment. Experts recognize two distinct subtypes of loneliness: **Emotional loneliness** occurs when “the intimacy in confidant relationships one wishes for has not been realized” [2]. **Social loneliness** occurs when the “number of relationships with friends and colleagues . . . is smaller than is considered desirable” [2]. Findings in the general population suggest these subtypes differ in their impact on cognition. The researchers set out to dissect relationships between overall, emotional, and social loneliness and subjective and objective cognitive performance.

This analysis focused on data from the Johns Hopkins Center for the Advancement of HIV Neurotherapeutics, a cohort recruited from an outpatient HIV clinic in Baltimore in 2021-2022. The research team assessed objective cognition in a neuropsychological test battery and subjective cognition on the Cognitive Failures Questionnaire, the Behavior Rating Inventory of Executive Function, and the Barrett Impulsiveness Scale. They assessed overall, emotional, and social loneliness on the De Jong Gierveld Loneliness Scale [2].

The 42 study participants averaged 61.5 years in age, 48% were men, 74% black, and 21% white. They averaged 13.3 years of education, their CD4 count averaged 687, and 93% had a viral load below 20 copies, while the remaining 7% had a load between 20 and 100 copies.

Overall loneliness averaged 2.45, emotional loneliness 1.24, and social loneliness 1.21. (See reference 2 for comparative scores in 6 European countries and Japan.) A model adjusted for age, sex, race, and education determined that emotional loneliness but not social loneliness was associated with measures of objective cognition: letter fluency, digit symbol, grooved pegboard nondominant, trail-making test (TMT) part A, TMT part B, Stroop trial 3 interference, and CalCap sequential minus simple.

A model adjusted for the same sociodemographic factors plus depressive symptoms (CES-D scores) found significant associations between emotional loneliness and three measures of

objective cognition: Hopkins verbal learning test revised (HVLT-R) recognition, digit symbol, and CalCap sequential minus simple. Social loneliness was not associated with any measures of objective cognition in this model. And this model adjusted for sociodemographics and depressive symptoms found no association of emotional or social loneliness with subjective cognition.

The Northeastern/Hopkins team proposed that their findings could be clinically useful “by informing interventions that target specific loneliness subtypes to prevent the worsening of processing speed.”

References

1. Yoo-Jeong M, Dastgheyb RM, Shorer EF, et al. Emotional, not social, loneliness is related to objective cognitive function in older people with HIV. International Workshop on HIV & Aging 2023, October 26-27, Washington, DC. Abstract 16.
2. De Jong Gierveld J, Van Tilburg T. The De Jong Gierveld short scales for emotional and social loneliness: tested on data from 7 countries in the UN generations and gender surveys. *Eur J Ageing*. 2010;7:121-130. doi: 10.1007/s10433-010-0144-6.
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2921057/>