

HIV-specific factors show no association with cognitive decline in treatment-experienced HIV+ adults in Ethiopia

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Traditional comorbidities exert a moresignificant effect on cognitive impairment than HIV-specific disease factors.

INTRODUCTION	METHODS	RESULTS	CONCLUSIONS	REFERENCES
Combination antiretroviral therapy (cART) improved life expectancy of people living with HIV (PLWH), leading to a HIV+ population susceptible to age-related conditions such as cognitive decline. It remains unclear whether cognitive impairment in well-treated PLWH is driven by HIV-specific factors (e.g., immunosuppression history) or by general age-related comorbidities. This study investigated associations between cognitive status, HIV-related clinical factors, and chronic comorbid illness in treatment-experienced adults in Ethiopia	Data was obtained from a cross-sectional study conducted at Tikur Anbessa Specialist Hospital (Addis Ababa, Ethiopia) from December 2019 to June 2020. Cognitive screening used the International HIV Dementia Scale (IHDS). Cognitive impairment was defined as IHDS ≤8 (scores ≤4 excluded due to low representation). Comorbidity was assessed as a binary variable (absence versus presence).Association of HIV-specific clinical factors (e.g., CD4 count, treatment duration) and comorbidities with cognitive status (impaired vs. unimpaired) were analyzed using descriptive statistics and logistic regression.	Of 323 participants (mean age 42.8 years, 63.6% female), 29.4% scored in the impaired range (IHDS ≤8) (mean: 9.2, s.d:1.6). Chronic comorbidities were present in 20.1% of participants. Those without any comorbidity showed a trend toward lower odds of cognitive impairment (O.R:0.58, 95% CI: 0.33-1.02), though it was not statistically significant. No HIV-specific clinical factor was directly associated with cognitive impairment. However, a few suggestive interactions between HIV-related variables (e.g. CD4 count) and demographic factors (age, sex) was observed indicating a potential complex interplay influencing cognitive outcomes.	In this cohort,a traditional risk factor for cognitive impairment (presence of comorbidity) appeared to be more influential than HIV-specific disease factors. The non-significant protective trend in those without comorbidities mirrors patterns seen in HIV-negative populations, underscoring similar determinants of cognitive health. Moreover, the lack of any direct association between HIV clinical history and cognitive status aligns with other recent studies of virally suppressed PLWH. These findings highlight the importance of managing general health and comorbid conditions in aging PLWH to preserve cognitive function and warrant larger longitudinal studies to confirm and further explore these observations.	UNAIDS. (2024). <i>Fact sheet - Latest global and regional statistics on the status of the AIDS epidemic</i>.https://www.unaids.org/sites/default/files/media_asset/UNAIDS_FactSheet_en.pdf WHO. (2025). <i>HIV data and statistics</i>. Deeks, S. G., Overbaugh, J., Miller, D. 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