

Effect Of The Young Persons and Adolescents Peer Supporters' Intervention on Stigma and Viral Load Suppression among HIV-Positive Adolescents in Northern Uganda

ABSTRACT

Background: Viral load suppression is a critical indicator of progress toward achieving the United Nations 2030 goal of ending the HIV epidemic, with a global target of 95% among people living with HIV. However, stigma remains a key barrier to achieving optimal treatment outcomes, particularly among adolescents, who experience disproportionately high levels of internalised stigma, poor adherence, and low retention in care. In Uganda, adolescents represent the least virally suppressed population despite the scale-up of targeted interventions such as the Young Persons and Adolescent Peer Supporters (YAPS) program. This study evaluated the effect of the YAPS intervention on HIV-related stigma and viral load suppression among adolescents living with HIV in Northern Uganda.

Methods: A mixed-methods, non-equivalent quasi-experimental design was employed among adolescents aged 10–19 years receiving HIV care in selected health facilities in Northern Uganda. Hospitals were purposively selected, while lower-level facilities were stratified by YAPS implementation status and randomly sampled. Quantitative data were collected through structured interviews and medical record abstraction, and analysed using STATA 16. Analytical approaches included descriptive statistics, cross-tabulations, ANOVA, multivariable regression, and propensity score matching to estimate Average Treatment Effects (ATE) and Average Treatment Effects on the Treated (ATET). Qualitative data were used to explore implementation barriers and facilitators.

Results: At baseline, HIV-related stigma prevalence was 51%, declining marginally to 47% at end-line, with no statistically significant difference between YAPS beneficiaries and non-beneficiaries ($p > 0.05$). Viral suppression improved from 67% at baseline to 73% at end-line. At end-line, suppression was 59% among YAPS beneficiaries and 74.7% among non-beneficiaries, with statistically significant differences observed between and within groups ($p < 0.001$). Propensity score analysis demonstrated a statistically significant effect of YAPS on viral suppression (ATE: Coef. = 1.198258, $p < 0.001$; ATET: Coef. = 1.628152, $p < 0.001$). However, no statistically significant effect on HIV stigma was observed (ATE: $p = 0.137$; ATET: $p = 0.073$). Key implementation barriers included funding constraints, staff and adolescent attrition, and limited government engagement. Facilitators included strong multilevel collaboration, sustained donor support, high staff commitment, capacity building, and active stakeholder engagement.

Conclusions: Viral suppression among adolescents in Northern Uganda remains suboptimal at 73%, falling short of global targets. The YAPS intervention demonstrates a significant positive effect on viral suppression but shows no measurable impact on HIV-related stigma. Persistent internalised stigma is likely to limit the full effectiveness of the intervention. Strengthening the psychosocial support components of YAPS is essential to enhance its overall impact. Addressing systemic constraints, particularly funding gaps, workforce instability, and limited government ownership, will be critical for improving sustainability and maximising outcomes.