

HIV-ASSOCIATED NEUROCOGNITIVE BURDEN: FEASIBILITY OF INTEGRATING THE INTERNATIONAL HIV DEMENTIA SCALE INTO THE HIV CARE MODEL AT TASO CENTRES IN CENTRAL AND SOUTHWESTERN UGANDA

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Abstract

HIV-associated neurocognitive disorders (HAND) remain a substantial public health concern, despite significant progress in HIV treatment and increased survival rates. The absence of clinical screening tools, such as International HIV Dementia Scale (IHDS), results in undiagnosed or misdiagnosed HAND among people living with HIV (PLWH). The study aimed at determining the burden of HAND and the feasibility of integrating the IHDS into the HIV care model at TASO centres in central and southwestern Uganda. The study used a mixed methods approach where cross sectional and sequential explanatory designs were employed at five TASO centers in central and southwestern Uganda. The study was composed of PLWH, medical records and healthcare workers (HCWs). Data were collected using questionnaires, checklists, pre -and post-educational intervention questionnaires, focus group discussions and document review. Criteria for determining HAND included a cutoff score of ≤ 10 , and a significance level set at $p \leq 0.05$. A quasi-experimental design was utilized with healthcare workers (HCWs) to assess their pre and post the educational intervention knowledge on HAND screening using IHDS. A paired t-test was used to compare mean knowledge scores before and after the intervention, while one-way ANOVA analyzed the mean score differences across different sites and cadres. Thematic analysis was used to analyze qualitative data with the assistance of Nvivo version 10. Following this, the identified themes were re-synthesized to develop a screening model for HAND.

Quantitatively, out of the 393 PLWH, ($n = 229, 58.23\%$) screened positive for HAND. Factors associated with HAND included, gender (OR 0.54, $p=0.017$), peasant farming (OR 1.70, $p=0.04$), and older age (OR 1.03, $p=0.019$). The mean age of the HCWs was 36.38 years ($SD = 7.80$) and mean years of experience was 8.92 ($SD = 6.52$). A paired *t*-test showed pre-intervention mean score ($M = 20.38, SD 2.94$) statistically different from post-intervention mean score ($M = 22.24, SD 2.15$) at $t(36) = -4.933, p > 0.001$. A one-way ANOVA showed counselors were statistically different from clinical officers before intervention (Mean difference 4.432, 95% *CI*: 0.1 – 8.85, $p = 0.049$ and after intervention (Mean difference 3.364, 95% *CI*: 0.07 – 6.65, $p = 0.042$).

Qualitatively, data generated eight themes. These themes were subsequently re-synthesized to develop the HAND screening model, named the IH-Integrated Client Centred Model (IH-ICCM). The study concludes that PLWH are at a risk of developing HAND, which can adversely affect their overall well-being. Screening for HAND with IHDS is crucial for identifying substantial changes in cognitive functioning. An educational intervention improved HCWs' knowledge on IHDS use. Healthcare workers' perspectives regarding HAND screening contributed to developing the IH-ICCM model, potentially valuable in TASO setting, but further assessment is necessary for broader clinical applicability.