**Employment status and HIV viral suppression among adults: a propensity score analysis**

**Abstract**

**Introduction**: Employment status has been associated with viral suppression….

**Methodology**: We analysed a cross-sectional data set, including information on viral suppression and employment status among a sample of HIV healthcare users between xxx and xxx. We applied a propensity score method (PS), inverse probability of treatment weighting (IPTW), to approximate a randomised controlled trial investigating the hypostasis that being employed is a protective factor of viral suppression. Gradient boosting was used to determine the best PS score result among all different covariate combinations.

**Results**: The adjusted odds ratios in the weighted sample provided evidence that employment has a protective effect on the viral load status (0.54, 95% CI: 0.34 – 0.95)

Conclusion: need to be completed

**Methodology**

To calculate the propensity score (PS), gradient boost considers multiple combinations and interactions when determining the propensity score. Finally, the algorithm selects the one with a less standardised mean difference.

The variables included in the propensity score were age, sex, health insurance type, comorbidities, migrant status, educational level, time on ART, region of residence, housing type, and indicator of self-stigma, additions, and mental health.

The weight was set to estimate the average treatment effect (ATE) for employed people was and unemployed . Bootstrapping was used to estimate the confidence intervals (5 000 iterations).

The propensity score and weighting method were evaluated using convergence plots, standardised mean difference, overlapping plots and p-values.

A double robust approach was taken to calculate ATE using the weighted sample and adjusting for the covariates included in the PS. Additionally, the model includes an indicator of adherence.

All analyses were conducted in R version.