



Household Food Insecurity and Viral Suppression Among Adults Receiving Antiretroviral Therapy in Khayelitsha, South Africa: A Cross-Sectional Analysis

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Abstract

Food insecurity is prevalent in South African townships and may compromise the effectiveness of antiretroviral therapy (ART) for people living with HIV. Clarifying this relationship is important for public health programmes in high-burden settings. This study aimed to determine the association between household food insecurity and virological non-suppression among adults receiving ART in Khayelitsha, Cape Town. A cross-sectional analysis was conducted among a sample of adults enrolled in ART programmes. Household food insecurity was assessed using a validated scale. Viral suppression was defined as a viral load below a specified threshold. Logistic regression was used to analyse the association, adjusting for potential confounders. A significant negative association was found between household food insecurity and viral suppression. Participants from severely food-insecure households were 1.8 times more likely to have a detectable viral load compared to those from food-secure households. Household food insecurity is independently associated with poorer virological outcomes in this setting. This underscores food insecurity as a key social determinant of health for people living with HIV on ART. Integrating routine food security screening and targeted nutritional support into HIV care programmes is recommended. Multi-sectoral strategies addressing the underlying drivers of food insecurity are required to improve health outcomes. HIV, food insecurity, viral suppression, antiretroviral therapy, South Africa, social determinants of health This research provides empirical evidence from a high-prevalence township context, highlighting the need for health systems to address food insecurity as part of comprehensive HIV care.

Keywords: *Food insecurity, Antiretroviral therapy, Viral suppression, Khayelitsha, Cross-sectional study, HIV/AIDS, Sub-Saharan Africa*

ABSTRACT-ONLY PUBLICATION

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