

# Exploring depression among women of child bearing age and nutrition knowledge in mother-child dyads in Gauteng, South Africa

Nozipho O. Musakwa<sup>1</sup>, Khumbo Shumba<sup>1</sup>, Dorina Onoya<sup>1</sup>, Idah Mokhele<sup>1</sup>

<sup>1</sup>.Health Economics and Epidemiology Research Office, Health Research Office, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa.



Although integrated health care is enhancing access and improving the mental well being of HIV-positive mothers, South Africa's mental health services require more investment as this impacts nutritional knowledge.



## Background and objectives - 1

- Maternal depression may impact the nutritional status that children born to HIV-positive mothers frequently encounter.
- We assessed the nutritional knowledge and depression among women in Gauteng, South Africa.



## Methods - 2

- We conducted cross-sectional analyses, examining a sub-set of 1150 mother-baby pairs enrolled in the PEAD-Link trial, one-week post-delivery from October 2016 to February 2018.
- Amongst the 1150 we tracked 124 mother-child pairs (child age: 32-59 months) between July 2020 and February 2021.
- We evaluated women's nutritional knowledge by using the validated General Nutrition Knowledge Questionnaire (GNKQ).
- We considered a GNKQ total score below 40 as "poor" and 40-60 as "moderate" because of the lower education levels within the study population.
- Depression was assessed using a validated CESD-10 scale categorised as no depression (CES-D 10 total score <5), low to medium depression (CES-D 10 total score ≥5 and <10) and major depressive symptoms (CES-D 10 total score ≥10).
- We conducted a case analysis of 80 mothers who reported on their mental health status and compared depression stratified by HIV status.
- We used a Modified Poisson regression model estimating risk ratios (RR) and corresponding confidence intervals (CI) to determine the effect of HIV status on nutritional knowledge.



## Results - 3

- Overall, 64/124 (51.6%) mothers had moderate nutrition knowledge — 40.3% in HIV-positive women and 70.2% in HIV-negative women. About 60/124 (48.4%) had poor nutrition knowledge -59.7% in HIV-positive women and 29.8% in HIV-negative women. (Fig 1)
- The cRR of HIV-positive women getting a moderate score for nutritional knowledge was 0.57 (CI: 0.41 – 0.80) when compared to HIV-negative women. (Fig 2)
- Among the 80 mothers with self-reported mental health status data, half (50%) were HIV-positive (Figure 3). A minority (36.3%) experienced depression, with 11 (13.8%) having low to medium depression and 18 (22.5%) exhibiting severe depression.
- Depression rates were higher among HIV-positive mothers (52.5%) compared to HIV-negative mothers (20%). However, depression status was not significantly associated with nutrition knowledge score (Fig 2).

## Conclusion - 4

- Nutritional knowledge among mothers ranged from moderate to poor, with HIV-positive mothers predominantly exhibiting poorer knowledge levels.
- Women living with HIV have more interactions with health services and might have more opportunities to receive nutrition education, although this does not translate to a high nutritional knowledge.
- Mental health services in primary health care facilities in South Africa are widely insufficient and require more investment.

Figure 1 General nutrition knowledge by HIV status (N = 124)

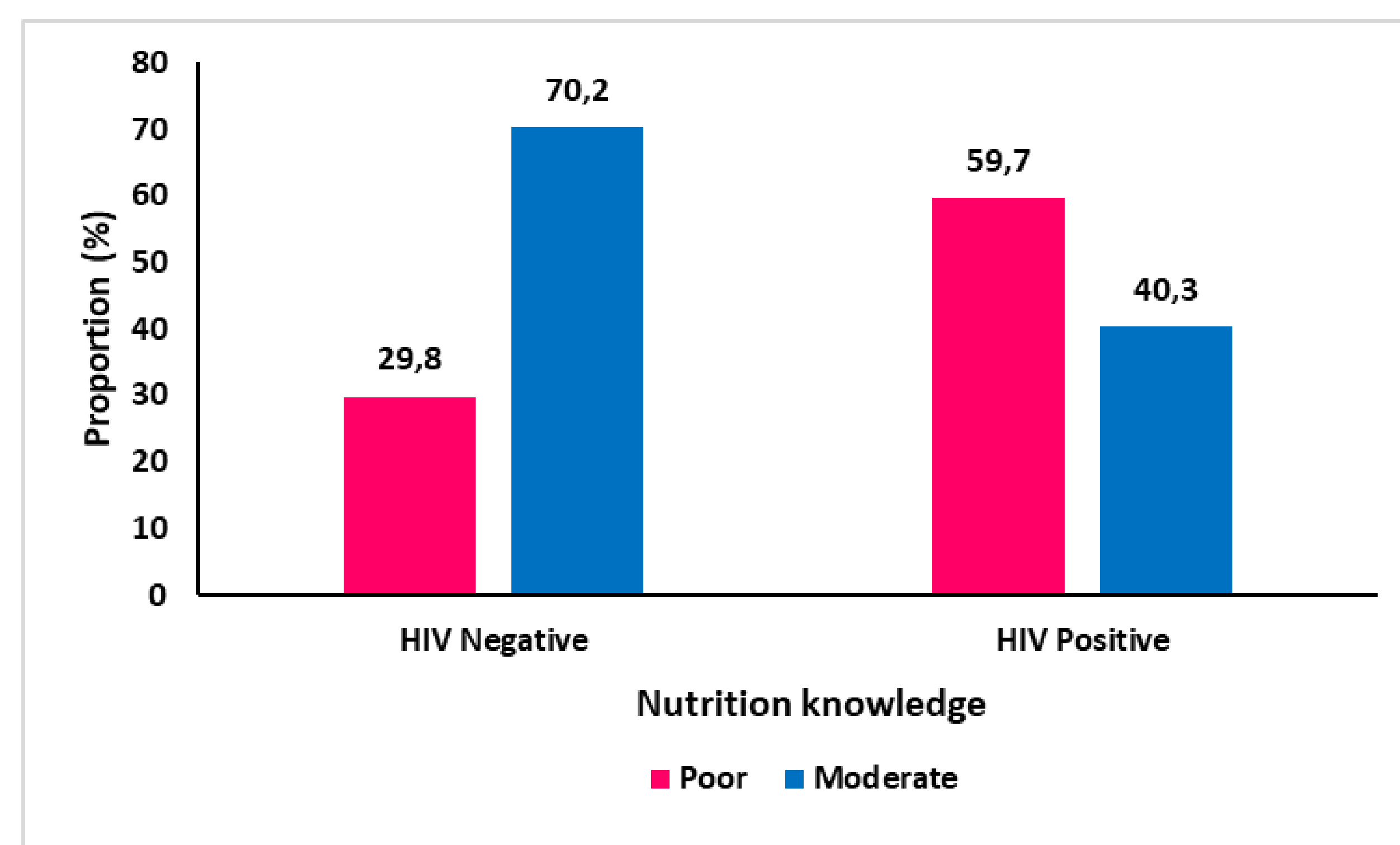


Figure 2 General nutrition knowledge regression analysis (cRR)

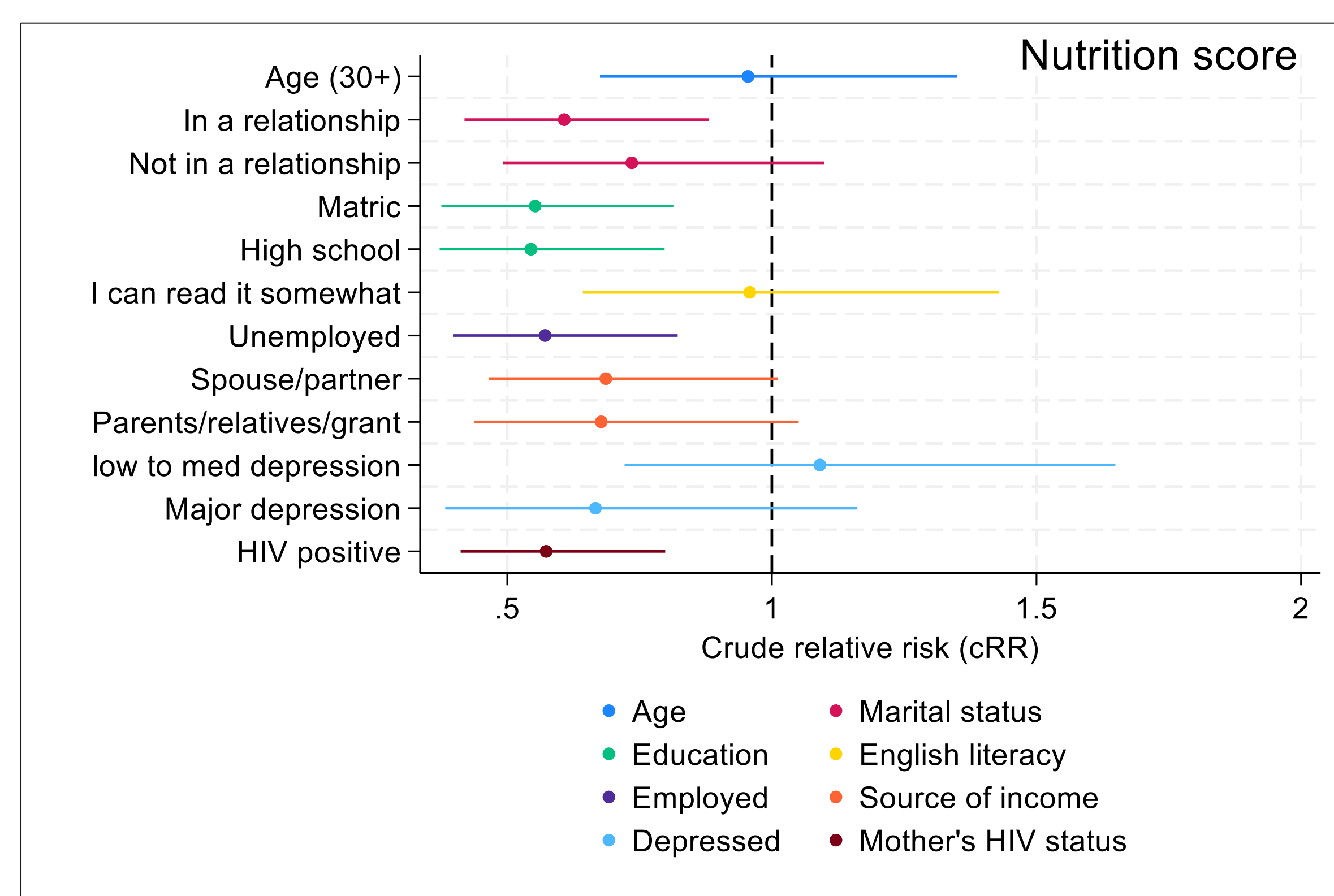


Figure 3 HIV status by depression N= 80

