



Teens just want to have fun: Association between substance use and weekend ART adherence amongst adolescents living with HIV in South Africa

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DISCLOSURE

I have no personal or financial conflict of interest in relation to this presentation.

OBJECTIVES AND METHODOLOGY

- **Research aim**

- Examine associations between excessive substance use and weekend adherence to anti-retroviral treatment (ART) amongst 10-21 years old adolescents living with HIV in South Africa

- **Methodology**

- Every 10-19 year old adolescent who ever initiated ART in an urban/rural health district of the Eastern Cape: 53 health facilities
- **1,065** adolescents living with HIV at baseline (90% of eligible participants)
- Community-tracing, 2-year longitudinal tracking (3rd year in progress)
- Clinic files and interview data using standardized questionnaires

- **Measurements (self-reported)**

- Excessive substance use the past three months
- ART Adherence (validated against viral load data)



ODK Collect > FIN...

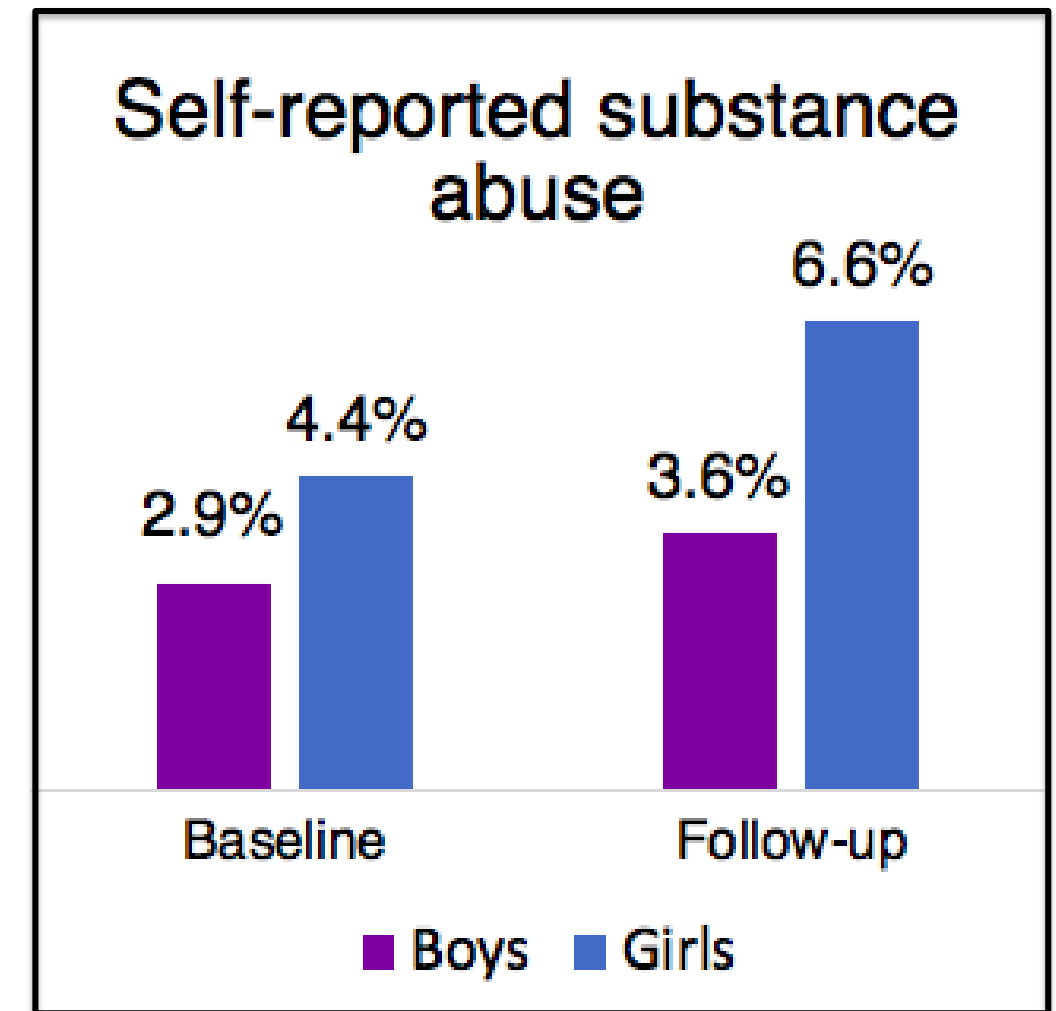
uLindiwe ukhe wabona umntu ehlatywa ngobunye ubusuku. Ingaba wakhe wabona umntu ehlatywa?



- Ewe, ngaphezulu konyaka odlulileyo
- Ewe, kunyaka odlulileyo
- Zange

SUBSTANCE USE & ART ADHERENCE RATES

- Low prevalence of substance use, with a slight increase between baseline and follow-up
 - 3.7% at baseline
 - 5.2% at follow-up
- Substance use rates are higher amongst female participants
- Weekend ART non-adherence:
 - 21.1% at baseline
 - 16.1% at follow-up



WHICH TEENS ARE MOST LIKELY TO REPORT HEAVY EPISODIC DRINKING AND/OR DRUG TAKING?

MULTIVARIABLE LOGISTIC REGRESSION USING THE CHANGE-IN-ESTIMATE METHOD

>15 years old (OR: 3.70, 95% CI: 1.81-7.57)

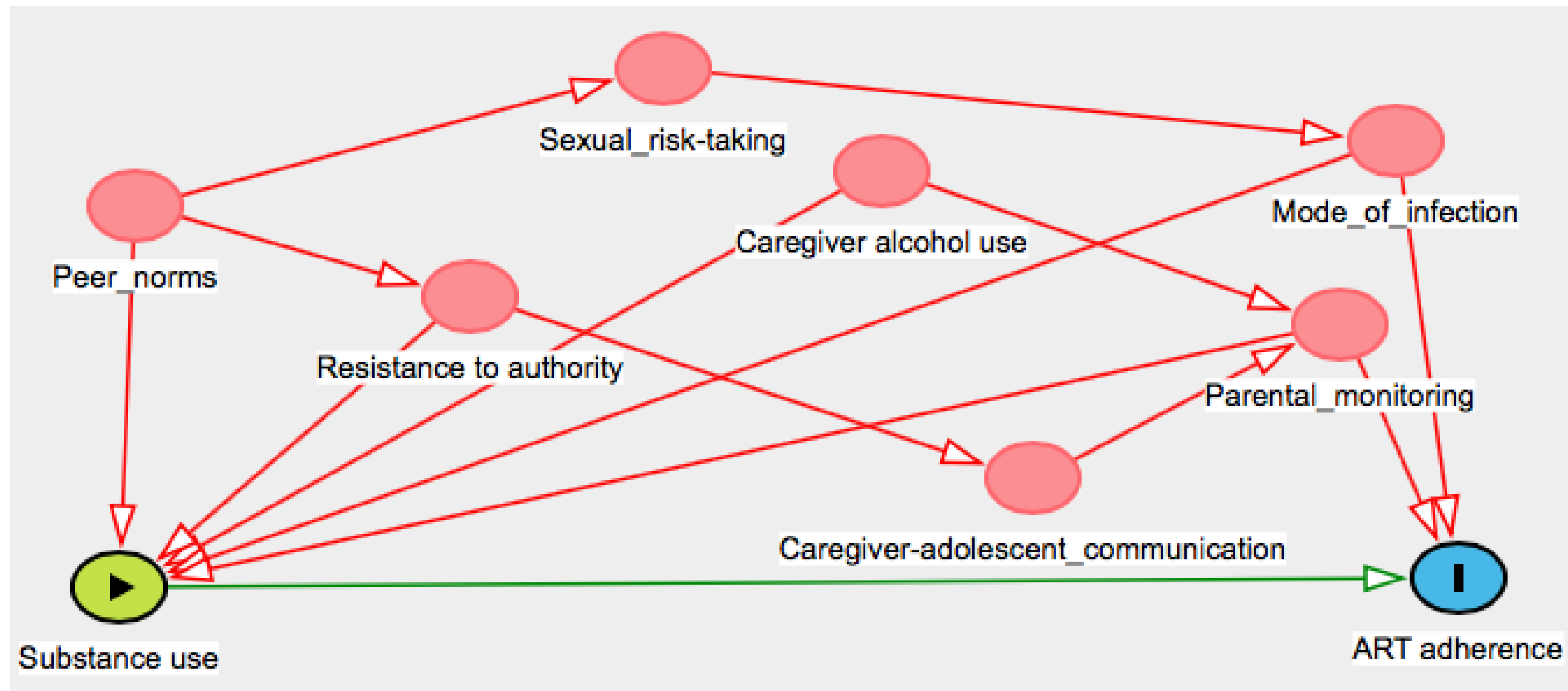
Horizontally infected (OR: 2.92, 95% CI: 1.61-5.28)

Maternally or paternally orphaned (OR: 2.09, 95% CI: 1.17-3.74)

In a relationship (OR: 2.21, 95% CI: 1.22-4.02)

Socio-demographic characteristics not retained in the model: gender, rural/urban location, home type (formal/informal)

COVARIATE SELECTION METHOD: DIRECTED ACYCLIC GRAPH



Minimal sufficient adjustment set for estimating the total effect of substance use on ART adherence: **parental monitoring and mode of infection**

RELATIVE RISK OF NON-ADHERENCE TO ART

POISSON REGRESSION WITH ROBUST VARIANCE CONTROLLING FOR BASELINE ADHERENCE, AGE, GENDER, PARENTAL MONITORING AND MODE OF INFECTION

Substance use and non-adherence to ART

Past weekday non-adherence:

IRR¹: 0.98, 95% CI: 0.64-1.50, P=0.937

Past weekend non-adherence

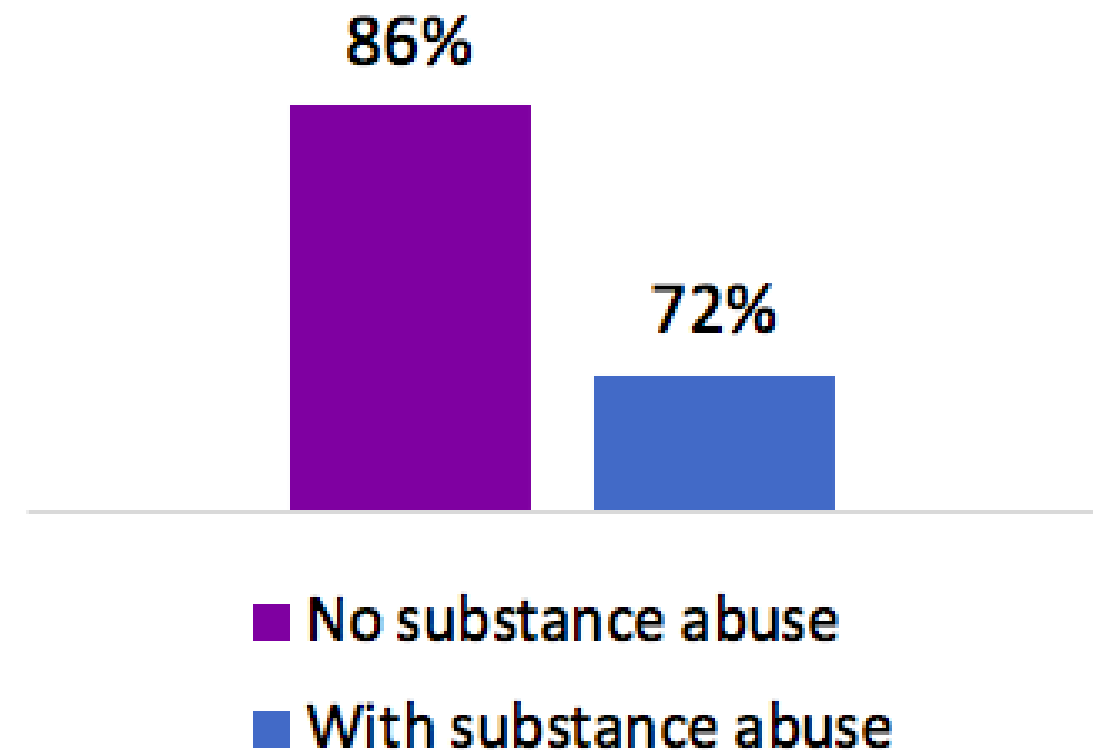
IRR: 1.95, 95% CI: 1.23-3.09, P=0.004

Past month non-adherence

IRR: 1.10, 95% CI: 0.94-1.29, P=0.233

¹ Incidence risk ratio

Adherence in the previous weekend ²



² Marginal effects analysis with covariates held at their mean values

CONCLUSION

Excessive substance use predicts week-end ART non-adherence for teens living with HIV



Implications for successful interventions and future research

- Current alcohol and drug abuse prevention: is it sufficient?
- Context-specific interventions need to take the lifestyle of adolescents into account
 - Regimens that do not include week-end dose (5 days on ART, 2 days off) or other flexible treatment approaches
- Strategies for young people to manage situations with a greater risk of ART non-adherence

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