

Evaluation of a support group for adolescents and youth living with HIV in South Africa

LESSONS LEARNED FOR IMPROVED PROGRAMMING

Background

Worldwide, more than 1.7 million adolescents are living with HIV, including an estimated 320,000 in South Africa^a. Adolescents and young adults living with HIV (AYLHIV) in sub-Saharan Africa experience poorer health outcomes than adults, including lower adherence to antiretroviral therapy (ART) and virologic suppression^b. This group is also characterized by high rates of unprotected sex, increasing the risk of adverse sexual health outcomes and onward transmission^c. Limited research exists on effective programming for improving health outcomes among AYLHIV^{d-e}. The purpose of this study was to identify modifiable factors for interventions while evaluating the effects of a structured support group for AYLHIV in South Africa.

Methods

Participants included male and female AYLHIV aged 14 – 24 years old, aware of their status, and enrolled in Vhutshilo 3 support groups in urban communities of Gauteng and KwaZulu Natal provinces of South Africa. Within each eligible site, all members of Vhutshilo 3 that commenced operation between June 2019 and March 2020 were invited to participate in the baseline survey (n = 128 groups).

During this same period, 548 individuals completed the Vhutshilo 3 intervention, and baseline and follow-up surveys approximately 7.5 months apart. The COVID-19 pandemic interrupted in-person service delivery in March 2020 and data collection temporarily ceased. In March 2021, an additional phone survey reached 196 of the original baseline survey participants. Various sub-samples and analytical approaches were employed to explore key factors impacting the well-being of AYLHIV (see Figure).

The study was approved by the Social Behavioral Institutional Review Board at Tulane University in the U.S. and the Pharma Ethics Independent Research Ethics Committee in South Africa.

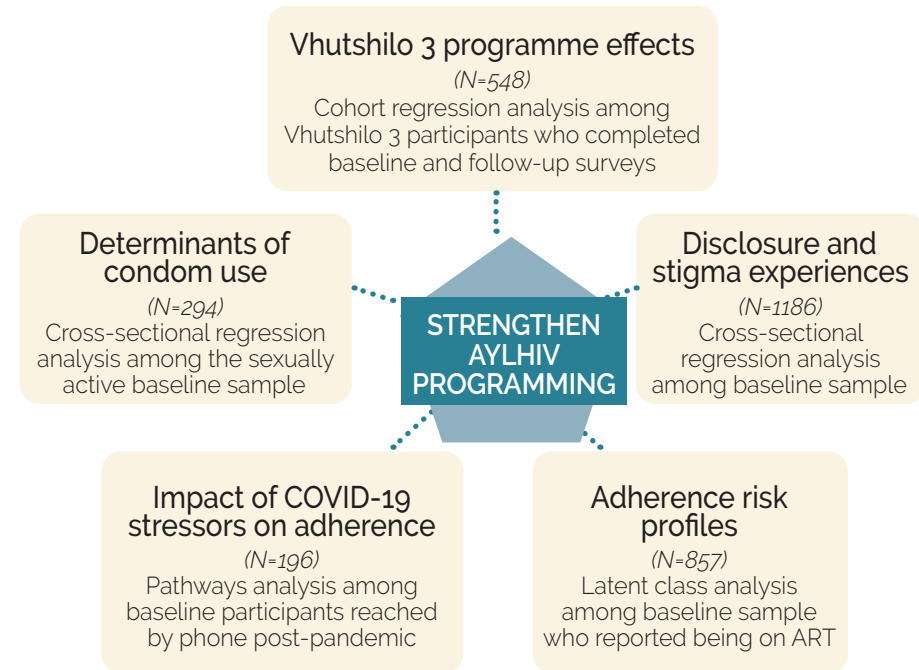


Figure. Sub-sample and analytical focal points

Intervention

Vhutshilo 3 is a structured curriculum delivered by trained facilitators to groups of 15-20 AYLHIV. It covers topics such as finding support, ART adherence, positive dating relationships, and avoiding risky sexual behaviour.

More information about Vhutshilo 3 available here:




Participating implementing partners were recipients of orphans and vulnerable children funding from the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) and United States Agency for International Development (USAID) Southern Africa and include:

- AFSA
- CINDI
- Community Care Project
- FHI360
- Future Families
- HIVSA
- NICDAM
- Youth for Christ



Key findings

Key risk factors amenable to intervention were associated with condom use.¹

77% 

77% of sexually active AYLHIV reported condom use at last intercourse.



Condom use was **less likely** among AYLHIV who were non-adherent to ART, increasing the possibility of onward transmission.

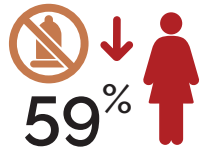


Drinking alcohol at least once per month was associated with **half the odds** of condom use.

↑ double



AYLHIV who had disclosed their status to their partner were **twice as likely** to use a condom.



Females were **59% less likely** to use a condom than males.



Respondents who learned their HIV status before age 13 had almost **triple the odds** of using a condom.

↑ triple

Knowledge of HIV status outside of the home can contribute to HIV-related mistreatment.⁴



Almost a quarter of AYLHIV experienced recent HIV-related mistreatment such as being treated badly and/or having lost friends because of their HIV status.



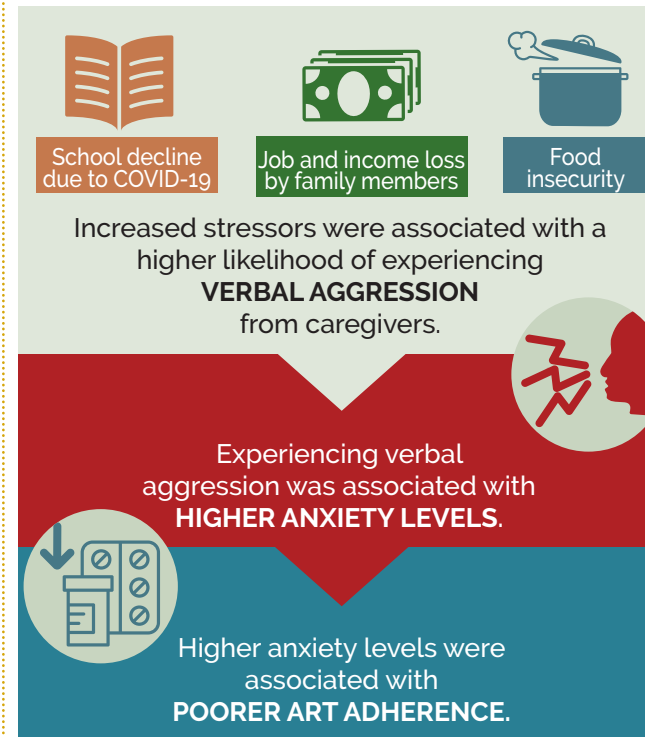
Just over half (55%) the sample reported a friend, teacher or sexual partner knew their status. Those with **non-family aware of their status had double the odds of experiencing recent HIV-related mistreatment.** Effects remained when examining each non-family relationship type individually.



School absences and food insecurity were also associated with HIV-related mistreatment and could be **indicators of deductive disclosure** of their HIV status.

Verbal aggression from caregivers and resulting adolescent anxiety contribute to poor adherence.²

Pathways analysis illustrated:



AYLHIV with multiple barriers to adherence can benefit most from targeted support.³

Understanding the complex, interrelated reasons for ART non-adherence may better inform intervention design and population engagement. Using latent class analysis, AYLHIV were classified into three subgroups:



85% self-reported few barriers to pill-taking including only occasionally missing a dose due to forgetting or because others were around



9% self-reported only missing doses due to feeling sick



6% reported missing doses due to multiple barriers:





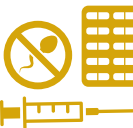
- forgetting
- side effect concerns
- feeling sick
- doubting ART effectiveness
- others around

Youth with multiple barriers were three times less likely to report ART adherence than youth who reported only occasionally forgetting or missing pills because others were around.

Contextual factors such as food security, being treated well at the clinic, and adult accompaniment to the clinic were also associated with higher ART adherence.

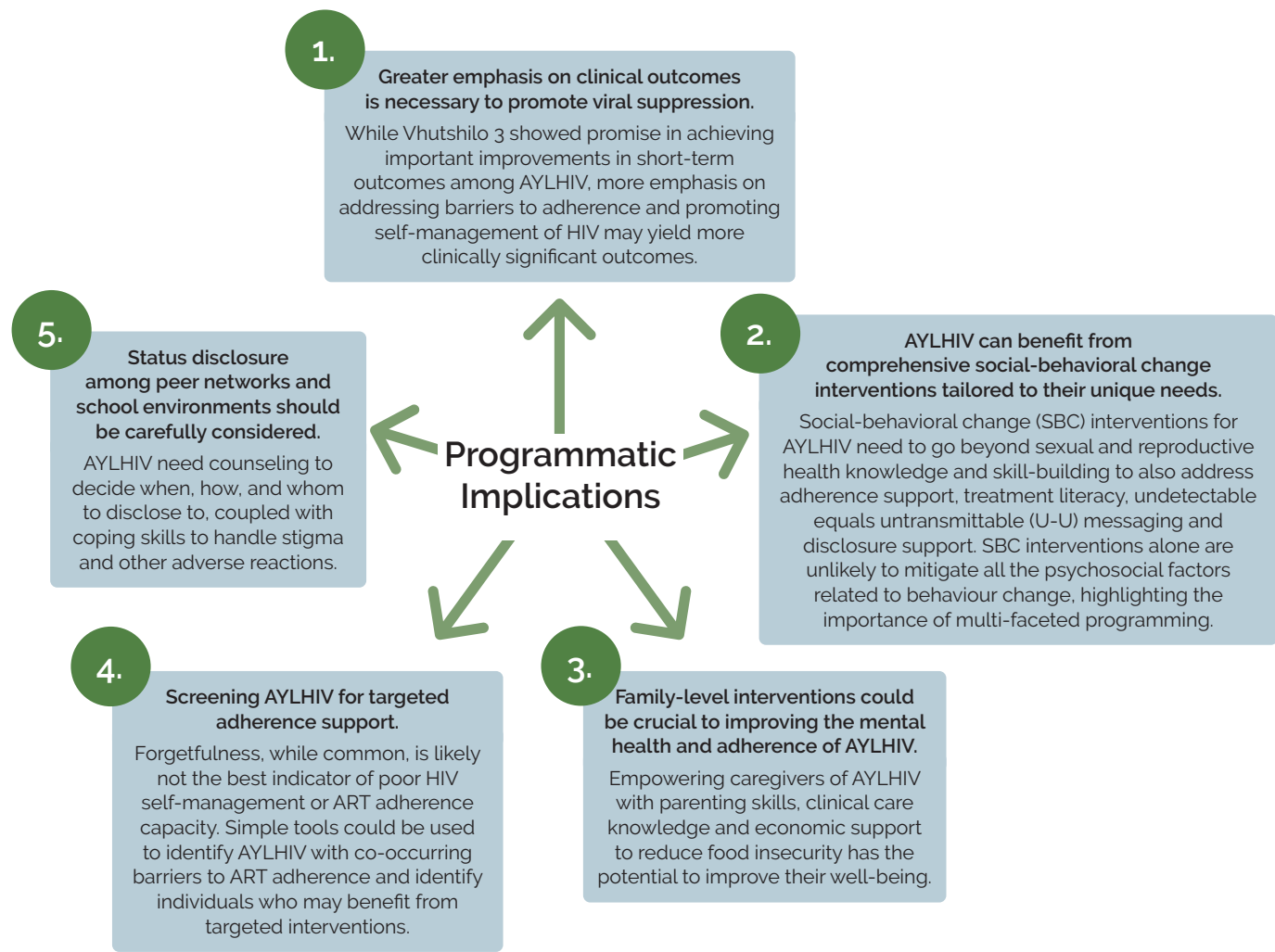
Support groups can improve AYLHIV well-being, including treatment adherence and sexual risk behaviour.⁵

At follow-up Vhutshilo 3 participants reported:

IMPROVED ART ADHERENCE	double the odds of being ART adherent	
IMPROVED SELF-REPORTED HEALTH	greater odds of good health and lower odds of poor health	
IMPROVED SCHOOL ATTENDANCE	half the odds of missing school for any reason	
SLIGHTLY BETTER TREATMENT KNOWLEDGE	improved understanding of the impact of CD4 counts and viral load and correct handling of missed ART doses	
SOME INCREASED CONTRACEPTION USE	double the odds of having used contraception (no changes in condom use) at their most recent sexual encounter	

Despite these achievements, significant care and treatment gaps remained with respect to ART uptake, adherence and HIV treatment knowledge.

There is significant potential for group-based support interventions to address an important gap in service provision for AYLHIV in South Africa by providing both treatment support and prevention education, which has critical individual and public health implications.



Limitations

- Self-reported measures are prone to recall and social desirability bias.
- Sample likely underestimates the impact on more disadvantaged AYLHIV given their enrolment in PEPFAR programming.
- Generalisability may be further limited due to urban study setting.
- Analyses exploring determinants rely on cross-sectional study design which limits causal inferences.
- Programme evaluation had a short follow-up period, smaller-than-expected sample, and lacked a control group.
- The COVID-19 pandemic interrupted the possibility to explore multi-faceted and longer-lasting programming effects.

Citations

All articles are open access and available from the links below and Tulane University's Highly Vulnerable Children Research Center (HVC-RC) website.

- 1 Thurman, T. R., Taylor, T. M., Lockett, B., Spyrelis, A., & Nice, J. (2023). Condom use correlates among youth living with HIV in South Africa: lessons for promoting safer sex. *Vulnerable Children and Youth Studies*, 19(1), 211-222. <https://doi.org/10.1080/17450128.2023.2282959>
- 2 Zani, B., Lockett, B., & Thurman, T. R. (2024). COVID-19 pandemic stressors, familial discord, and anxiety among adolescents living with HIV in South Africa: pathways to non-adherence. *AIDS Care*, 36(sup1), 137-144. <https://doi.org/10.1080/09540121.2024.2308025>
- 3 Nice, J., Thurman, T. R., Lockett, B., & Zani, B. (2024). Disclosure and experiences of HIV-related stigma among adolescents and young adults living with HIV in South Africa. *AIDS and Behavior*. <https://doi.org/10.1007/s10461-024-04487-9>
- 4 Nice, J., Saltzman, L., Thurman, T. R., & Zani, B. (2024). Latent class analysis of ART barriers among adolescents and young adults living with HIV in South Africa. *AIDS Care*, 36(sup1), 45-53. <https://doi.org/10.1080/09540121.2024.2307389>
- 5 Thurman, T. R., Lockett, B., Zani, B., Nice, J., & Taylor, T. M. (2024). Can support groups improve treatment adherence and reduce sexual risk behavior among young people living with HIV? Results from a cohort study in South Africa. *Tropical Medicine and Infectious Disease*, 9(7), 162. <https://doi.org/10.3390/tropicalmed9070162>

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Endnotes

- a UNICEF. Key HIV epidemiology indicators for children and adolescents aged 0–19, 2000–2021. <https://data.unicef.org/topic/hiv-aids/> (2022). Accessed 2024.
- b Simbayi, L. et al. (2019). South African national HIV prevalence, incidence, behaviour and communication survey, 2017. HSRC Press. <https://hsrcpress.ac.za/product/south-african-national-hiv-prevalence-incidence-behaviour-and-communication-survey-2017/>
- c Zgambo, M., Kalembo, F. W., & Mbakaya, B. C. (2018). Risky behaviours and their correlates among adolescents living with HIV in sub-Saharan Africa: a systematic review. *Reprod Health*, 15(1), 180. <https://doi.org/10.1186/s12978-018-0614-4>
- d Casale, M., Carlqvist, A., & Cluver, L. (2019). Recent Interventions to Improve Retention in HIV Care and Adherence to Antiretroviral Treatment Among Adolescents and Youth: A Systematic Review. *AIDS Patient Care STDS*, 33(6), 237-252. <https://doi.org/10.1089/apc.2018.0320>.
- e Ridgeway, et al. (2018). Interventions to improve antiretroviral therapy adherence among adolescents in low- and middle-income countries: A systematic review of the literature. *PLoS One*, 13(1), e0189770. <https://doi.org/10.1371/journal.pone.0189770>

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