

Peer Education Intervention to Reduce Substance Use in Southern Africa: Preliminary Findings from a Southern Africa Pilot Study



Tara Carney, PhD

**Specialist Scientist: Mental Health, Alcohol, Substance
Use and Tobacco Use Research Unit
South African Medical Research Council**



The South African Medical Research Council

recognizes the catastrophic and persisting consequences of colonialism and apartheid, including land dispossession and the intentional imposition of educational and health inequities.

Acknowledging the SAMRC's historical role and silence during apartheid, we commit our capacities and resources to the continued promotion of justice and dignity in health research in South Africa.



transformation
WORKING TOGETHER FOR EXCELLENCE



Jennifer Belus, PhD

University Hospital Basel
(Switzerland)



Tara Carney, PhD

SA Medical Research Council
South Africa



Beatrice Chiyokoma, MPH

SolidarMed Zambia



Kuda Madzeke, PhD

SolidarMed Zimbabwe



Anitha Menon, PhD

University of Zambia

The Scientific Team



UNIVERSITY OF ZAMBIA



Swiss National
Science Foundation



BACKGROUND

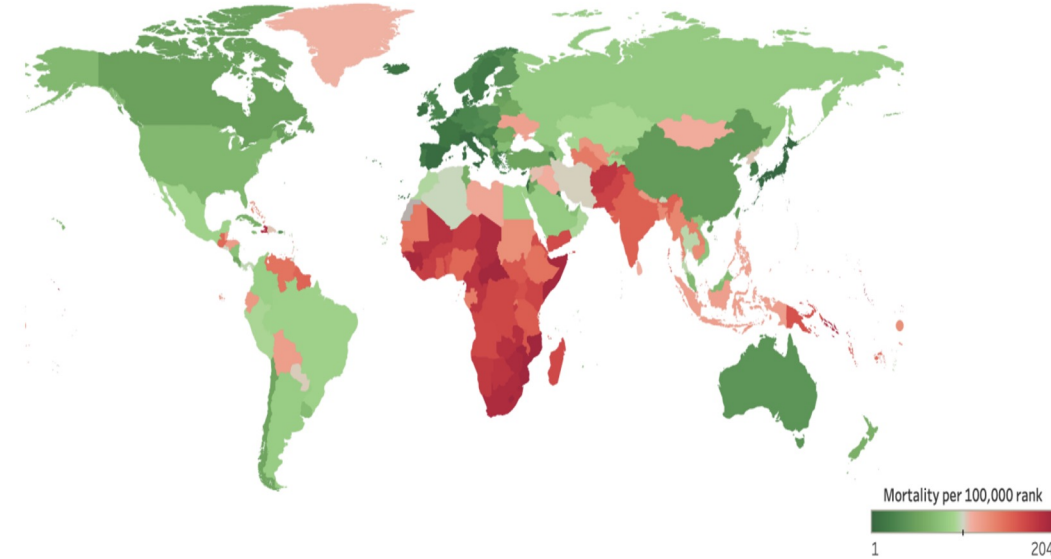
Current Issues Facing Adolescents and Young People in Sub-Saharan Africa

Large youth population in Sub-Saharan Africa, with high levels of poverty and unemployment

Only region in the world with rising mortality among **adolescent and young adults** aged 16 – 24 years old (GBD 2019 Adolescent Collaborators et al., 2021)

Substance use during this critical stage is a prevalent coping mechanism (Olawole-Isaac et al., 2018) which increases the risk of **mortality and morbidity** across the lifespan (Bryazka et al., 2022)

Internalization of **traditional gender norms** tends to co-occur alongside substance use (Jumbe et al., 2025) and is similarly



Global rank for mortality rate in 15-19 olds



METHODS

Description of Pilot Test



Work with selected **vocational training programmes**

Train potential interventionists on **PEGISUS intervention**

Pilot test intervention with **N~15** AYA peer groups ($n \sim 5$ per country: South Africa, Zambia, Zimbabwe)

Determine **pre- and post-intervention** changes in substance use and gender equity beliefs

Determine **feasibility and acceptability** of intervention

Final **intervention; training adapted**

Eligibility Criteria



Youth 16-24 years old



≥ weekly AOD use with peers



**Moderate or severe risk of
unhealthy AOD use**

Involvement of Adolescents and Young Adults

Question: Is this new intervention culturally-appropriate, feasible and acceptable?



- Not Research Participants
- 2 Youth Advisory Boards per country



- 12 FGDs (4 per country)
- N=120 participants
- Current substance use

**Suggested
Activity Change
and Length**

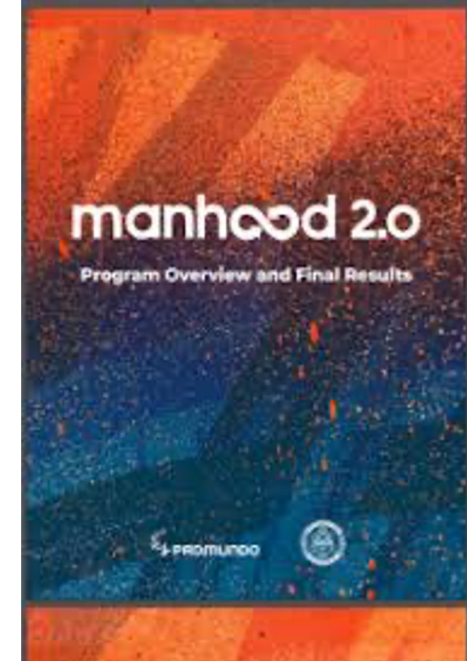
Study Logo

**Intervention
Delivery**

Evidence-based substance use reduction for AYAs



Evidence-based gender equity beliefs components





PEGISUS Intervention Overview

Focus on challenges that are specifically pertinent to **Southern African** context

Consist of **eight** workshops

Manualized with handbook

Aimed at **peers** who use substances supporting each other

Covers **substance use and gender norms** and how these interact

Includes short-term and long-term **goals** for adolescents and young people





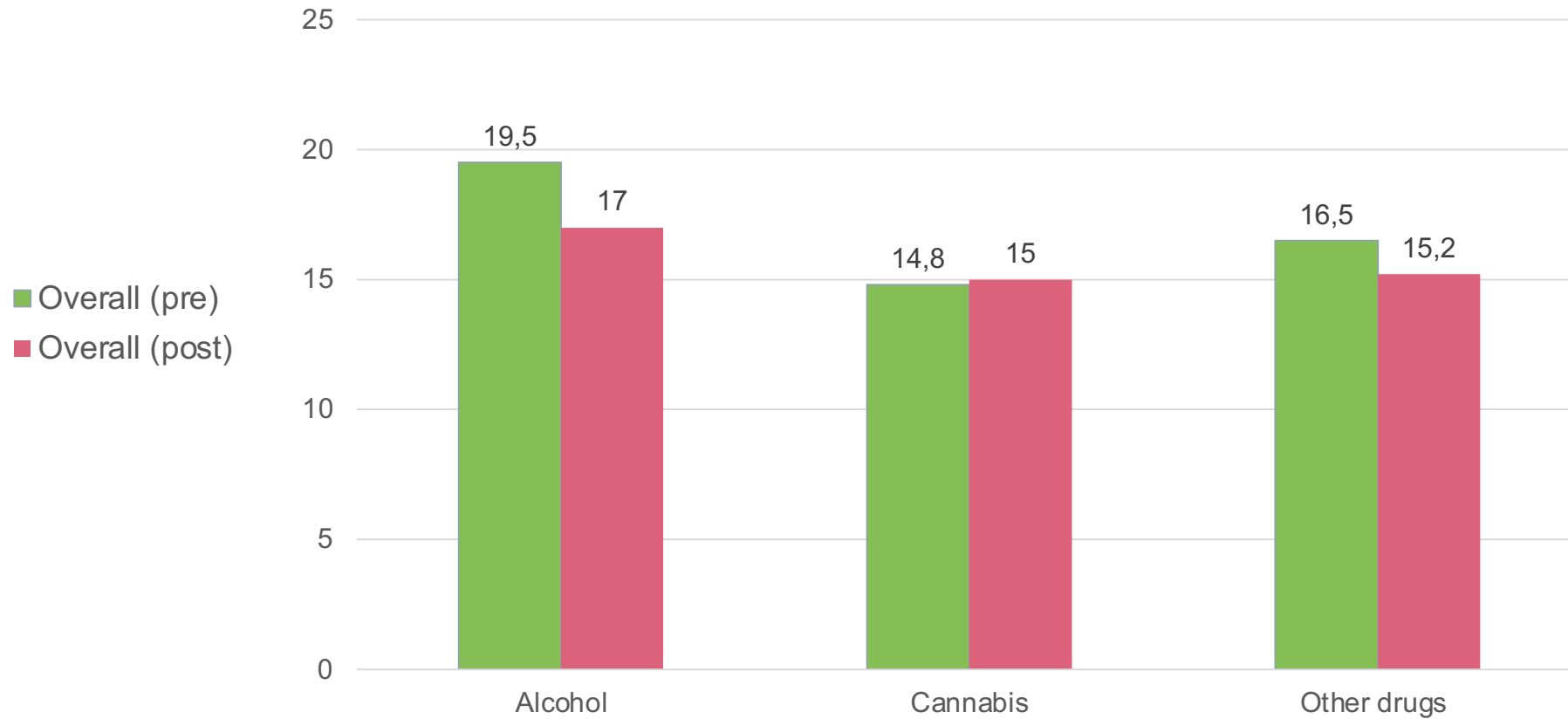
RESULTS

Sociodemographic and Clinical Descriptive Statistics

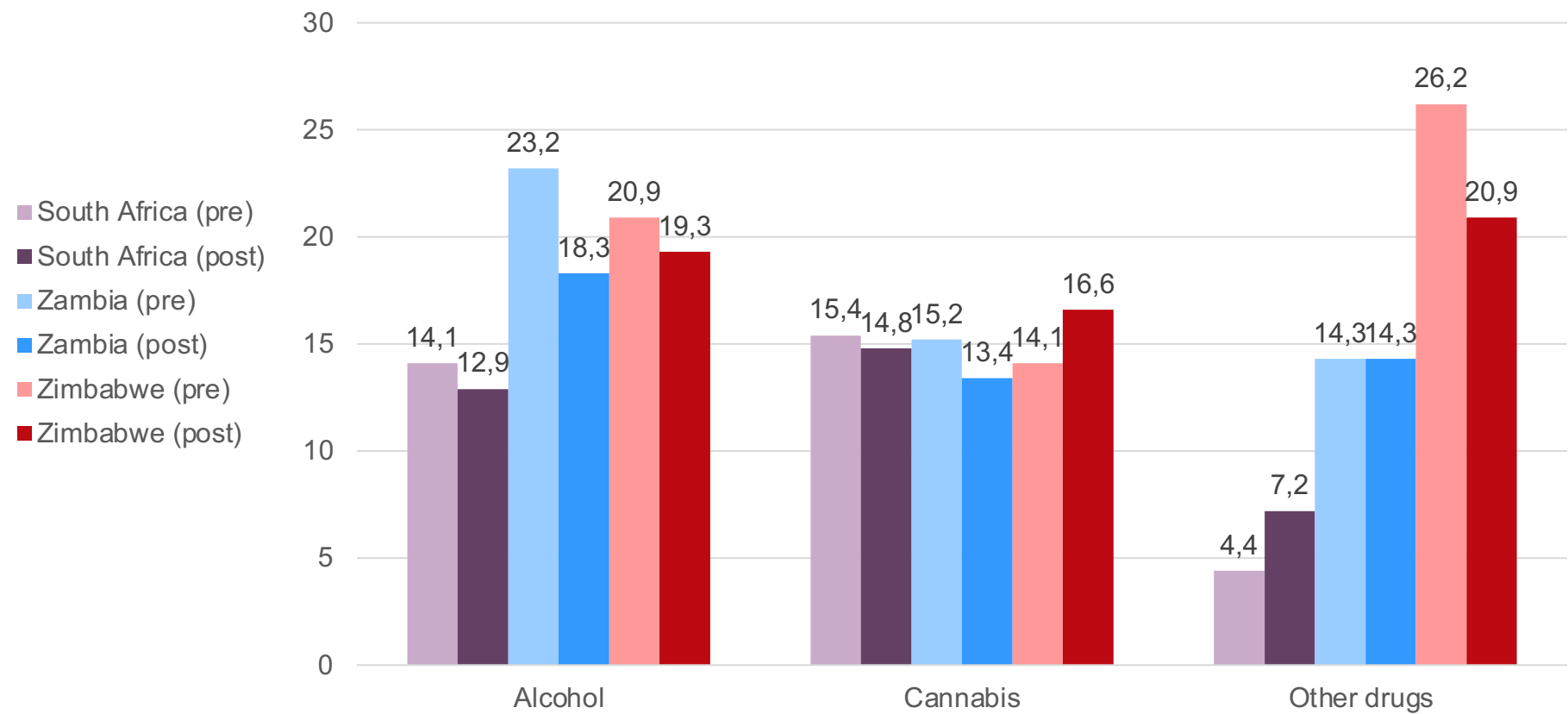
	Overall sample (n=57)	South Africa (n=17)	Zambia (n=16)	Zimbabwe (n=24)
Female, % (n)	30 (53%)	13 (76%)	3 (19%)	14 (58%)
Age, M (SD)	19.6 (2.2)	18.4 (1.5)	21.2 (2.0)	19.3 (2.2)
Education level, % (n)				
Did not complete high school	40 (70%)	17 (100%)	10 (63%)	13 (54%)
Completed high school	14 (25%)	0 (0%)	3 (19%)	11 (46%)
Tertiary education	3 (5%)	0 (0%)	3 (19%)	0 (0%)
Household SES				
Employment status, % (n)				
Student	22 (39%)	16 (94%)	6 (38%)	0 (0%)
Employed	6 (11%)	0 (0%)	3 (19%)	3 (13%)
Unemployed	29 (51%)	1 (6%)	7 (44%)	21 (88%)
Ever referred for substance use treatment, % (n)	2 (3.5%)	0 (0%)	0 (0%)	2 (8.3%)
Depression and anxiety symptoms (K10), M (SD)	26.6 (7.4)	28.4 (5.9)	24.7 (8.2)	26.8 (7.7)
Total # of peer groups	18	8	5	5
Members per peer group, M (SD)	3.17 (1.20)	2.13 (0.35)	3.20 (0.45)	4.80 (0.45)

Overall ASSIST Scores

Enrolled $N=57$ participants, 18 peer groups total (2 – 5 peers/ group)



Substance Use by Country



Gender Equity Beliefs



Linear Mixed Effects Model

	Alcohol	Cannabis	Other drugs
Number of individuals (clusters)	57 (18 clusters)	45 (18 clusters)	26 (13 clusters)
Mean change	2.5 (p<0.01*)	0.2 (p=0.94)	1.3 (p=0.74)
Individual variability	21.55	43.82	386.04
Contribution from clusters	12.34	0.00	0.00
Age	1.18 (p<0.01*)	0.05 (p=0.72)	0.67 (p=0.72)
Gender	2.11 (p=0.31)	2.72 (p=0.46)	6.44 (p=0.46)
Country difference			
<i>Zambia</i>	7.19 (p<0.01*)	3.09 (p=0.80)	8.49 (p=0.47)
<i>Zimbabwe</i>	2.15 (p<0.01*)	2.89 (p=0.98)	17.76 (p=0.15)

Acceptability and Feasibility of PEGISUS Intervention

	Overall N=56	South Africa N=17 (1 missing)	Zambia N=16	Zimbabwe N=23
Acceptability, M (SD)	43.6 (2.5)	42.9 (3.4)	42.5 (2.5)	44.8 (0.6)
Feasibility, M (SD)	37.3 (6.5)	40.3 (2.7)	29.8 (5.3)	40.4 (4.5)
Appropriateness, M (SD)	36.6 (3.3)	34.2 (3.8)	36.5 (3.3)	38.3 (1.2)



NEXT STEPS



Substance use and
gender equity beliefs
intervention in peer
groups

**Aim 1: ADAPT
INTERVENTION**

Evidence-based
interventions,
adapted for AYA
peer groups



Vocational training
institutions

**Aim 2: TEST
INTERVENTION**

Randomised
controlled trial



AYA improved
health & quality of
life

**Aim 3: PREPARE
FOR SCALE-UP**

Identify sites for
successful scale-
up

References

GBD 2019 Adolescent Mortality Collaborators (2021). Global, regional, and national mortality among young people aged 10-24 years, 1950-2019: a systematic analysis for the Global Burden of Disease Study 2019. *Lancet*, 398(10311), 1593–1618.

[https://doi.org/10.1016/S0140-6736\(21\)01546-4](https://doi.org/10.1016/S0140-6736(21)01546-4)

Olawole-Isaac, A., Ogundipe, O., Amoo, E. O., & Adeloye, D. (2018). Substance use among adolescents in sub-Saharan Africa: A systematic review and meta-analysis. *South African Journal of Child Health*, 12(SPE), s79–s84. <https://doi.org/10.7196/SAJCH.2018.V12I2.1524>

Bryazka, D. et al. (2022). Population-level risks of alcohol consumption by amount, geography, age, sex, and year: a systematic analysis for the Global Burden of Disease Study 2020. *The Lancet*, 400(10347), 185–235. [https://doi.org/10.1016/S0140-6736\(22\)00847-9](https://doi.org/10.1016/S0140-6736(22)00847-9)

Heise, L. et al. (2019). Gender inequality and restrictive gender norms: framing the challenges to health. *The Lancet*, 393(10189), 2440–2454. [https://doi.org/10.1016/S0140-6736\(19\)30652-X](https://doi.org/10.1016/S0140-6736(19)30652-X)

Jumbe, S., Mwenda Kamninga, T., Kalu, U. G., Nyali, J., Saleh, L., Newby, C.,

M (2025). A systematic review and meta-analysis of factors associated with ac

Thank you

For more information contact:
tara.carney@mrc.ac.za

