

Author reflexivity Statement

1. How does this study address local research and policy priorities?

At the start of this study, the HIV prevalence in Zimbabwe was about 12.7% among adults aged 15 to 49 years. (1) HIV continues to have a major impact on morbidity and mortality in Zimbabwe. Attrition from antiretroviral therapy (ART) remains a serious challenge. Thus, new methods of care are needed that address risk factors to adherence to ART that have not been considered sufficiently. In Zimbabwe, as in all sub-Saharan Africa, religion/spirituality (R/S) plays a major role in daily life, substantially influencing people's health behaviour. Local researchers published research stating that people living with HIV in Gweru Zimbabwe defaulted medications because they believed in faith healing, alternative medicines, perceived spirituality as the main cause of HIV and AIDS and that they had an allegiance to church values. Thus, these local researchers urged to harmonise religion and HIV and AIDS treatment. (2) Local HIV organisations like Zvandiri have recognised the need for new and innovative ways of care that consider aspects of R/S in the care of HIV patients. They conducted a study where up to 73% of deaths of young people living with HIV were due to cessation of ART sanctioned by caregivers, probably motivated by faith healing. (3) Thus, this research was designed and conducted alongside and in collaboration with one of Zvandiri's senior researchers and other local organisations. The National Institute of Health Research, the Research Council Zimbabwe, and the Medical Research Council Zimbabwe approved the study.

2. How were local researchers involved in study design?

The research was the product of wide collaboration. Local collaborators included Zvandiri, the National Institute of Health Research, INERELA Zimbabwe, and the Traditional Practitioners Council. Additionally, several local religious leaders, and different medical practitioners all gave their input on the content of the research proposal. The final validation of the proposal was done by the National Institute of Health Research.

3. How has funding been used to support the local research team?

S.M. received seed money from her institution (Swiss TPH) to support the study. The money was used to pay salaries to A.M. and the data collection team and to cover most other expenses, like government fees, transport fees, the requested remuneration of participants, and all publication costs. SM and U.W. did not receive any salary for this study. Except A.M, no other senior researchers received financial support. They are however co-authors of articles from this study. Paying all the expenses plus providing a salary enabled A.M. and the data collection team to conduct this research. After the research, all members of the data collection team were given recommendation letters to increase their chances of employment in future research projects.

4. How are research staff who conducted data collection acknowledged?

A.M. and the data collection team are mentioned in the patient and public involvement section. A.M. is included as author.

5. Do all members of the research partnership have access to study data?

All members of the partnership have access to data upon request.

6. How was data used to develop analytical skills within the partnership?

S.M. instructed U.W. how to do the analysis. During the analysis process U.W., A.M. and S. M. regularly discussed the analysis and the findings.

7. How have research partners collaborated in interpreting study data?

U.W.-G discussed the data findings with S.M. A.M., C.M., and with all members of the data collection team. Were the findings relevant? Did they reflect the experience of A.M. C.M. and the data collectors? Were there missing aspects that needed to be addressed? Besides Zvandiri, the findings were also discussed and validated with INERELA Zimbabwe, the local Swiss Development Cooperation team, the medical staff of a local HIV-Clinic, the Zimbabwe National Network of People living with HIV (Znnp+), and a local NGO working with people living with HIV.

8. How were research partners supported to develop writing skills?

The research team of this paper is predominantly composed of senior academics. U.W.-G. who is an early career researcher was supported by the senior academics (S.M. U.W. A.M. and M.M.-M.) to develop and refine her writing skills.

9. How will research products be shared to address local needs?

All papers resulting from this research (=mother study) will be published as open access. The final report of the entire research will be shared with the Zimbabwean Medical Research council and the Research Council. The findings of this research have already been presented and discussed with various local organisations and stakeholders (Zvandiri, INERELA Zimbabwe, Newlands Clinic, Znnp+, Katzwe Sistaheed, local Swiss Development Cooperation team, and to 200 individual guests from different ethnic, religious, economic, gender, age etc. backgrounds).

Two additional abstracts, a proposal for a podium discussion between religious, traditional, and medical health practitioners, and a film about the impact of Covid-19 on people living with HIV have been submitted to the International Conference on AIDS and STIs in Africa. This will allow the engagement with research leaders in global health and other fields involved in international collaborations, with potential journal signatories based in both high-income countries and low- and middle-income countries; and with journalists, again both based in high-income countries and low- and middle-income countries.

10. How is the leadership, contribution and ownership of this work by LMIC researchers recognised within the authorship?

Authors U.W.-G. and S.M. worked as authorship team in developing this manuscript, and their contribution has been recognised as first and last authors respectively. We have specifically included researchers based in the global south (A.M., C.M., N.M. and M.M.-M.) within the authorship team. We acknowledge, however, that the first and last author originate from high-income countries. The primary reason for this is that the initiative has been driven from U.W. and S.M. in compliance with U.W.'s PhD studies.

11. How have early career researchers across the partnership been included within the authorship team?

U.W. is the only early career researcher within the authorship team. We acknowledge that she originates from a high-income country, but she was resident in Zimbabwe for the entire time of this research.

12. How has gender balance been addressed within the authorship?

Five authors are female (U.W.-G., A.M., U.W., M.M.-M., and S.M.) and two authors male (N.M., and C.M.)

13. How has the project contributed to training of LMIC researchers?

The authorship team is primarily composed of senior researchers. All the authors based in low- and middle-income countries are especially senior researchers. Private funding leveraged as part of this project was used to employ and train the local data collection team.

14. How has the project contributed to improvements in local infrastructure?

This project has not directly contributed to improvements in local infrastructure.

15. What safeguarding procedures were used to protect local study participants and researchers?

The study conforms to the principles embodied in the Declaration of Helsinki. All open-source data is anonymised. The research tool had inbuilt red flagged answers for participants who needed referral to local counsellors. The data collectors were debriefed regularly and mentally supported. All Covid-19 regulations were respected during the research process.

1. Unaid. UNAIDS Countryreport 2019 [Internet]. [cited 2020 Nov 16]. Available from: https://www.unaids.org/sites/default/files/country/documents/ZWE_2019_countryreport.pdf
2. Mutambara J, Sodi T, Mtemeri J, Makomo M. Harmonizing religion and health: an exploration of religious reasons for defaulting ARVs among people living with HIV and AIDS in Gweru, Zimbabwe. *AIDS Care*. 2021 Mar 4;33(3):383–8.
3. Mavhu W, Willis N, Mufuka J, Bernays S, Tshuma M, Mangenah C, et al. Effect of a differentiated service delivery model on virological failure in adolescents with HIV in Zimbabwe (Zvandiri): a cluster-randomised controlled trial. *Lancet Glob Health*. 2020 Feb;8(2):e264–75.