

Orphanhood, Gender, and HIV Infection among Adolescents in South Africa: A Mixed Methods Study

Introduction

Adolescents in Southern Africa experience some of the highest rates of HIV incidence in the world, and each year, half of new HIV infections occur in young people aged 15-24 [1]. Southern Africa remains the sub-region most affected by the HIV pandemic, with one third of the world's population of HIV infected persons [2], and South Africa has high levels of HIV typical of the sub-region [3, 4]. HIV prevalence rises from almost zero among adolescents 15 and under to over 43 percent among youth 21-25 in one high prevalence community [5]. In addition to high HIV incidence, adolescents in South Africa are burdened by extremely high rates of orphaning. Between 20 and 25 percent of adolescents aged 15-18 [8, 9] and over 27 percent of 15-24 year olds [10] have lost a parent for any reason in South Africa. In 2005, 15.2 percent of 15-24 year olds had lost one or both parents because of AIDS [8].

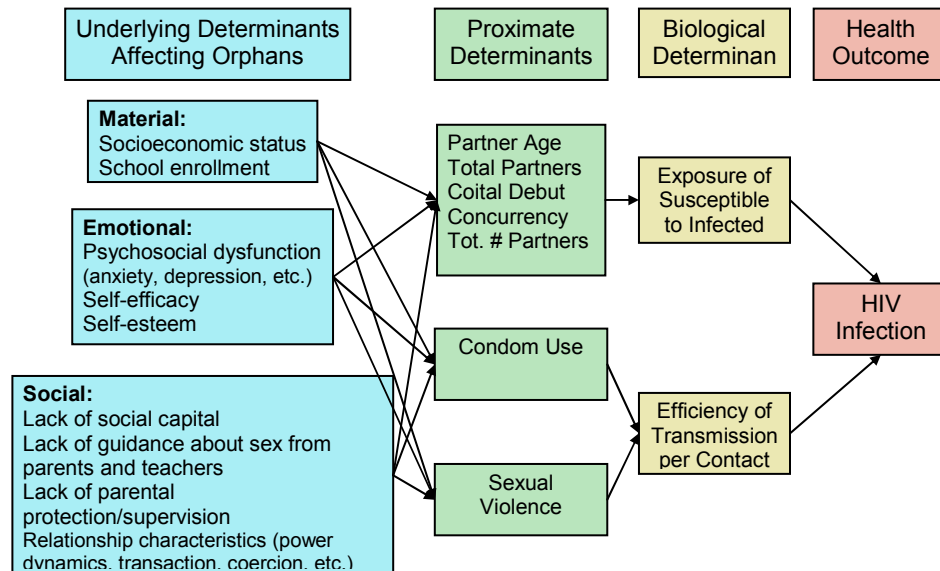
Limited data suggests that adolescent orphans are especially vulnerable to HIV infection. Maternally orphaned female adolescents in Zimbabwe [11] and females 15-24 who have lost either parent in South Africa [10] experience higher HIV prevalence than their peers. In addition, orphanhood has been documented as a factor in risky sexual behavior among South African adolescents [12]. This study provides a unique opportunity to examine the relationship between orphanhood and HIV among young people aged 15-24 in communities with high HIV prevalence [13]. Using survey data, HIV prevalence by status as a maternal, paternal, double, or non-orphan is described for male and female adolescents age 15-24 and the association between orphanhood and HIV risk factors is examined. In addition, focus group and interview data describe factors that influence orphan sexual debut and sexual partnerships in two South African communities.

Conceptual Framework

The Boerma and Weir Proximate Determinants Framework for Factors Affecting Sexual Transmission of HIV [14] is used as a conceptual framework for understanding the effect of orphan status on HIV transmission risks for adolescents. The model illustrates how underlying and proximate determinants affect HIV transmission through exposure of HIV susceptible persons to HIV infected persons and efficiency of transmission. Orphaned adolescents acquire sexually transmitted HIV infections through the same proximate and biological determinant pathways as

their non-orphaned peers, although orphan contextual factors are likely to increase their exposure to many risky partnership and behavioral patterns. A modified framework with orphan-specific underlying determinants is presented in figure 1.

Figure 1. Modified proximate determinant framework illustrating orphanhood as an underlying determinant of HIV infection among young people in South Africa



Survey Data Description and Methods

The HIV status and sexual risk behaviors of South African adolescents aged 15-24 are examined using data collected in 2002 by the Reproductive Health and HIV Research Unit (RHRU) of the University of the Witwatersrand. The RHRU 2002 Community Survey was a baseline evaluation of the impact of the national South African HIV prevention program loveLife. 8,735 youths were surveyed in 33 communities throughout South Africa to obtain baseline measures of the prevalence of adolescent infection with HIV, STDs, and related risk behavior [13]. The survey took place in 11 health districts within the 9 provinces of South Africa. Within each health district, youths were interviewed in one community with a loveLife Youth Centre, one community with a loveLife National Adolescent Friendly Clinic, and one control community. Adolescents in the community study have a higher prevalence of HIV infection (20 percent in females and 7.5 percent in males) than those surveyed in a similar national survey conducted in 2003 by the RHRU (15.5 percent in females and 4.8 percent in males) [13, 16].

In this paper, associations between orphanhood and HIV status by gender are assessed using logistic regression. In addition, the association between orphanhood and underlying and

proximate HIV determinants from the Proximate Determinants Model is assessed to evaluate the appropriateness of the model for describing pathways through which orphans experience heightened HIV risk. These determinants include coital debut, partner age difference, partnership characteristics such as power dynamics, violence, and transactional sex, lifetime number of partners, condom use, socioeconomic status, social capital, education, and knowledge about HIV. Orphan status is assessed as double, maternal, paternal, or non-orphan.

Qualitative Study Description and Methods

KwaZulu-Natal was selected as the region for the qualitative component of this study because of its extremely high HIV prevalence and the fact that it has the highest prevalence of orphanhood in South Africa [3, 9]. Two communities sociodemographically similar to the KwaZulu-Natal communities where the 2002 survey took place were chosen as study sites. In 2007, a total of 57 male and female adolescents aged 14-19 participated in focus group discussions in one urban and one high-density rural community. In each community, all youth aged 14-19 attending after-school programs offered by the orphan organization Nurturing Orphans of Africa for Humanity (NOAH) were invited to take part in the study. NOAH offers services to vulnerable as well as orphan youth and for ethical reasons, it was not deemed possible to single orphans out for study participation. Therefore, 12 study participants were youth identified as vulnerable because of poverty, abandonment, or difficult home situations due to problems such as parental alcoholism. The remaining 45 respondents (79 percent) had experienced the death of one or both parents.

Focus groups were chosen as the primary methodology for this study because in NOAH's experience, orphans feel more comfortable in group research situations than in individual interviews. Discussions were moderated in Zulu by a male or female field assistant, as appropriate, using a semi-structured focus group discussion guide. Focus groups were stratified by gender and age; older and younger male and older and younger female groups were formed at each site, based on the age of volunteers. Male groups met twice and female groups met 3 times for approximately one hour per session, resulting in a total of 12 female focus groups and 8 male groups. On average, groups contained 7 orphaned youth and 1 or 2 "vulnerable" youth. The orphan or vulnerable identity of each participant is identified in transcripts for analysis.

Focus group discussions utilized stories about young people involved in partnerships with younger, same age, and older partners, and explored HIV risk behaviors such as partnership formation, partner age, sexual debut, and condom use. Each scenario was tailored to the age group

of participants. For example, 14-16 year old girls are asked about scenarios involving 15 year old girls. Partner ages for each scenario were determined based on data from the literature. Additional female scenarios were included because of the wider range of female partner ages.

In addition, 26 semi-structured interviews were conducted in Zulu by field assistants or in English by the PI (as requested by 5 study participants) with 19 volunteers from the focus group study. Interviews complemented focus group findings by exploring sexual partnerships from an individual perspective in a context in which personal experiences could be discussed, and offered the opportunity to explore specific preliminary focus group findings from an alternate viewpoint. Discussions and interviews were digitally recorded and transcribed in English.

Preliminary Results

Orphanhood is associated with increased HIV prevalence among adolescent females but not among adolescent males in the 2002 survey. Analysis of selected proximate determinants shows that both male and female orphans have an earlier coital debut and older sexual partners on average than non-orphans of the same age. Each of these factors is positively associated with HIV infection for females, but not for males. A full assessment of the association between the proximate determinants of HIV risk and orphan status will be included in the final paper.

Preliminary analysis of a subset of qualitative transcripts suggests that the HIV risk behaviors of males and females are affected differently by orphanhood. Respondents of both genders reported that female orphans were especially motivated to engage in sexual partnerships for material and or emotional support. Females in particular felt that orphan girls who don't receive the material and emotional support they need at home are likely to meet these needs through sexual partnerships. On the other hand, male orphans have difficulty forming partnerships because of poverty; they are unable to provide material goods or entertainment that girlfriends often desire or require. Rural orphan males repeatedly discussed the necessity of having younger girlfriends with lower material expectations. Lastly, findings point to the role of problematic caregiver relationships in orphan HIV risk. A lack of care and supervision on the part of some caregivers, or a lack of respect for caregivers, was perceived to lead to "unmonitored time" for orphans to form partnerships and engage in sex. While some risks are similar for all orphans, preliminary results suggest that economic hardship may increase female orphan HIV risk and provide limited protection for males in the two study communities.

References

1. UNFPA, *State of World Population 2004*. 2004, United Nations Population Fund.
2. UNAIDS, *AIDS Epidemic Update: December 2006*. 2006.
3. DOH, *National HIV and syphilis antenatal sero-prevalence survey in South Africa 2004*. 2005, Department of Health.
4. UNAIDS and WHO, *AIDS Epidemic Update: December 2005*. 2005.
5. MacPhail, C. and C. Campbell, 'I think condoms are good but, aai, I hate those things': *condom use among adolescents and young people in a Southern African township*. *Social science & medicine* (1982), 2001. 52(11): p. 1613-1627.
6. UNICEF, *The State of the World's Children 2005*. 2004, The United Nations Children's Fund.
7. UNAIDS, UNICEF, and USAID, *Children on the brink 2004: A joint report of new orphan estimates and a framework for action*. 2004.
8. Shisana, O., et al., *South African National HIV Prevalence, HIV Incidence, Behavior and Communication Survey*. 2005, HRSC Press: Cape Town.
9. Brookes, H., O. Shisana, and L. Richter, *The National Household HIV Prevalence and Risk Survey of South African Children*. 2004, Human Sciences Research Council: Cape Town.
10. Operario, D., *Prevalence, characteristics, and HIV risk associated with Parental Bereavement among young people in South Africa: Results from a National Representative Study*. 2005.
11. Gregson, S., et al., *HIV infection and reproductive health in teenage women orphaned and made vulnerable by AIDS in Zimbabwe*. *AIDS Care*, 2005. 17(7): p. 785-794.
12. Thurman, T.R., et al., *Sexual risk behavior among South African adolescents: is orphan status a factor?* *AIDS Behav*, 2006. 10(6): p. 627-35.
13. Pettifor, A.E., et al., *A community-based study to examine the effect of a youth HIV prevention intervention on young people aged 15-24 in South Africa: results of the baseline survey*. *Trop Med Int Health*, 2005. 10(10): p. 971-80.
14. Boerma, J.T. and S.S. Weir, *Integrating demographic and epidemiological approaches to research on HIV/AIDS: the proximate-determinants framework*. *J Infect Dis*, 2005. 191 Suppl 1: p. S61-7.
15. Andrews, G., D. Skinner, and K. Zuma, *Epidemiology of health and vulnerability among children orphaned and made vulnerable by HIV/AIDS in sub-Saharan Africa*. *AIDS Care*, 2006. 18(3): p. 269-76.
16. Pettifor, A.E., et al., *Young people's sexual health in South Africa: HIV prevalence and sexual behaviors from a nationally representative household survey*. *Aids*, 2005. 19(14): p. 1525-34.
17. Strauss, A. and J. Corbin, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. 1998: Sage Publications.
18. Bernard, H.R., *Research Methods in Anthropology*. 2002: AltaMira Press.
19. Ulin, P.R., E.T. Robinson, and E.E. Tolley, *Qualitative Methods in Public Health: A Field Guide for Applied Research*. 2005: Family Health International.