

Jasmin Dirinpur

**Social barriers to effective HIV prevention:
Stigma, peer pressure and the role of
soccer-based programmes in South Africa**

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To Lailuma & Fariborz, and Ramin who have supported and encouraged all of my dreams and endeavours...

...and to those South Africans, young and old who have shown me, that if you start dreaming your dreams together, they might become reality.

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¹ As the study was initiated and findings refer to the time before the merger with DED and InWEnt, 'GTZ' will be used in the following.

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LIST OF ABBREVIATIONS

ABC	Abstain, Be faithful, Condomise
ABMP	African Media Broadcast Partnership against HIV/AIDS
AIDS	Acquired Immunodeficiency Syndrome
ART	Anti Retroviral Therapy
BMZ	German Federal Ministry of Economic Cooperation and Development
C	Control Group
CECAFA	Confederation of East and Central African Football Associations
COSAFA	Council of Southern African Football Associations
CRCT	Community Randomised Controlled Trial
DHS	Demographic and Health Survey
EC	Eastern Cape
ETH	Swiss Federal Institute of Technology Zurich
FIFA	Federation International de Football Association
FS	Free State
GRS	Grassroot Soccer
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit GmbH
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
JHU/PCS	John Hopkins University Population Communication Services
HBM	Health Belief Model
HIV	Human Immunodeficiency Virus
HSRC	Human Sciences Research Council
IMB	Information-Motivation-Behavioural Skills
IV	Instrumental Variable
KZN	KwaZulu Natal
MP	Mpumalanga
NGO	Non Governmental Organisation
PEPFAR	President's Emergency Plan for AIDS Relief
PCA	Principal Component Analysis
RCT	Randomised Controlled Trial
RHRU	Reproductive Health and Research Unit
SASA	South African Scouts Association
SAFA	South African Football Association

List of Abbreviations

SRSA	Department of Sport and Recreation South Africa
SCT	Social Cognitive Theory
STI	Sexually Transmitted Infection
STUTVA	Stable Unit Treatment Value Assumption
T	Treatment Group
UNAIDS	United Nations Joint Programme on HIV/AIDS
VCT	Voluntary Counselling and Testing
WDR	World Development Report
WKU	WhizzKids United
YDF	Youth Development through Football

1 INTRODUCTION

1.1 Motivation

Conventional HIV prevention education was based on the assumption that information and knowledge about HIV and its transmission would help young people to internalise risk and adopt safer sexual behaviours like delaying first sex, if sexually experienced considering secondary abstinence, being faithful to one partner, or consistently using condoms (WDR, 2007). Recently released data from sub-Saharan Africa shows declining trends in HIV prevalence among young pregnant women aged 15-24 and suggests that there has been some degree of behavioural response to HIV.² However, in three countries of the southern sub-region which accounts for one third of all people globally infected with HIV there is no evidence of reduced HIV incidence among young people.³ South Africa is the country with the largest number of individuals living with HIV (UNAIDS and WHO, 2007).

Although knowledge about HIV transmission and protection is at high levels, South African youth continuously engage in behaviours that put them at risk for infection (RHRU, 2004; loveLife, 2007). Understanding *drivers* of *knowledge-behaviour gaps* in HIV/AIDS *hyperendemic* settings is crucial to the design of effective HIV prevention interventions.⁴ The observation that the pandemic evolves differently at regional and local levels suggests that social and cultural factors ultimately shape the pathways of HIV transmission and its impact on individuals and communities (UNAIDS, 2007).

This research and analysis is informed by the social perspective on HIV prevention, an approach that assumes the presence of community-level factors that influence sexual-health outcomes and thus suggests community-led peer education as a key strategy to curb the disease. The ultimate goal is to create supportive environments that enable health enhancing behaviours (Campbell and Mzaidume, 2002). Beyond AIDS *awareness* as a consequence of top down information spread and promotion of the ABC⁵ through the mass media, social networks and interpersonal communication played a crucial role in 'breaking the silence' around AIDS and ultimately reversing Uganda's HIV epidemic (Green et al., 2006). Uganda's behavioural response has often been discussed as a 'unique' success story in the prevention literature and because it

² HIV prevalence trends among young pregnant women are used as a proxy measure for HIV incidence.

³ Mozambique, South Africa, and Zambia

⁴ Please refer to **appendix A** for an explanation of terms printed in bold.

⁵ **Abstain, Be faithful, Condomise**, a behavioural strategy that was first communicated in Uganda and later on in a number of other African countries.

has not until recently seen any repetition in other African settings, the relative impact and long term effects of educational interventions such as the ABC campaign have increasingly become subject of debate (e.g. in Oster, 2008).⁶

A highly promising bottom up educational approach with regard to *sustained* behaviour change and community involvement is the sports-based model of HIV interventions (WDR, 2007). One of the pioneers on these grounds is Grassroot Soccer (GRS), an international health organisation that uses football as a tool in the fight against HIV/AIDS. Several of the action-based games of the GRS curriculum address topics such as peer pressure and stigma and aim to create a climate of positive social support (GRS website, GRS curriculum). The social mobilisation paradigm is new terrain and knowledge about *why* participation in the community influences certain behaviours still in its first steps (Campbell and Mzaidume, 2002).

1.2 Objectives

Given the above research motivation, this paper seeks to address two questions:

The first objective is to look at stigma and peer pressure as drivers of HIV in South Africa. HIV/AIDS-related stigma undermines effectiveness of public health interventions because it hinders preventive behaviours such as condom use and HIV test seeking (Brown et al., 2001). In a recent qualitative study on voluntary counselling and testing (VCT) uptake among South African youth, adolescents express fears of stigma and discrimination that hinders them from 'knowing their status' (MacPhail et al., 2008). The view that psychological costs are a major barrier to HIV testing and learning results has been challenged by rigorous empirical evidence provided in Thornton (2007) who shows that after door-to-door testing small cash incentives motivate individuals to collect their results at the VCT centre.⁷ Utilising the rich set of stigma measures from the 'Transitions to adulthood in the context of AIDS in South Africa' study (Popcouncil/Horizons) I scrutinise how different indicators developed to capture the various dimensions of a complex phenomenon are related to behavioural proxy outcomes of HIV risk. In particular, I look at how '*HIV test seeking*' and '*condom use*' are associated to individual-level measures of stigma as well as indicators that capture perception of stigma in the community. Moreover, I assess the role of peer influence - as measured by '*adolescents perception of the share of peers sexually active*' and whether '*peers favour protected sex*' - on different '*condom use*' outcomes.

⁶ Only recently, reduced HIV incidence due to changes in sexual behaviour has been observed in parts of Kenya and Zimbabwe (UNAIDS, 2007).

⁷ Psychological costs can be either internal i.e. fear, or external such as experiencing social stigma.

The second objective is to highlight the distinctive features of football-based HIV prevention programmes and to describe their *innovative potential* to contribute to the community-level response that is required to reverse the epidemic in South Africa. Within this subject I discuss the initial design and lessons learnt from a prospective study on a street soccer HIV & life skills project of the South African Scouts Association (SASA) in Mpumalanga province. Two different curricula with action-based games on peer pressure (curriculum A) and stigma (curriculum B) were randomised over the treatment group.⁸ The main outcome of interest was '*willingness to take an HIV test in the future*' assuming that exposure to curriculum B would encourage participants to know their status.

1.3 Approach

The remainder of the paper is organised as follows:

Section two reviews key empirical literature on behavioural response. The questions of interest debated within this section are: (1) on the relationship between HIV incidence and sexual behaviours; (2) on the types of evidence resulting from a) observational studies and b) randomised controlled trials and, moreover, from recent creative experiments (e.g. Dupas, 2007; Thornton, 2007) that go beyond conventional randomised clinical and behavioural trials in testing different hypothesis in the field; (3) on the socio-economic characteristics of HIV infection and associated sexual behaviours.

The paradigm shift in HIV prevention from ABC to YOU⁹ is outlined in section three prior to introducing to the terminology of social interactions effects in general, and stigma - as occurring within social relations - and peer pressure in particular. The different approaches to measure social interaction effects are briefly illustrated. Thereafter, the role of sports as a tool for development and HIV prevention is highlighted and two soccer-based programmes within their theoretical framework are presented as concrete examples. Background information on HIV among young South Africans is provided in the last chapter of section three in order to bridge to the two empirical studies that ensue.

The empirical study I in section four summarises findings from regressions of HIV testing- and condom use behaviours on stigma- and peer pressure measures. The empirical study II in section five discusses the initial and final evaluation strategy of

⁸ Three games with key messages on peer pressure and four games with key messages on stigma were taken from the GRS curriculum and attached to the general HIV/AIDS curriculum of the Scouts.

⁹ The YOU campaign is an initiative of the 'African Media Broadcast Partnership against HIV/AIDS' that addresses key drivers of the epidemic.

Introduction

the Asilweni project in Mpumalanga. Section six reflects on areas for future research and concludes.

2 BEHAVIOURAL RESPONSE TO HIV – THEORY AND EMPIRICS

2.1 HIV incidence and sexual behaviours

The link between transmission of HIV at the population level and sexual behaviours is complex and dynamic. Beyond differences in sexual behaviours, differences in transmission rates varying with presence of other sexually transmitted infections (STIs), male circumcision and other epidemiological parameters could explain distinct HIV infection rates across continents and within disproportionately affected Africa (Oster, 2005).

In an attempt to explain the varying patterns of HIV across areas Oster (2005) builds a statistical model that simulates the *heterosexual* HIV/AIDS epidemic to predict HIV rates in the United States (US) and in Sub-Saharan Africa (SSA). The simulation model incorporates data on sexual behaviours and other parameters of the epidemic.¹⁰ The underlying reasoning is that small differences in transmission rates can account for large differences in infection rates. The model is based on groups of individuals whereby a group is defined as people of the same sex, age, marital status and type of sexual partnership.¹¹ Behaviour of these groups is observed and tracked over time predicting HIV rates for each group at the end of each one year period running the simulation over the life span of the epidemic (about 20 years). Predicted rates (US: 0.23%; SSA: 12.7 %) are found to be close to actual estimated prevalence of 0.5 % and 11.8 % respectively. The same model is then fitted to estimate patterns of HIV rates within Africa whereby the transmission rate is assumed to be the same for the 14 African countries included in the simulation.¹² Again predicted rates are close to actual rates for each country. Two types of interventions that are expected to slow the future course of the epidemic are then evaluated in the model: 1) biomedical interventions to decrease the likelihood of transmission when exposed to unprotected sex 2) educational interventions to reduce risky sexual behaviour. It turns out that interventions focusing on the reduction of transmission rates would be substantially more effective. This finding is underscored by the argument that in terms of feasibility

¹⁰ a) Sexual behaviours: share of people having premarital or extramarital sex; number of partners outside marriage; condom use; among male the share of non-marital partner who are commercial sex workers; b) other parameters: information on arrival time of the virus; viral transmission rates.

¹¹ E.g. 18 year old single women with casual partnership, 18 year old single women not engaging in sex, etc.

¹² Niger, Chad, Mali, Burkina Faso, Benin, Guinea, Cote d'Ivoire, Cameroon as representing West Africa; Ethiopia, Tanzania, **Zambia**, Malawi, Kenya as representing East Africa; Namibia as representing Southern Africa

it is easier to convince people to go for treatment of a STI than to encourage changes in sexual behaviours.¹³

Almost three decades into the AIDS pandemic and high levels of knowledge on how to protect oneself against HIV, the epidemics evolution in a number of African countries continues to fuel the controversy on *behavioural response* and effective prevention strategies. In 2007 UNAIDS provided revised data that has resulted in substantial changes in the estimates on the number of people living with HIV worldwide. There is *recent* evidence from Kenya and Zimbabwe that a proportion of the significant declines in prevalence can be attributed to reduced HIV incidence which in part is due to a reduction in risky behaviours (UNAIDS and WHO, 2007).

Once changing transmission paths can be related to sexual behaviour two questions are of interest: 1) on the shift in relative behavioural risks that explain a reduction in HIV incidence and 2) on the extent to that changes in risk are causal to particular interventions. The 'success stories' of Thailand and Uganda in effectively curbing the spread of AIDS at national level are widely discussed in the literature. In Thailand sex workers were the major focus of intervention. Simultaneously discouraging clients to engage in paid sex and promoting universal condom use among sex workers resulted in self-reported behaviour change (i.e. high rates of condom use; less visits to sex workers) that could be validated against objectively measured outcomes reflected in reduced incidence of STI and HIV infection in military recruits and reduced HIV prevalence among women attending antenatal clinics as documented in sentinel surveys. In Uganda, in response to high prevalence rates in the late 1980s and early 90s, the government implemented a prevention strategy – the so-called ABC - encouraging the discussion of HIV risks and advocating for change in sexual behaviour practices to reduce risk of infection (Hallett et al., 2007a).

The ABC gained popularity in the Ugandan context and later on was extended to other African countries. ABC-related programmes became the focus of UNAIDS and the US President's Emergency Plan for AIDS Relief (PEPFAR) prevention approaches (Oster, 2008). Uganda's HIV decline triggered subsequent debate on the individual-level risk factors and their impact on population-level HIV incidence i.e. around the relative benefits of *delaying age at first sex* (A), *being faithful to one partner* (B), and *using condoms consistently* (C). A key finding often not enough considered in the design of interventions is that the impact of certain behaviour changes on HIV spread is highly sensitive to the structure and dynamics of the *sexual network* through which infection occurs. It is suggested that it was through the mediating variables of increased condom use and fidelity (the so-called *zero grazing*) rather than through the two-year delay in

¹³ This thesis in general contests Oster's work by adopting a social perspective on HIV. Moreover, some specific notes are attached in **appendix B**.