

## Self-deception does not explain high-risk sexual behavior in the face of HIV/AIDS: A test from northern Kenya

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### Abstract

Throughout sub-Saharan Africa, there is resistance to changing sexual behavior despite survey data indicating high levels of knowledge about HIV transmission patterns and high-risk behavior. Previous explanations for this paradox emphasize indigenous cultural models. An alternative explanation is that, due to a strong natural selection for sexual gratification, individuals evoke the evolved trait of self-deception to continue practicing high-risk sexual behavior. This alternative is tested using survey data from an Ariaal community in Marsabit District, northern Kenya. Results indicate that respondents make highly accurate self-assessments of HIV risk, negating the concept of self-deception in this study. These results are discussed within the larger context of the applicability of evolutionary theory to the AIDS pandemic.

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## 1. Introduction

### 1.1. HIV/AIDS education program, self-assessment, and evolutionary theory

In the absence of an effective vaccine, public education and self-awareness are cited as the best strategy against the transmission of HIV/AIDS (World Bank, 1999). However, Australian demographer John Caldwell (1999) called attention to the limited success of education programs in halting the AIDS pandemic in the sub-Saharan Africa continent. As examples, he pointed to Demographic and Health Survey data showing that 98% of Tanzanian men knew about AIDS in 1991, and 99% of Kenyan men were familiar with the disease by 1998. Yet, in both cases, sexual behavior remains largely unchanged.

In this region, the failure of education programs is attributed to widespread culturally based beliefs and behavior. These include beliefs linking male heterosexual intercourse to overall health and well-being (Orubuloye, Caldwell, & Caldwell, 1997), the association of condoms with illegitimate sexual unions and prostitution (MacPhail & Campbell, 2001), and the notion that one's time of death is preordained and nonsusceptible to behavior change (Caldwell, 1999). In sub-Saharan Africa, where over 90% of HIV transmission results from heterosexual intercourse, these beliefs and behaviors constitute powerful forces for HIV transmission.

However, the persistence of HIV high-risk behavior is not limited to sub-Saharan Africa, calling for an alternative, more inclusive explanation beyond region-specific cultural beliefs and practices. A case in point is the global resurgence of high-risk behavior among homosexual and bisexual men. Until very recently, contemporary male homosexual communities represented one of the few voluntary successes of HIV/AIDS education programs. With the goal of "sustaining safe sex," homosexual groups around the world educated themselves about HIV, practiced low-risk sexual practices, and lowered HIV/AIDS infection rates (cf. Dowsatt, 1999). Tragically, however, recent data from the United States (Chen et al., 2002), Canada (Martindale et al., 2001), Europe (Macdonald et al., 2004), and Australia (Van De Ven et al., 1998) all show increasing rates of sexually transmitted diseases (STDs) and HIV/AIDS among homosexual and bisexual men. One explanation offered for this reversal is the self-deceptive view that the availability of Highly Active Anti-Retroviral Therapies (HAART) means that HIV+ people will live long, normal lives while still satisfying their sexual desires.

The above explanation is congruent with evolutionary theory, which considers human self-deception as an evolved trait. Self-deception may be defined as an act or a process of rejecting or ignoring the importance of opposing evidence, through which one maintains a false belief, and in which one is generally unaware of the illogical nature of his/her belief. This concept of self-deception can be applied for HIV/AIDS risk assessment, where one fails to recognize the risk of contracting HIV through high-risk sexual behavior despite previous exposure to information on HIV risk behaviors.

### 1.2. Self-deception in human evolution

Evolutionary biology's interest in self-deception stems from the foreword of Robert Trivers (1976) to the original edition of Dawkins (1976) of "The Selfish Gene," in which

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