

People on HIV treatment less likely to have unsafe sex, SA study finds

The idea that people react to a decline in perceived risk by acting in riskier ways has a long, chequered history in social science. A recent study by a team of HSRC researchers found that people living with HIV in South Africa who are on treatment actually take fewer sexual health risks. By *Andrea Teagle*

A recent study based in South Africa found that people living with HIV (PLHIV) who are on antiretroviral treatment (ART) are less likely to engage in risky behaviours than those who are not on treatment. Also, HIV-negative people are more likely than PLHIV to take sexual risks.

Led by the HSRC's Dr Nompumelelo Zungu, a team of researchers used data from a 2017 nationally representative survey of participants older than 14 years. They measured risky sexual behaviour through three self-reported components: condom use at last sexual encounter, consistent condom use, and number of sexual partners in the past 12 months.

The study found that PLHIV on treatment were significantly less likely to have had multiple sexual partners than PLHIV not on treatment. Those on treatment were also more likely to have used a condom during their last sexual encounter than those not on treatment. However, PLHIV not on treatment were still more likely to have used a condom than HIV-negative participants who were aware of their status. The researchers found no statistically significant association between HIV status, being on treatment, and inconsistent condom use.

Risk compensation

The finding that people on treatment engage in less risky behaviour goes against the 'risk compensation hypothesis': the idea that people respond to a decline in perceived risk by acting in riskier ways. In public health the worry is that the availability of health interventions, especially biomedical ones, may encourage people to take greater personal health risks, thereby offsetting the effect of the interventions.

According to the risk compensation hypothesis, PLHIV who are on treatment will be more likely to engage in riskier sexual behaviour, knowing that they are protected by ART and that risk of transmission is lowered. If that were so, the decline in new infections due to greater availability of treatment would be lower than anticipated.

That the study found the opposite suggests that 'HIV counselling and support, associated with engagement with healthcare by people on treatment, help these individuals to limit their risk-taking,' the authors write. Other research on risk compensation among people on ART has yielded inconsistent results; however, the findings of the current study align with evidence from a [meta-analysis](#) of 14 studies of lower risk-taking among PLHIV in sub-Saharan Africa.

A dangerous assumption

Understanding how human behaviour affects public health interventions is clearly useful. The challenge with the risk compensation hypothesis is that it can be – and frequently has been – used to argue against any measure that protects people from harm. This is in spite of the fact that empirical evidence often [fails](#) to [support](#) the theory. In instances where some individuals do change their behaviour as charged by the hypothesis, the benefits of the intervention tend to far outweigh the negative effects.

Science journalist Tim Requarth argues in [Slate](#) that the risk compensation hypothesis is part of a set of 'perversity arguments' that keep coming up because they are useful for protecting the status quo.

'For free-marketeers, the risk compensation hypothesis (or the "Peltzman effect," as it was later dubbed) provides the perfect *a priori* argument to shut down discussion. If any safety measure, by definition, is offset by risk compensation, then why consider safety regulations at all,' he writes.

Consider these familiar arguments against social protection – both of which have been disproved: 'If we offer [child support grants](#), teenage girls will get pregnant just to take advantage of them', and 'If people have access to a [basic income grant](#), they won't bother to work'. Since the intended beneficiaries of an intervention are going to act against their own best interests (it is implied), then not only is it pointless to intervene, but they also don't *deserve* to be helped.



Photo: [Laura James](#), Pexels

Even where the argument is applied with good intentions – not to object to interventions, but to make sure that they are effective – it can backfire. During the COVID-19 pandemic, health experts in the US hesitated to advise the public to wear masks, assuming that people would take this as a free pass for reckless behaviour. The flip-flopping on messaging damaged public trust in science communication, undermining the pandemic response.

Clear communication

Where risk compensation might be one of the factors at play in a particular health outcome, often a more useful response is ensuring that people have enough information to recalibrate their behavioural responses. For example, in the case of ART treatment, ensuring that people know that viral suppression means that they cannot transmit the virus, but that they could still contract other strains of HIV and sexually transmitted infections through unsafe sex, or transmit HIV if they are not virally suppressed.

It's worth noting that many factors affect ART adherence and sexual risk behaviour, including stigma, mental health issues, and gendered power dynamics. In the current study, women were less likely to engage in safe sex, a finding that likely points to the reality that women are not always able to insist on condom use. The study also found that older age groups were more likely to report no consistent condom use. Interestingly, no consistent condom use was less likely among hazardous drinkers and participants with tertiary education.

Because the current study is cross-sectional, it cannot conclusively say that people changed their behaviour after going on ART; it is possible, for example, that people on ART were already more likely to engage in safer sex for other reasons. Nonetheless, the findings indicate that how human behaviour influences intervention outcomes is complex.

In another similar public health example, health experts have long debated whether the benefits of voluntary medical male circumcision – up to 60% reduction in female-to-male HIV transmission risk – might be offset by riskier sexual behaviour. Several recent large studies, including in Kenya, Zimbabwe and KwaZulu-Natal, have found on balance no evidence of this effect.

Similarly, a 2012 South African study conducted by the HSRC found no difference in condom use between men who had been circumcised and their uncircumcised counterparts. However, the study did find that those who had received the intervention were more likely to report having more than two sexual partners. The authors attribute this to 'possible shortcomings in the HIV risk reduction counselling interventions that are provided as part of voluntary medical male circumcision in the clinical setting'.

Ensuring accurate and culturally sensitive messaging was a core part of the national rollout of circumcision for HIV prevention in Eswatini. Treating individuals as agents capable of responding to information puts the onus on healthcare professionals to communicate risk accurately, and to support individuals to make smart health decisions for themselves.

Author:

Andrea Teagle, a science writer in the HSRC's Impact Centre

Research contacts: Dr Nompumelelo (Mpumi) Zungu, a research director, and Shandir Ramlagan, a senior research specialist in the HSRC's Human and Social Capabilities division

mzungu@hsrc.ac.za; sramlagan@hsrc.ac.za