Can television shows change how people think and act? In Nigeria, researchers evaluated the impact of MTV Shuga, a drama featuring educational storylines about HIV/AIDS on viewers’ sexual knowledge, attitudes, and behaviors. The study shows that exposure to MTV Shuga improved viewers’ knowledge and attitudes, increased HIV testing, reduced risky sex, and among women, led to fewer sexually transmitted infections.

Policy issue

In 2016, an estimated 1.2 million people in sub-Saharan Africa became infected with HIV. More than one-third of these infections occurred in youth between the ages of 15 and 24. Since AIDS, the disease caused by HIV, is not curable, policymakers must focus on preventative measures. Most cases of HIV in sub-Saharan Africa are caused by transmission through unprotected sex. Safer sexual behavior can help prevent the virus from spreading, but evidence is mixed on how best to encourage this behavior. Traditional methods of sharing information such as counseling, peer education, and public messages on posters and billboards have been shown to improve awareness and knowledge, but have little impact on behavior change.

Some governments and development agencies are increasingly turning to entertainment media, from TV to mobile games, to communicate with youth and other high-risk populations. This type of outreach, known as entertainment education or “edutainment,” is often modeled after entertainment formats like soap operas and pop songs. Information delivered through these educational soap operas is often easier to remember than abstract information and faces less psychological resistance.
from viewers than traditional health education campaigns. Edutainment programs can inspire audiences to engage in new thinking about what is possible, and change audience perceptions of what is “normal” and socially acceptable behavior.

**Context of the evaluation**

Nigeria, where this study takes place, has the second highest HIV/AIDS burden in the world. Unsafe heterosexual sex is the primary source of transmission, causing about 80 percent of new cases of HIV in 2014. \(^4\) Approximately one-third of youth have a comprehensive knowledge about AIDS. \(^5\) Risky behaviors are prevalent; just one in ten sexually active youth got tested in the last 12 months. The television series MTV Shuga seeks to address the spread of HIV/AIDS by fusing sexual health messaging with engaging storylines. The series, in its third season at the time of this study, was produced in Nigeria and eventually aired on more than 150 broadcast television stations worldwide to an audience of more than 500 million viewers. \(^6\) The show was produced by the MTV Staying Alive Foundation and supported by African governments, UNICEF, PEPFAR, and The Bill and Melinda Gates Foundation, among others.

The third season features stories about the stigma and discrimination associated with the virus, dispels myths related to HIV transmission, and includes a series of messages aiming to promote HIV testing and reducing risky sex.

![Jemima Osunde as Leila and Olumide Oworu as Weki in the edutainment show MTV Shuga.](image)

**Details of the intervention**

The study involved community screenings in halls rented from schools and community centers in 80 urban and semi-urban communities in seven towns in southwest Nigeria. To recruit participants, enumerators first visited a random selection of approximately 17,000 households and collected basic demographic information about the young people aged 18 to 25 living there.

Then, researchers randomly selected one young person in each household to be invited to see a movie unrelated to MTV Shuga or HIV. The intention was to recruit among those interested in seeing movies in order to minimize potential attrition during the intervention.
Finally, enumerators visited at home approximately 5000 of those individuals who showed up to this first screening. They were invited to participate in the baseline survey and if they agreed, they were administered the survey and given invitations for two additional screenings the following two weekends.

In 54 randomly selected communities, participants viewed eight 22-minute episodes of the MTV Shuga television drama in two blocks of four episodes. In 26 other randomly selected communities, participants viewed a “placebo” television series, “Gidi Up,” that did not include educational messages. Hosting community screening events in both the treatment and comparison communities enabled researchers to attribute any impacts they found to the MTV Shuga program itself, rather than the community screening component of the activity.

The study assesses the effectiveness of edutainment and investigates the role of two types of channels through which entertainment education may affect behavior: an individual channel and a social channel.

From an individual perspective, the entertaining format may encourage the viewer to pay more attention and reduce resistance to top-down advice, resulting in increasing audiences' knowledge about show messages.

To identify impacts related to social channels, researchers employed a variety of strategies. First, in half of the MTV Shuga locations, after watching the show individuals viewed short video clips that contained interviews and smart graphs about the HIV views of peers who had watched MTV Shuga in other communities (T2 in Table 1). Second, researchers tested whether exposure to the show affected individuals' beliefs about social norms in their own communities. Third, in a cross-cutting arm (T3) in all treatment communities, individuals were randomly selected to receive extra tickets to bring up to two friends to the community screenings.

Finally, the study investigated spillover effects—e.g., whether people who were exposed to the show shared knowledge with others—by surveying participants’ acquaintances who had not seen MTV Shuga.

<table>
<thead>
<tr>
<th>T1: MTV Shuga screening</th>
<th>T2: MTV Shuga screening + extra videos</th>
<th>Comparison</th>
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<tr>
<td>“Without friends” treatment</td>
<td>MTW Shuga screening + videos with info about attitudes of peers (1/6 participants)</td>
<td>Placebo screening (1/3 participants)</td>
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<td>Individuals randomly selected to receive 2 extra invitations for friends (1/6 participants)</td>
<td>Individuals randomly selected to receive 2 extra invitations for their friends (1/6 participants)</td>
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<tr>
<td>T3: &quot;With friends&quot; treatment</td>
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Survey data consisted of a baseline and an 8-month follow up survey. Objective measures for HIV testing, condom demand, and chlamydia (a common sexually transmitted infection in study sites) were collected through health camps, which took place two weeks after the follow up survey.

Results and policy lessons

All results below are preliminary.

MTV Shuga effectively transmitted information, changed attitudes, and increased HIV testing. More nuanced effects were found on risky sexual behavior. Researchers reported results aggregated into indices related to HIV and risky sexual behavior, and on individual outcomes.

Impacts on knowledge: Exposure to MTV Shuga improved participants’ knowledge about HIV, including greater awareness about transmission, testing, and available drug therapies.

The index “HIV knowledge” measured how aware an individual was about the method of transmission, the existence of antiretroviral drugs, and the timing of testing for HIV. For comparability, knowledge levels were converted to a common scale, the “standard deviation,” which tells us the extent to which viewers improved knowledge relative to those in the comparison group. For example, an increase of two standard deviations would move someone from having average knowledge to being in the top 5 percent of the group. For the “HIV knowledge” index, the magnitude of impact corresponds to an average increase of 0.13 of a standard deviation.

Exposure to the TV drama also impacted knowledge about specific topics discussed in the script. Thirty-nine percent of youth who viewed MTV Shuga reported knowing that a second test was necessary to confirm HIV positive status, compared to 34 percent of youth in the comparison group, a 13.7 percent increase. 18 percent of youth who viewed the show knew that the window of time between the two tests was three months, compared to 13 percent of youth in the comparison group, a 39 percent increase.

Impacts on HIV attitudes: The index “HIV attitudes” captured respondents’ inclination to potentially reveal their status, allow HIV-positive people to interact with the community, as well as respondents’ judgments toward HIV-positive people. The show positively influenced viewers’ attitudes toward people living with HIV. The magnitude of impact on the “HIV attitudes” index corresponded to an average increase of 0.10 of a standard deviation.

Positive effects were found on individual outcomes as well. 53 percent of youth who viewed MTV Shuga reported being willing to buy from an HIV-positive shopkeeper, compared to 49 percent of youth in the comparison group—about a 10 percent increase. 71 percent of youth who viewed the show believed that an HIV-positive boy should be able to play football (soccer), compared to 66 percent of youth in the comparison group—an 8 percent increase. 53 percent of youth who viewed the show believed that HIV is not a punishment for having multiple sexual partners, a nine percent increase from the comparison group’s 49 percent.

Impacts on behavior: HIV testing: The “HIV testing” index measured whether participants knew where to get tested, if they had been tested and when, if they picked up the results, and if they asked for the test themselves. Viewing MTV Shuga induced an increase in the aggregate index of 0.08 of a standard deviation.

Youth in the treatment group were almost twice as likely to have visited local HIV centers and been tested in the last six months than youth in the comparison group, increasing from 3.3 percent to 6.4 percent.

Risky sexual activity: The index “Risky sex” captured whether participants had multiple concurrent sexual partners (and the number of partners), condom use during last intercourse, and having a primary partner or additional sexual partners. The impact on the aggregate index suggests that risky sexual activity may have declined. However, the findings were not statistically significant.

Researchers did find direct impacts on concurrent partnerships. In the eight months following the screenings, youth in the treatment group were less likely to report having concurrent sexual partners than youth in the comparison group, particularly
those who had initially reported having more than two partners.

Despite the fact that the show features condom use as a way to prevent HIV transmission, the intervention did not have effects on self-reported and objective measures for condom use. Supply issues cannot explain this given that the vast majority of study participants report having ready access to condoms.

Sexually transmitted infections: Exposure to MTV Shuga led to a 55 percent decrease in the likelihood that women tested positive for chlamydia. Women with positive test results declined from 3.1 percent in the comparison group to 1.7 percent among viewers. The effects for men were in the same direction, though these were not statistically significant.

Social effects: The different strategies adopted to test for the presence of social effects did not reveal robust results. The study found no evidence that exposing individuals to the views of peers (T2 in Table 1) or watching the show with friends (T3) led to further improvements in attitudes or behaviors (though findings suggested some positive impacts on knowledge for those who brought friends of the opposite sex to a screening). Overall, individual responses, rather than social channels, seem to drive the positive results.

Spillover effects: The intervention increased participants' friends' knowledge about HIV transmission, suggesting that people who watched MTV Shuga conveyed its messages to their friends. The effect was particularly strong for friends of the opposite sex to the participant.

Overall, learning, rather than the social conformity, seems to drive the positive results. The study found no evidence that exposing individuals to the views of local peers (T2 in Table 1) or watching the show with friends (T3) led to further increases in knowledge, attitudes and behaviors.

Policy lessons
Overall, these results suggest that entertainment education can educate and positively change deep-seated attitudes and behaviors in the context of HIV.

The study suggests that the value of edutainment comes from its ability to convey information that is difficult to transmit through traditional formats. Given that mass media can reach large segments of the population at low marginal costs, edutainment has the potential to be more influential and cost-effective than traditional behavior change campaigns.

Use of results
Early preliminary results were shared with the MTV Staying Alive Foundation to inform content of future MTV Shuga seasons. The program is also being scaled up in other contexts. With the support of other donors, MTV plans to produce spin-offs focusing on gender-based violence in India and Egypt.

The study has also supported the launch of a research program on entertainment education at the World Bank Development Impact Evaluation unit. Since its launch in 2016, and with the support of the World Bank and other donors, the research program has launched new rigorous impact evaluations in Brazil, Mexico, Nigeria, and India.


