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Program effects of DREAMS among adolescent girls and young women in Kisumu County, Kenya: Findings from DREAMS implementation science research

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Kisumu County in Kenya is severely affected by HIV. It has a current HIV prevalence of 17.5 percent, with women bearing a heavy burden of disease. For instance, HIV prevalence is 3.2 percent among 20–24 year old women, compared to 0.6 percent among men of the same age.

Population Council conducted implementation science research in Kisumu County to determine the effectiveness of the DREAMS* comprehensive HIV prevention intervention package in reducing HIV risk among adolescent girls and young women (AGYW). As part of the DREAMS interventions, AGYW were offered a comprehensive HIV prevention package, which included social asset-building, educational subsidies, youth-friendly sexual and reproductive health services, and other social protection and support. This service package aimed to empower AGYW and provide them with the necessary skills and resources in an enabling environment to reduce their vulnerability to HIV and risky sexual behaviors and increase their access and use of healthcare services.

This brief summarizes key findings from a prospective cohort study conducted with AGYW (ages 15–24 years) participating in DREAMS programming in an urban and peri-urban site in Kisumu County. In 2016–2017 (Round 1) we surveyed 914 AGYW who had been enrolled in DREAMS programming. In 2018 (Round 2) we re-interviewed 740 AGYW from the original sample, resulting in a retention rate of 81 percent. To complement the quantitative data collection, we conducted focus group discussions (FGDs) and in-depth interviews (IDIs) with AGYW and DREAMS program staff. Here we present results on AGYW’s exposure to DREAMS programming and how their knowledge, attitudes, risk behaviors, and service utilization changed over time.

**WHO ARE THE SURVEY RESPONDENTS?**

Our final cohort included 736 AGYW who had been enrolled in DREAMS. Average age of the respondents in our study was 19 years at Round 1. Over time, fewer AGYW were enrolled in school and more were employed. More AGYW reported being sexually active, married, and ever pregnant at Round 2 compared to Round 1.

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*DREAMS stands for Determined, Resilient, Empowered AIDS-free, Mentored, and Safe.

**Locations:** Nyalenda A and Kolwa East, Kisumu County, Nyanza Province, Kenya

**Study duration:** 2016–2019

**Funder:** Bill & Melinda Gates Foundation

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This research was conducted in close collaboration with: DREAMS implementing partners (PATH/USAID Afya Ziwani, ICL, MMS) and PEPFAR Kenya
TABLE 1  CHARACTERISTICS OF RESPONDENTS

<table>
<thead>
<tr>
<th></th>
<th>ROUND 1</th>
<th>ROUND 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average age (SD)</td>
<td>19 (2.9)</td>
<td>20 (2.8)</td>
</tr>
<tr>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Currently enrolled in school</td>
<td>60</td>
<td>53 ***</td>
</tr>
<tr>
<td>Currently employed</td>
<td>22</td>
<td>38 ***</td>
</tr>
<tr>
<td>Sexual activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ever had sex</td>
<td>60</td>
<td>67 ***</td>
</tr>
<tr>
<td>Currently sexually active</td>
<td>38</td>
<td>49</td>
</tr>
<tr>
<td>Marriage &amp; pregnancy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ever married</td>
<td>23</td>
<td>26 **</td>
</tr>
<tr>
<td>Currently married</td>
<td>19</td>
<td>22 *</td>
</tr>
<tr>
<td>Ever pregnant</td>
<td>37</td>
<td>43 ***</td>
</tr>
</tbody>
</table>

*p<0.05; **p<0.01; ***p<0.001

RESULTS

High levels of participation in DREAMS interventions.

More than 90 percent of AGYW at Round 2 reported participating in five primary DREAMS interventions: social asset building, HIV and violence prevention, condom education and demonstration, HIV testing services, and contraception information, education, and communication. More than twice as many young women (20–24 year olds) participated in financial capability training as adolescent girls (62 vs. 26 percent).

The majority of AGYW were also exposed to most secondary interventions, including condom and pre-exposure prophylaxis (PrEP) provision, combination socioeconomic support, cash transfers, and education subsidies (15–19 year olds). Less than half were exposed to post-violence care.

Despite the high level of DREAMS program exposure, 73 percent reported periods of non-participation over the last year. The mean number of interruptions was five. More than half (55 percent) had an interruption that lasted one month or longer. The main reasons for interruptions were being away at school, being away from the community, and sickness.

Positive perceptions of DREAMS mentors and DREAMS’ effect on HIV risk

Very high proportions of AGYW felt comfortable seeking advice or referral from their mentor (92 percent). A high proportion said that their mentor was readily available (89 percent) and knowledgeable about DREAMS topics (94 percent).

Overall, the vast majority (96 percent) reported that being part of DREAMS lowered their HIV risk. Additionally, more than 9 out of 10 reported that DREAMS caused them to take measures to reduce their HIV risk (98 percent) and 86 percent reported that they shared information about HIV with other girls in their community because of DREAMS.

We were also taught how to prevent HIV. That if you use condoms you cannot get HIV.

─ AGYW, 15 years, Kolwa East

Significant improvements in HIV knowledge

At Round 2, over 70 percent of AGYW had accurate knowledge about HIV, condoms, PrEP, and post-exposure prophylaxis (PEP). Still less than half of the AGYW were aware of prevention of mother-to-child transmission and treatment as prevention at Round 2.

FIGURE 1  HIV KNOWLEDGE

We were also taught how to prevent HIV. That if you use condoms you cannot get HIV.

─ AGYW, 15 years, Kolwa East

*p<0.05; **p<0.01; ***p<0.001
**Decreased stigma toward people living with HIV, but anticipated stigma remained high**

Only 15 percent of AGYW reported having stigmatizing attitudes toward people living with HIV at Round 2, compared to 29 percent of AGYW at Round 1 (p<0.001). Yet, nearly eight out of ten had reported that they might face stigma and discrimination if they acquired HIV at Round 1, and these rates did not change very much at Round 2.

**Increased power in their intimate relationships**

Over time, more AGYW reported having more power and say in their relationships with their husbands, boyfriends or other partners. For instance, fewer AGYW thought their partner would get angry if she asked him to use a condom at Round 2 compared to Round 1. Similarly, only 32 percent of AGYW said that their partner had more say about important decisions in that affected them at Round 2, compared to 45 percent in Round 1 (figure 2).

**Decreased experiences of sexual violence from partners and non-partners**

Gender-based violence has been shown to be associated with HIV risk. Over time, AGYW enrolled in DREAMS reported significantly lower experiences of sexual violence from partners and non-partners.3

### TABLE 2 EXPERIENCE OF SEXUAL VIOLENCE FROM PARTNERS AND NON-PARTNERS

<table>
<thead>
<tr>
<th></th>
<th>ROUND 1</th>
<th>ROUND 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Among sexually active</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical violence from partners</td>
<td>24</td>
<td>20</td>
</tr>
<tr>
<td>Sexual violence from partners</td>
<td>20</td>
<td>9***</td>
</tr>
<tr>
<td>Among all AGYW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual violence from non-partners</td>
<td>25</td>
<td>17***</td>
</tr>
</tbody>
</table>

*p<0.05; **p<0.01; ***p<0.001

**Mixed shifts in sexual behaviors**

Over time, there were no major changes in the number of sexual partners reported by AGYW. Most AGYW (78 percent in Round 1 and 82 percent in Round 2) reported having one partner. While there was a slight decrease in the proportion of AGYW’s reporting of two or more sexual partners in the last year and alcohol use before sex, these changes were not significant.

At the same time, there was a significant decrease in consistent condom use and a significant increase in transactional relationships with a main partner, heightening their HIV risk.

### TABLE 3 SEXUAL BEHAVIORS

<table>
<thead>
<tr>
<th></th>
<th>ROUND 1</th>
<th>ROUND 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistent condom use (among AGYW with sexual partners)</td>
<td>35.4</td>
<td>27.8*</td>
</tr>
<tr>
<td>Started/stayed in a relationship with main partner for material gain (among all AGYW)</td>
<td>9.9</td>
<td>20.1***</td>
</tr>
<tr>
<td>Engaged in transactional sex (among all sexually active AGYW)</td>
<td>6.8</td>
<td>9.3</td>
</tr>
</tbody>
</table>

*p<0.05; **p<0.01; ***p<0.001

**Significant increase in HIV testing, but not other services**

HIV testing rates were high in the study sites and increased significantly over time. Nearly all AGYW (97 percent) has tested for HIV in the last 12 months.
Over time, more AGYW also sought gender-based violence (GBV) care after experiencing partner violence (18 vs. 21 percent) and STI services (60 vs. 65 percent), but the changes were not significant.

**RECOMMENDATIONS**

- To sustain significant changes in knowledge & self-efficacy among AGYW, continue to provide AGYW with education and life skills to help them make informed decisions.
- To sustain reductions in experience of violence, continue to invest in community-level efforts to shift norms around GBV and increase support to women who experience GBV.
- To sustain improvements in HIV testing, sustain continued HIV testing efforts in the community.
- To increase condom use among young women, consider engaging men/male partners in HIV prevention, promote their condom use, and address communication and power within relationships.
- To lower likelihood of AGYW entering transactional sexual relationships, consider programs to ensure school completion and increase young women’s livelihoods opportunities.

**REFERENCES**


For more information about the DREAMS IS portfolio:
Visit the DREAMS IS special series page: [https://knowledgecommons.popcouncil.org/series_dreams/](https://knowledgecommons.popcouncil.org/series_dreams/)


For more information about the study in Kenya:

“High rates of sexual violence by both intimate and non-intimate partners experienced by adolescent girls and young women in Kenya and Zambia: Findings around violence and other negative health outcomes,” *PLoS ONE* 13(9): e0203929. doi: [10.1371/journal.pone.0203929](https://knowledgecommons.popcouncil.org/series_dreams/10.1371/journal.pone.0203929)


“High rates of sexual violence by both intimate and non-intimate partners experienced by adolescent girls and young women in Kenya and Zambia: Findings around violence and other negative health outcomes,” *PLoS ONE* 13(9): e0203929. doi: [10.1371/journal.pone.0203929](https://knowledgecommons.popcouncil.org/series_dreams/10.1371/journal.pone.0203929)

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