HPTN 068: Impacts on HIV and IPV among young South African women
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Know Violence, Florence May 2016
3.9 million young people in Sub-Saharan Africa aged 15 – 24 years are living with HIV. Three-quarters are young women.
Social determinants that increase risk

- Education/Schooling
- Poverty
- Gender Inequity/Violence
- Mental Health
- Alcohol/Drugs
Keep them in school: the importance of education as a protective factor against HIV infection among young South African women

Audrey E Pettifor,1* Brooke A Levandowski,1 Catherine MacPhail,2 Nancy S Padian,3 Myron S Cohen4 and Helen V Rees2
* Among young women with one lifetime partner, those who had not completed high school were almost 4 times more likely to be HIV infected compared to those that had completed HS (AOR 3.75 95% CI 1.34–10.46) (Pettifor A et al. IJE 2008)

* Two recent reviews on HIV and education indicate a protective association between higher education and HIV infection, particularly as epidemics mature (Hargreaves et al. AIDS 2008, Jukes et al. AIDS 2008)
Barriers to Education

* Poverty pushes many young people out of school - in particular young women

* In South Africa, 65% of young people who were not in school indicated that they did not have enough money to continue their education
  * Hidden costs: uniforms, books/supplies, transport, food, etc.

* Young women are often taken out of school to find employment to support the family or to care for sick family members.

* Young people make up 40% of the unemployed globally
  * Young women in low and middle income countries find it more difficult to find work

Samson 2004
Education: Baird et al (2013) review

Systematic review of 35 evaluations:

- 36% greater enrollment in households with ANY cash transfers
- 23% greater enrollment in UCT (unconditional cash transfer)
- 41% greater enrollment in CCT (conditional cash transfer) households

Impact on enrollment:
- Greater at secondary (31%) than primary (4%) level
- 42% greater attendance in UCT and 65% greater attendance in CCT households

Effects on attendance:
- Higher in girls than boys

Greater transfers (relative to per capita income) produce greater effect sizes (Saavedra and Garcia, 2012)
Cash transfer and HIV infection—effect sizes

- **Malawi**
  - CT trial (HIV prevalence)
  - Control: 1
  - Cash transfers: 0.36

- **Tanzania**
  - Respect trial (STI prevalence)
  - Control: 1
  - Low CCT: 0.73
  - High CCT: 0.75

- **Lesotho**
  - Lottery trial (HIV incidence)
  - Control: 1
  - Lottery eligible: 0.67
  - Lottery, females: 0.69
  - Only high value lottery: 0.69

Statistically significant effect sizes
Child-focused state cash transfers and adolescent risk of HIV infection in South Africa: a propensity-score-matched case-control study

Lucie Cluver, Mark Boyes, Mark Orkin, Marija Pantelic, Thembela Molwena, Lorraine Sherr

Lancet 2013
HPTN 068: Study Design

- Phase III individually randomized controlled trial.
- Primary endpoint: HIV incidence.
- Young women and parent/guardian seen at baseline and annually for up to 3 follow-up visits between March 2012-March 2015.
- **Intervention**: Cash transfer provided to young women and parent/guardian conditional on ≥80% school attendance monthly.
  - Attendance data collected from schools monthly
  - R100 (~USD 10) to the girl
  - R200 (~USD 20) to the parent/guardian
Methods: Study Visits

• HIV and HSV-2 were assessed at each visit.
  – HIV: Two rapid tests confirmed with Western Blot and 100% QC at the HPTN Laboratory Center
• Audio-Computer Assisted Self-Interview (ACASI) at each visit to collect:
  – e.g. sexual behavior, schooling, intimate partner violence, mental health, alcohol and drug use
• Parent/guardian interviewed at each visit to assess socio-economic status.
• Large qualitative component to study.
Study Site: Agincourt Health and Socio-Demographic Surveillance Site (AHDSS)

- **Ehlanzeni District, Mpumalanga Province**
- **28 villages, 115,000 people, 420 km²**
- HIV Prevalence 46% and 45% among women and men 35-39 years.

Design: Study Population

Eligibility Criteria:
• Female
• Enrolled in grades 8, 9, 10 or 11 in participating high schools
• Age 13-20 years
• Not married or pregnant by self-report
• Parent/guardian living in household
• Able to complete a computer survey on her own
• Residing in study area
IPV: Definition and Measurement

- **Partner defined as:** “current boyfriend or partner or any other partner in [a young woman’s] past”

- Survey used 6 physical violence questions and 2 sexual violence questions from WHO survey:

  *Eg of a physical violence question:*
  “Has a partner ever slapped you or thrown something at you that could hurt you?”

  *Eg of a sexual violence question:*
  “Has anyone ever physically forced you to have sexual intercourse when you did not want to?”

- Constructed variables for Any IPV, Any Physical IPV, Any Sexual IPV, Both Physical and Sexual IPV
Results: Baseline

- 2,533 young women were enrolled March 2011 - December 2012.
- 2,448 were HIV uninfected at enrollment (81 HIV+, 4 unknown status).

<table>
<thead>
<tr>
<th>Baseline</th>
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</thead>
<tbody>
<tr>
<td>Age (Median, IQR)</td>
<td>15 (14-17)</td>
</tr>
<tr>
<td>Ever sex</td>
<td>26.6%</td>
</tr>
<tr>
<td>HIV</td>
<td>3.2%</td>
</tr>
<tr>
<td>HSV-2</td>
<td>4.4%</td>
</tr>
<tr>
<td>Ever Pregnant</td>
<td>8.9%</td>
</tr>
<tr>
<td>Orphan</td>
<td>28.6%</td>
</tr>
<tr>
<td>Food insecurity</td>
<td>34.3%</td>
</tr>
<tr>
<td>HH receives CSG</td>
<td>79.0%</td>
</tr>
</tbody>
</table>
Table 2a. Prevalence of ever experiencing physical IPV among adolescent, South African women participating in HPTN068, Baseline, March 2011-December 2012, (n=2533)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Ever Experienced- Total Study Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
</tr>
<tr>
<td><strong>Any Physical Violence by a partner</strong></td>
<td></td>
</tr>
<tr>
<td>Partner slapped you or threw something at you that could hurt</td>
<td>291</td>
</tr>
<tr>
<td>Partner ever pushed or shoved</td>
<td>218</td>
</tr>
<tr>
<td>Partner ever hit you with his fist or with something else that could hurt you</td>
<td>78</td>
</tr>
<tr>
<td>Partner ever kicked you, dragged you, or beat you up</td>
<td>138</td>
</tr>
<tr>
<td>Partner ever choked or burned you on purpose</td>
<td>36</td>
</tr>
<tr>
<td>Partner ever threatened to use or actually used a gun, knife, or other weapon against you</td>
<td>37</td>
</tr>
</tbody>
</table>
Table 2b. Prevalence of ever experiencing sexual IPV among adolescent, South African women participating in HPTN068, Baseline, March 2011-December 2012, (n=2533)

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Ever Experienced- Total Study Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
</tr>
<tr>
<td>Any Sexual Violence by a partner</td>
<td>113</td>
</tr>
<tr>
<td>Ever physically forced to have sex when you did not want</td>
<td>76</td>
</tr>
<tr>
<td>Ever had sex that you did not want because you were afraid of what the other person might do</td>
<td>66</td>
</tr>
</tbody>
</table>
Results: Study Conduct

• Retention was 91% over the study period.
  – 87.5% in the control arm and 95.1% in the intervention arm
• 99.7% of intervention participants eligible for payments were paid.
• Study adhered to clinical trial standards.
  – DSMB
  – Quarterly external clinical trial monitoring
Results: Social Harms

- There were no serious social harms reported by participants.
  - 16 reports (9 intervention, 7 control) during the trial.
  - 13/16 (81%) were minor teasing/jealousy related to being in the study.
Results: HIV incidence

• There was no difference in HIV incidence between those that received the cash transfer and those that did not.
  – Hazard Ratio (HR) 1.17 (95% CI 0.80-1.72, p=0.42).

• 107 incident HIV infections were identified during the study.
  – 59 in the intervention arm and 48 in the control arm

• HIV incidence was 1.8% during the study.
Results: School Attendance

• There was no significant difference in school attendance or permanent drop out by study arm.
  
  – **Attendance**: 95.0% in the intervention arm and 95.3% in the control arm, mean difference -0.44 (95% CI -1.44 – 0.56), p=0.39.

  – **School drop out**: 2.7% in the intervention arm and 2.9% in the control arm, RR 0.90 (95% CI 0.67 - 1.24), p=0.53
Results: HSV-2

- There was no difference between arms in HSV-2 incidence, RR 0.92 (0.71-1.18) (p=0.492)
## Results: Sexual Behavior

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Control</th>
<th>Intervention</th>
<th>RR</th>
<th>CI</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Had any sex partner in past 12 months</td>
<td>35.2%</td>
<td>32.2%</td>
<td>0.90</td>
<td>0.83 - 0.99</td>
<td>0.023</td>
</tr>
<tr>
<td>Any unprotected sex (past 3 mo)</td>
<td>10.2%</td>
<td>8.1%</td>
<td>0.81</td>
<td>0.67 – 1.0</td>
<td>0.05</td>
</tr>
<tr>
<td>IPV at any visit</td>
<td>31.2%</td>
<td>22.7%</td>
<td>0.72</td>
<td>0.64 - 0.80</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Coital debut</td>
<td>17.6%/yr</td>
<td>15.3%/yr</td>
<td>0.92</td>
<td>0.78 - 1.08</td>
<td>0.30</td>
</tr>
<tr>
<td>Partner age diff &gt;5yr</td>
<td>19.1%</td>
<td>16.0%</td>
<td>0.90</td>
<td>0.72 - 1.12</td>
<td>0.34</td>
</tr>
<tr>
<td>Transactional sex</td>
<td>10.5%</td>
<td>9.7%</td>
<td>0.95</td>
<td>0.78 - 1.15</td>
<td>0.57</td>
</tr>
<tr>
<td>Any pregnancy during the study</td>
<td>13.6%</td>
<td>13.0%</td>
<td>0.94</td>
<td>0.76 – 1.17</td>
<td>0.58</td>
</tr>
</tbody>
</table>
Cash transfer and other outcomes

• There was no difference between the girls getting the cash and the control on:
  – Depression or anxiety
  – Sexual relationship power
  – Hope for the future
  – Alcohol use
Results: Schooling was protective

- School enrollment and attendance were protective for HIV irrespective of study arm.
  
  - Risk of HIV infection comparing school drop out to non drop out, HR 3.21 (95% CI 1.81, 5.71), p<.0001
  
  - Risk of HIV infection comparing <80% attendance to ≥80% school attendance, HR 3.05 (95% CI 1.81,5.13), p<0.0001
How did they spend the $?

Household expenditures

YW expenditures
Qualitative findings (1)

• The vast majority reported decisions about spending the money were their own (78%); a very small percentage of young women noted that their boyfriend had a role in decision making about the cash transfer.

• Girls did talk about sharing money mainly with female siblings- not much with other family members, peers or partners.

• Most young women discussed the importance of being able to make one’s own decisions about money and having the independence to spend their own money without having to ask for it from family.

“I feel happy about having access to my own money because there is no one controlling me. And I do not have pressure about using it. I use it at my own time and my own way “
Qualitative findings (2)

- Most young women discussed independence from their families, but there were some indications that access to the cash transfer might also increase independence from male sexual partners.

  “this money is good. Even if you don’t have a boyfriend you can buy hair extensions and body lotion”

- Money also allowed young women to feel like they fit in with peer group at school- in terms of ‘looking good’ and also having pocket money to buy snacks at school
Discussion

• A monthly cash transfer conditional on school attendance did not reduce new HIV infections.
• Young women receiving the CCT reported fewer sex partners, less unprotected sex and experienced less IPV.
• School attendance was high in both arms.
• Staying in school and greater attendance significantly reduced HIV risk for young women.
• HIV incidence was 1.8% and risk behaviors were relatively low.
**CCT- IPV pathways**

- CCT lead to a reduction in physical IPV
- Pathways of protection?
  - CCT not associated with greater relationship power, hope for the future or improved mental health
  - Not associated with differences in school attendance
  - Cash lead to fewer young women having partners, thus less likely to experience IPV?
  - Money allowed young women to not ‘need’ a partner to provide materials goods (transactional sex or older partner)?
  - Money empowered young women, did not feel the need to take on partners to provide for them?
  - Cash reduced tension or stress in existing relationships (so no change in partner number but less violence in existing partnership)
Next Steps

* Trying to think through pathways through which cash may reduce IPV- exploring mediation
* Definition of IPV- look at severity of violence
* Follow up qualitative interviews this year to try and better understand pathways through which cash may have reduced IPV
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Unpacking results

• Why such high school enrollment?
  – High social protection coverage
  – Fee exempt schools
  – School feeding schemes
  – Qualitative data suggests study and peer effects on increasing school attendance

• Data from SA DBE from 2012/2012 shows enrollment rates in MP province of 85% for 16-18 year olds.
Implications

• Schooling is protective for HIV
  – Low risk behavior overall
  – Those that dropped out of school, while a small group had higher incidence
  – Focus for prevention should be more on 18-24 and out of school youth

• In places with low school enrollment, cash likely can help increase attendance (may have played a role in our site for sure)