Young Women’s Preferences to Inform MPT Development

Findings from the TRIO Study in Kenya and South Africa

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MPT End-User Research: Updates from the Field Webinar
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Overall Objective

- To improve understanding of young women’s preferences among three potential MPT delivery forms for HIV and pregnancy prevention.
  - Acceptability, preferences, choice and use evaluated.
  - Participants engaged as co-designers using multiple strategies.
Clinical Study Design Overview

Stage 1: Cross-Over Period
- Participants randomized to a product use sequence, and used each product for one month
- Acceptability: Months 1, 2, 3

Stage 2: Usage Period
- Participants used their chosen product, and could switch at month 4
- Choice
- Switch
- Persistence

3 months

2 months
Study sample size and retention

- N=277 HIV-negative women aged 18-30 enrolled.

<table>
<thead>
<tr>
<th></th>
<th>Total (N=277)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Site</td>
<td></td>
</tr>
<tr>
<td>Kisumu, Kenya</td>
<td>49%</td>
</tr>
<tr>
<td>Soshanguve, South Africa</td>
<td>51%</td>
</tr>
<tr>
<td>Age</td>
<td></td>
</tr>
<tr>
<td>18-24</td>
<td>66%</td>
</tr>
<tr>
<td>25-30</td>
<td>34%</td>
</tr>
<tr>
<td>Married or cohabiting</td>
<td>25%</td>
</tr>
<tr>
<td>Completed secondary school</td>
<td>52%</td>
</tr>
<tr>
<td>Parity &gt;=1</td>
<td>78%</td>
</tr>
</tbody>
</table>

Marital status and educational attainment varied by site.

- Retention: 93% contributed at least one month of follow-up; 89% completed both study stages.
  - Loss to follow-up was not associated with product sequence.
Mean ratings after one month of use

“Please rate how much you liked the [tablets/injections/ring] you used over the past month.”

<table>
<thead>
<tr>
<th>Product</th>
<th>Mean</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tablets</td>
<td>2.96</td>
<td>(2.81, 3.12)</td>
</tr>
<tr>
<td>Injections</td>
<td>4.26</td>
<td>(4.14, 4.38)</td>
</tr>
<tr>
<td>Ring</td>
<td>3.28</td>
<td>(3.11, 3.45)</td>
</tr>
</tbody>
</table>

Mean rating higher for injection than those for rings and tablets (p<0.001); Mean rating for rings higher than that for tablets (p=0.015).

• Injections most highly rated product, followed by ring and then tablets.
26-year old female discussing the first time she saw the vaginal ring, Soshanguve, South Africa:

“I was like wow!! This aah circle thing...is going to enter my vagina?! I was like argh! Like I was thinking about pains and what what...I thought I won’t be comfortable but I was comfortable you know. After one day, aah! I was like wow, I don’t feel nothing. It’s like normal.”
Multiple product attributes associated with product rating

- Attribute acceptability across 3 TRIO products (%).
- Estimates of effect on product rating derived from multivariable linear regression (β).

<table>
<thead>
<tr>
<th>Product attributes rated as “acceptable”+</th>
<th>Tablet</th>
<th>Injections</th>
<th>Ring</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td>β</td>
<td>%</td>
<td>β</td>
</tr>
<tr>
<td>How the product “looks”</td>
<td>61.8</td>
<td>1.07**</td>
<td>88.2</td>
</tr>
<tr>
<td>Ease of use</td>
<td>58.4</td>
<td>1.15**</td>
<td>92.9</td>
</tr>
<tr>
<td>Perceived interference with normal activities</td>
<td>66.7</td>
<td>1.16**</td>
<td>90.6</td>
</tr>
<tr>
<td>Possible to use without partner knowledge</td>
<td>69.0</td>
<td>0.19</td>
<td>78.0</td>
</tr>
</tbody>
</table>

*p<0.01;**p<0.001. All estimates adjusted for age, site and randomization order + on a 4-point rating scale.
Clinical results: choice at month 3 visit (N=249)

Overall

Tablets: 21%
Injections: 64%
Ring: 15%

Kenya

Tablets: 27%
Injections: 57%
Ring: 16%

South Africa

Tablets: 13%
Injections: 71%
Ring: 15%
Qualitative findings: reasons for not considering tablets

- Women who would not consider using the tablets in the future disliked the prescribed daily dosing regimen
  - Concerns about inability to correctly follow the dosing regimen
  - Difficulty swallowing a pill every day, given undesirable physical characteristics (large size, color, smell)

…You find that there are things that you cannot plan for, like mine -- I never planned to go and sleep somewhere, so you find that that day I missed my — one of the tablets that I was supposed to take.

(Kenya, age 21)

They [tablets] bore me because you have to take them at a specific time. They have a funny smell.

(South Africa, age 20)
Qualitative findings: reasons for not considering the ring

- Women who would not consider using the ring in the future had lingering doubts about the ring, even if disproven during the crossover period
  - Concerns about the ring coming out while walking or during sex
  - Insertion process
  - Discomfort/issues while in place
  - General comments about “fear”

R: For instance you are a person that always likes exercising, so you kind of tend to leave the exercise part of it out because you think that while jumping, skipping or doing something… The ring might fall; the ring might move to some position…
I: Yes did you experience that yourself?
R: No.

(Kenya, age 21)

The ring -- inserting that thing like… I have a huge problem with inserting things inside my vagina.

(South Africa, age 27)
Qualitative findings: reasons for not considering the injections

- Aversion to future use of the injections was related to an unwillingness to tolerate the pain of the injections, given the monthly frequency

  R: The injection because, oh, you will feel the pain with it. Oh my...
  I: But it’s just for a few seconds.
  R: Oh no, still. No.
  I: You don’t want it?
  R: I don’t want it.

(South Africa, age 22)
- 81% continued with their chosen product; 19% switched after first use month.
Question: Imagine that you do NOT want to be pregnant and you want to prevent HIV. What type of product(s) would you prefer?

- Two separate products: one for HIV prevention and one for pregnancy prevention
- “2-in-1” product that prevents both HIV and pregnancy

At study exit, nearly all women in South Africa and most in Kenya indicated a preference for an MPT over using two separate products.

85% stated they would prefer one of the study products over condoms for HIV and pregnancy prevention.
### Discrete Choice Experiment

Each participant answered 8 HIV prevention product choice questions. Participants randomized to one of 6 sets of choice questions.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Product A</th>
<th>Product B</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV Prevention</td>
<td>7 of 10 women remain HIV negative</td>
<td>7 of 10 women remain HIV negative</td>
</tr>
<tr>
<td>Pregnancy Prevention</td>
<td>Prevents pregnancy. May stop having monthly menstrual period</td>
<td>Prevents pregnancy. May stop having monthly menstrual period</td>
</tr>
<tr>
<td>Product Form</td>
<td>Vaginal ring</td>
<td>Injection</td>
</tr>
<tr>
<td>How often it is used</td>
<td>Use one time per month</td>
<td>Use one time per week</td>
</tr>
<tr>
<td>Side Effects</td>
<td>Mild headache/dizziness</td>
<td>No side-effects</td>
</tr>
</tbody>
</table>

Please look at these two products and choose Product A or Product B:
Attributes Influential to Product Choice

- Most important attribute: product efficacy
  - Changes in efficacy more influential to choice among Kenyan than South African respondents.

- Other attributes influential to choice:
  - Pregnancy prevention (MPT feature)
  - Product delivery form more influential to choice in South Africa than in Kenya.
    - Injections favored.

- Side effects (mild) played more minor role in choice.

Preferences for the attribute levels estimated using random-parameters logit.
Summary

- Strong interest in an MPT product vs. in separate products for HIV and pregnancy prevention.
- Injections were the most preferred among the three products evaluated.
  - 1 in 3 women preferred tablets or ring.
- Rating of all three products increased after use.
  - Greatest increase in rating for ring, the least familiar product.
- Product attributes, more than sociodemographic and behavioral factors, were most influential on product ratings.
- MPT attributes important to product preference in DCE.
- Findings underscore need for method mix that offers choice to users to meet preferences and life circumstances.
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