# Addressing Issues Impacting Safe and Consistent Use of an HV Prevention Intervention: Developing a Social Benefits-Harms Tool (SBHT)

#WEPEC1059

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## BACKGROUND

### RATIONALE FOR SOCIAL BENEFITS-HARMS TOOL (SBHT)

In HIV prevention trials, male partners have influenced women's ability to safely and consistently adhere to trial products, including vaginal rings.

CHARISMA is a pilot intervention being tested at the HIV Open-label Prevention Extension (HOPE) study in Hillbrow, Johannesburg, South Africa. CHARISMA provides empowerment counseling tailored to individual women's needs, as well as couples' counseling and referrals to local support organizations.

A brief measurement tool was needed to assess and monitor women's perceptions of partner support or opposition to vaginal ring use.

Validated scales can be useful tools to systematically measure complex constructs, such as those related to male partner engagement.

### LITERATURE REVIEW

We identified existing measures of agency, partner support and violence that might provide draft items for our tool. Some measures we drew from include:

- Revised Conflict Tactics Scale – 39 items
- Composite Abuse Scale – 30 items
- Psychological Abuse Scale – 15 items
- Gender Relationship Power Scale – 23 items
- Multidimensional Scale of Perceived Social Support – 12 items
- Quality Relationship Inventory – 29 items

## METHODS

### TOOL DEVELOPMENT PROCESS

We used a three-phase process to develop the SBHT:

1. Cognitive interviews with former trial and trial-naïve participants with and without past experience of violence (n=25) to assess ease, comprehensibility and relevance of 135 items.
2. Survey of former microbicide trial and trial-naïve participants (n=309). Exploratory factor analysis (EFA) to identify a reduced set of constructs and items that could measure social benefits and harms. Reliability and validity assessed by examining hypothesized associations between emergent factors/constructs and other variables.
3. Automation of SBHT on tablets and pilot-testing in one site to evaluate utility to inform and monitor CHARISMA intervention.

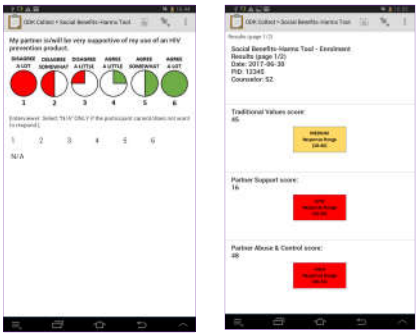

Figure 1: Screenshots of SBHT Readout on Samsung Tablet

## RESULTS

### COGNITIVE INTERVIEWS

Based on these interviews, we:

- Removed ~10 items that were reported to be embarrassing or duplicative.
- Edited some items that had unclear wording or difficult answer choices.

### SBHT TOOL DEVELOPMENT

- We reviewed means and distributions of individual items, removing highly skewed items.
- Based on the EFA, a 5-factor solution was selected (see Table 1 for psychometric properties).
- We then tested and obtained feedback from clinic staff before programming tool in Open Data Kit (ODK) for administration on Samsung tablets.

**Table 1:Characteristics of 5-Factor Solution**

| FACTORS | # Items, *alpha* | EXAMPLE ITEMS |
|---|---|---|
| Traditional Values | 13, α=.84 | I think a woman cannot refuse to have sex with her husband. |
| Partner Support | 10, α=.81 | My partner is as committed as I am to our relationship. |
| Partner Abuse & Control | 9, , α=.81 | My partner slaps, hits, kicks, or pushes me. |
| Partner Resistance | 5, α=.80 | If I asked my partner to use a condom, he would get angry. |
| HIV Prevention Readiness | 5, α=.68 | Using an HIV prevention product is the right thing to do. |

## RESULTS (Con't)

### VALIDATION

We conducted several analyses to retrospectively validate the scales that make up the SBHT:

- Based on Item Response Theory (IRT), we determined that all items in 4 of 5 scales contributed unique information and should remain.
- We developed *a priori* hypotheses about the direction and strength of associations between individual SBHT scales - and with other sociodemographic variables. At least one team member was correct in 40 or 46 predictions (87%). Only the Prevention Readiness scale did not perform as expected – likely due to ceiling effect of most items.

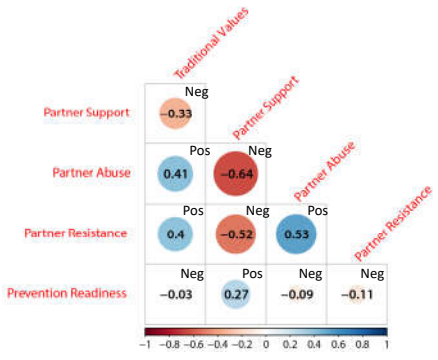


Figure 2: Correlations between SBHT Scales

### COMPARING SURVEY & INTERVENTION DATA

- CHARISMA participants' (n=61) baseline scores were significantly lower than survey data from former trial participants on the Traditional Values and Partner Abuse scales. Scores on the other scales were similar.
- Although preliminary, all SBHT subscale scores show favorable changes from baseline to first follow-up (n=24).

### PROSPECTIVE VALIDATION

The strongest evidence for SBHT validity would be its ability to discriminate between women with different levels of relationship harmony, stress or violence and to reliably track changes in relationship context over their participation in the intervention.

We will conduct several analyses to prospectively validate the SBHT, including:

- Qualitative comparison of counseling notes and SBHT scores from baseline to follow-up
- Latent variable model to assess reliability and measurement invariance
- SEM to explore associations between SBHT and sociodemographic characteristics

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## CONCLUSIONS

### INTERIM FEEDBACK FROM CHARISMA

- Participants reported that the SBHT made them reflect on relationships in ways they had not before.
- Counselors found items informative for building a more comprehensive profile of participants' lives.

### SCALE-UP

- If CHARISMA is found to be feasible and acceptable, it may be adapted and implemented at additional HOPE study site locations and/or PrEP demonstration projects.
- Expansion to new sites should include rapid testing to identify appropriate cut-points for locating participant on social benefit-harm tool.

### CONCLUSIONS

Our brief, electronically-administered tool assists providers to assess women's perceptions of partner support or opposition to using HIV prevention products, including the risk of IPV. Beyond trial settings, such a tool could enable clinic staff to efficiently tailor risk reduction, empowerment and adherence counselling for microbicides and other services. It may provide important monitoring information about social harms and benefits of HIV prevention programs.

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