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Examining the Applicability of the Information-Motivation-Behavior Skills Model of HIV Preventive Behavior in Uganda

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Background: HIV in Uganda

- HIV/AIDS is a major contributor to morbidity and mortality in Uganda (UNAIDS, 2005)
- Recent data suggest a concerning increase in incidence (Shafer et al., 2006; Kamali, et al., 2002)
- Among young people who had sex with a non-cohabitating partner, 38% of young men and 56% of young women reported not using a condom (UNAIDS, 2005)

Background: IMB Model

The information-motivation-behavioral skills (IMB) Model of HIV Preventive behavior (Fisher & Fisher, 2005)

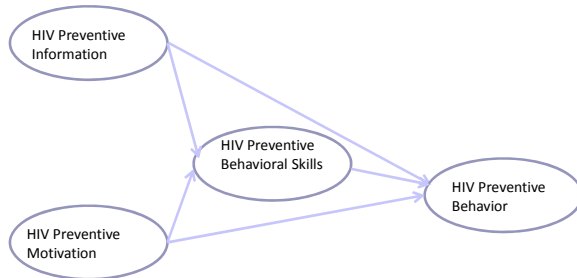
Posits that a trilogy of one's:

- Information about how to prevent HIV,
- Motivation to engage in non-risky behaviors, and
- Skills and abilities in acting out these behaviors

together predict HIV preventive behavior over time.

IMB predicts HIV preventive behavior among adolescents and young adults in the United States (Fisher et al., 2002) and non-Western countries (Bryan, et al., 2000; Linn et al., 2001; Kalichman, 2005).

IMB Model



Motivation includes subjective norms, behavioral intentions, and attitudes

The research question

What is the applicability of the IMB model to the behavior of adolescents living in resource-constrained countries, specifically Uganda, in predicting:

- Ever had sex, and
- Condom use

Mbarara Adolescent Health Survey Methodology

- Cross-sectional survey of 1,496 S1-S4 students
- Data were collected between September & October, 2008; and March & April, 2009.
- On average, the survey took 1 hour to complete
- Estimated response rate: 76.7%
- Location
 - Mbarara, Uganda is the 6th largest urban center in Uganda
 - Five secondary schools participated: one Catholic, one Muslim, three government
- **Data entry is ongoing**

Participant characteristics

- 680 Ugandan youth*
- 71% male, 29% female
- Age
 - 12-13: 8%
 - 14-15: 44%
 - 16-17: 35%
 - 18 and older: 11%
- Ever had sex?
 - Yes: 33%
 - No: 64%
 - Unknown: 3%

Data entry is ongoing

Main Measures

- HIV prevention information
 - 8 items, 1 point for each correct response
 - Summed, larger numbers reflect more information
- HIV prevention motivation
 - HIV prevention subjective norms
 - 11 items, 0-4 scale
 - Summed, larger numbers reflect more positive preventive norms
 - HIV prevention behavioral intentions
 - 5 items, 0-4 scale
 - Summed, larger numbers reflect more HIV preventive behavioral intentions

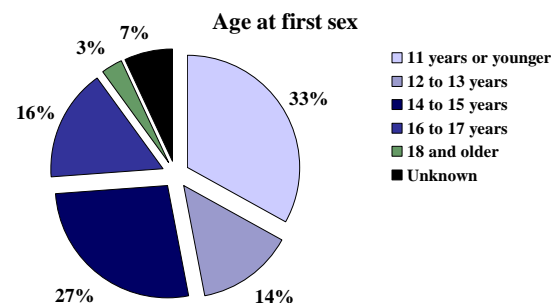
Main Measures

- HIV prevention behavioral skills
 - 7 items, 0-4 scale
 - Summed, larger numbers reflect more HIV preventive behavioral skills
- HIV prevention behavior
 - Ever had sex? Yes (1) or no (0)
 - For those sexually active-Use condoms during sex? At least some of the time (1) or none of the time (0)

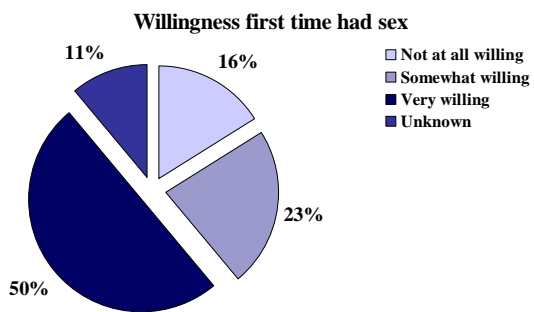
Additional Measures

- Rosenberg self-esteem (Rosenberg, 1965)
- Orientation to the future (Whitaker, Miller & Clark, 2000)
- Duke - UNC Functional Social Support Questionnaire (Broadhead et al., 1988)
- Self-rating of physical health (single item from the SF-36, Ware 1993)

Among those who have had sex.. (n=222)



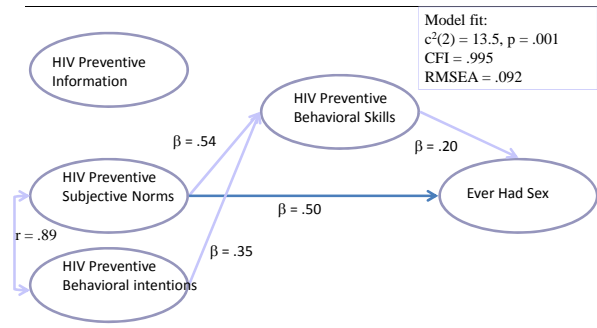
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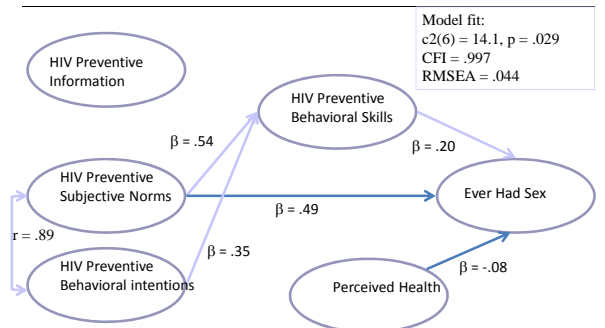
Condom Use

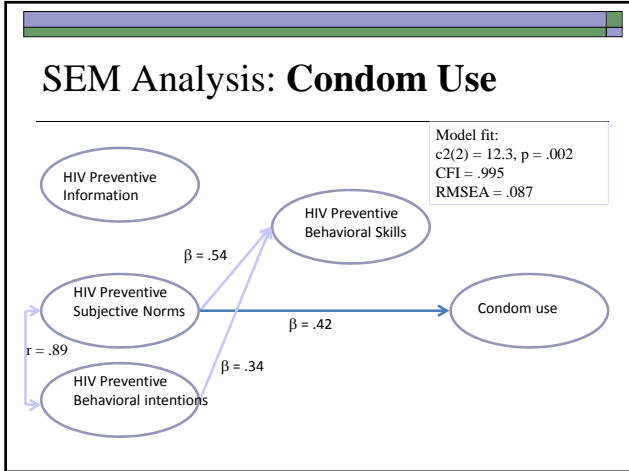
- 75% of those sexually active know where they can **buy condoms**
- 55% of those sexually active know where they can get condoms **for free**
- Frequency of condom use (% of sexually active)
 - Never use: 42%
 - Sometimes use: 19%
 - Always use: 24%
 - Unknown: 15%

SEM Analysis: Ever Had Sex



SEM Analysis: Ever Had Sex





Summary

For both ever had sex and condom use:

- Motivation (i.e., subjective norms and behavioral intentions) is related to behavioral skills
- Subjective norms are related to HIV preventive behavior
- HIV preventive information does not predict the outcome in either case.
 - Why? Maybe because it seems to be low over all:
 - 46% of participants answered 50% or less of the items correctly;
 - 93% answered 75% or less of the items correctly.

Summary

For ever had sex only:

- Health is negatively related to ever having sex.
- None of the other co-variates (self-esteem, future orientation, social support) are related to either outcome

Motivation and Behavioral skills (the M and B of IMB) do appear to be important in predicting HIV preventive behavior

Next steps

- Finish data entry!!
- Examine culturally-specific influencers on the IMB model
- Build an internet-based HIV prevention program based upon the findings.

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