AIDS Impact
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Usability and Navigability and Field Testing of an Internet-based HIV prevention program in Mbarara, Uganda

Sheana Bull
Ruth Biringi
Julius Kiwanuka
Michele Ybarra

* Thank you for your interest in this presentation. Please note that analyses included herein are preliminary. More recent, finalized analyses can be found in: Ybarra ML, Biringi R, Prescott T, Bull SS. Usability and navigability of an HIV/AIDS internet intervention for adolescents in a resource-limited setting. Comput Inform Nurs. 2012;30(11):587-595.

Acknowledgments

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- Our Youth Advisory Council, comprising 20 youth from secondary schools in Mbarara
- Our Community Advisory Council, comprising adult professionals, parents, and persons living with HIV in Mbarara
- Our Secondary School partners

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Objectives

- To orient audience to current HIV trends among youth in southwestern Uganda
- To consider why the Internet may be a useful approach to reach youth with educational messages
- To introduce CyberSenga, an Internet-based HIV prevention curriculum
- To discuss field testing of CyberSenga
- To consider implications for using Internet-based prevention programs in other resource-poor settings

Background information on CyberSenga

- Sub-Saharan Africa remains the worlds' region most heavily affected by HIV, accounting for 67% of all young people living with HIV and for 75% of AIDS deaths
- Among 15–24-year-olds in Uganda who were testing for the first time, HIV prevalence was 3% among young men and 10% among young women in 2002
- Uganda's HIV prevalence rates are currently estimated to be between 6-7% ; in Mbarara, 6%

Background information on CyberSenga

- HIV prevention programs have led the technology health field and have been shown to have efficacy for behavior change
- Technology can provide a private and confidential environment, which is particularly important in places where stigma could limit service access.
- Technology has the potential to be highly cost effective
- There is evidence that the Internet and computers may be a feasible and attractive approach for developing country and other resource-limited settings—Ybarra and colleagues demonstrated high usage of Internet among youth in a 2008 paper*

Ybarra ML, Emenyonu N, Nansera D, Kiwanuka J, Bangsberg DR. Health information seeking among Mbararan adolescents: results from the Uganda Media and You survey. Health Educ Res. 2008 Apr;23(2):249-58.

Background information on CyberSenga

- CyberSenga is a research project that aims to develop and test an Internet program for adolescents in Uganda
  - "Senga" is the Luganda term for Auntie, who is the father's sister and is expected to offer guidance to family as they mature
- The completed CyberSenga Program includes modules on:
  - Basic computer skills
  - Sexual Health information (STI, HIV, pregnancy)
  - Problem Solving
  - Communication
  - Motivation to be sexually active versus abstinent
  - Healthy Relationships
  - Condom Skills Building

Background information on CyberSenga

- CyberSenga was developed with input from our Youth and Community Advisory Councils
- In data presented at AIDS Impact in Botswana we reported audience preferences for interactive content with minimal reading; games; humor; and skills building.

Bull, S., Bimngi, R., Nabembezi, D., Kiwanuka, J., Ybarra, M. 2010. Cyber-Senga: Ugandan youth preferences for content in an Internet-delivered comprehensive sexuality education program. East African Journal of Public Health, 7 (1): 58-63

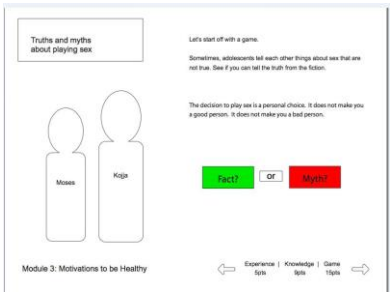
Methods and Sample

- Computer skills assessment
- ***Focus groups for content comprehension***
- Beta-testing for usability and navigability
  - These first three activities were carried out with our youth advisory council members
- ***Field testing of selected program modules***
  - ***Implemented with selected secondary school students in partner schools***

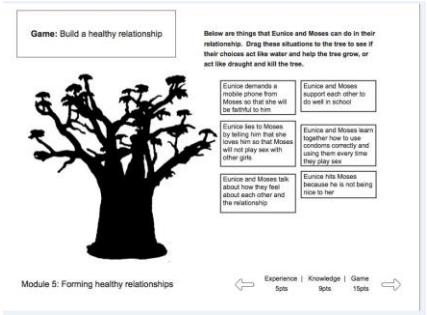
Methods and Sample

	Computer Skills N=20	Beta Testing N=13	***Focus Group N=14***	***Field Testing N=20***
Demographic	%	%	*%*	*%*
Male	70	62	***36***	***75***
Female	30	39	***64***	***25***
Senior 1	50	23		***25***
Senior 2	50	38	***36***	***35***
Senior 3		15	***43***	***40***
Senior 4		23	***21***	
Day	30	8	***7***	***30***
Boarding Student	70	92	***93***	***70***
Muslim	10	23	***29***	***10***
Catholic	50	30	***29***	***40***
Protestant	40	46	***42***	***50***

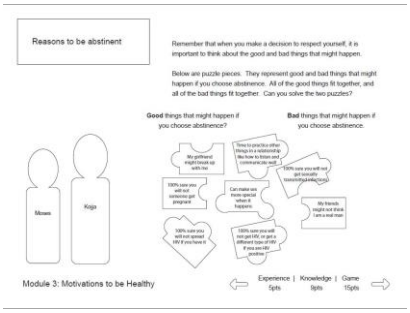
Focus Group for Engagement Assessment



Focus Group for Engagement Assessment



Focus Group for Engagement Assessment

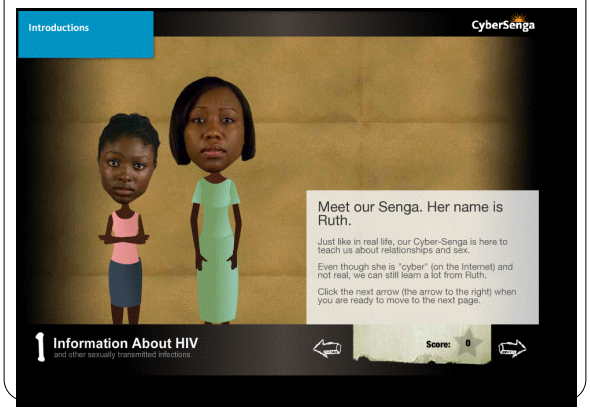


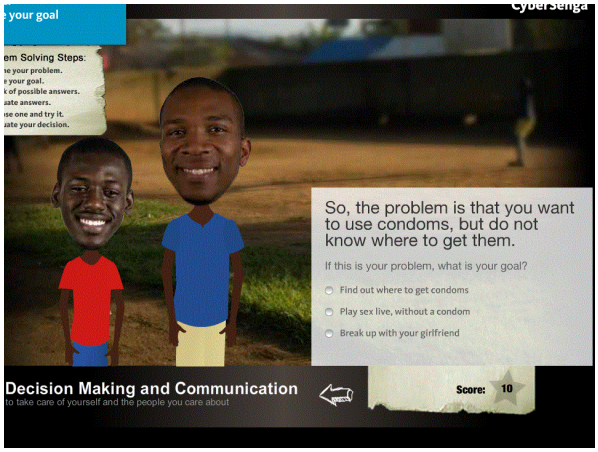
Focus Group for Engagement Assessment

- Youth found the scenarios realistic
  - Problem solving module:"*these problems are very common…adolescents [are shy] they find it hard to get these condoms*"
  - Communication module: "*It relates because most adolescents do not speak to the point…and it makes them have quarrels*"

Focus Group for Engagement Assessment

- Youth found the activities interesting
  - Sexual health module: (re: puzzle on abstinence) "*it is creative…a good way because teens do not like reading but it is in a game I think it could help them*"
- Youth found the skills building activities useful
  - Healthy Relationships module: "*if you pick a solution that is good and you see the tree growing and if you pick the bad solution and see [it] shrinking it can make you choose the right thing*"





Field Testing

- Program and assessments delivered all six modules over six weeks to a subset of students at three partner schools
- Brought netbooks into schools because of variability in access to and quality of computers
- Initial experiences with power outages, slow loading resulted in bringing a car battery to power the Internet router, and pre-loading content

Field Testing

- Once participants got through the initial assessments and module, capacity and ease with the program increased
- The average length of time to complete any module among participants was 54 minutes (range 28-71 minutes)
- Continually fluctuating school schedules made consistent delivery of program during field testing a challenge

Lessons learned

- While it is feasible to deliver an Internet-based comprehensive sexuality education program to secondary school youth in Uganda, there are several critical considerations
  - Computer skills training
  - Ensuring that program is easy to follow and navigate
  - Make sure it is fun and engaging—***Before*** you program!!
  - Make sure it works in the field/setting you intend

Next steps

- We are finishing our randomized controlled trial of CyberSenga with 5 partner schools
- Completed baseline assessments, program delivery, and initial follow-up. Long term follow up occurring now
- Data will help to establish the utility of using Internet-based comprehensive sexuality education in resource poor settings, or in settings where access to traditional information is limited or diminishing