



AIDS Impact
Sante Fe, NM
September 13, 2011



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

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* 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

We gratefully acknowledge the following people who contributed to this project and presentation:

- 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

The project described was supported by Award Number R01MH080662 from the National Institute of Mental Health. The content is solely the responsibility of the authors and does not necessarily represent the official views of the National Institute of Mental Health or the National Institutes of Health.

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 world's 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*

Thera M.L., Emeryoni N., Namera D., Kwanika J., Bangberg DR. Health information seeking among Mbarara adolescents: results from the Uganda Health and Family Survey. Health Educ Res. 2008 Apr;23(2):249-56.

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., Banggi, R., Nakumbe, D., Kwanika, J., Thera, 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): 51-63

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

Truths and myths about playing sex

Let's start off with a game. Sometimes, whitecents tell each other things about sex that are not true. How if you can tell the truth from the fiction.

The decision to play sex is a personal choice. It does not make you a good person. It does not make you a bad person.

Moses | Kija

Fact? OR Myth?

Module 3: Motivations to be Healthy

← Experience | Knowledge | Game | Spts →

Focus Group for Engagement Assessment

Game: Build a healthy relationship

Below are things that Eunice and Moses can do in their relationship. Drag these affluents to the tree to see if their choices act like water and keep the tree green, or act like drought and kill the tree.

Eunice demands a mobile phone from Moses so that she will be faithful to him.

Eunice and Moses support each other to do well in school.

Eunice lies to Moses by telling him that she does not see other girls so that Moses will not play sex with other girls.

Eunice and Moses learn together how to use condoms correctly and using them every time they play sex.

Eunice and Moses talk about how they feel about each other and the relationship.

Eunice tells Moses that she is not being nice to her.

Module 5: Forming healthy relationships

← Experience | Knowledge | Game | Spts →

Focus Group for Engagement Assessment

Reasons to be abstinent

Remember that when you make a decision to respect yourself, it is important to think about the good and bad things that might happen.

Below are puzzle pieces. They represent good and bad things that might happen if you choose abstinence. All of the good things fit together, and all of the bad things fit together. Can you solve the two puzzles?

Good things that might happen if you choose abstinence?

- There is no risk of getting a sexually transmitted infection.
- There is no risk of getting pregnant.
- There is no risk of getting HIV or AIDS.
- There is no risk of getting a sexually transmitted infection.
- There is no risk of getting pregnant.
- There is no risk of getting HIV or AIDS.

Bad things that might happen if you choose abstinence.

- There is no risk of getting a sexually transmitted infection.
- There is no risk of getting pregnant.
- There is no risk of getting HIV or AIDS.
- There is no risk of getting a sexually transmitted infection.
- There is no risk of getting pregnant.
- There is no risk of getting HIV or AIDS.

Module 3: Motivations to be Healthy

← Experience | Knowledge | Game Skills →

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”*

Introductions CyberSenga

Meet our Senga. Her name is Ruth.

Just like in real life, our Cyber-Senga is here to teach us about relationships and sex. Even though she is "cyber" (on the Internet) and not real, we can still learn a lot from Ruth. Click the next arrow (the arrow to the right) when you are ready to move to the next page.

1 Information About HIV and Other Sexual Transmitted Infections Score: 0



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