AI4D

A Chatbot named Beshte combats HIV

The Public Health Threat

- Adolescents and young adults account for 40% of new infections in Kenya, with females bearing a higher burden.
- Factors that include stigma, knowledge gaps, social norms and structural barriers hinder testing and treatment.

The Challenge

How to inspire young people to act preventively, declare their HIV status, and seek help.

An Innovative Solution

- Design a confidential chatbot that enables and encourages young users to seek answers and help for themselves.

The Story

Dr. Victoria Mukami, an informatics expert from the University of Embu in Kenya is one of 4 cofounders of the Beshte project.

"We saw this problem in our youth - where HIV was leading, and so we decided to do something about it, as traditional interventions are not working."

She points out that it's hard to reach young people today via newspapers or television - it's not where they are.

"And this is what you can call the neglected generation," she adds. No specific intervention has been designed for them, and having grown up with HIV, they have what she calls "HIV fatigue" - to the point where they won't even take medication.

"So we saw the need to come up with a technological solution, to enable more understanding, more testing, more disclosure, and more awareness amongst them," she says.

The Result

A chatbot that uses English, Swahili, and a slang mix of the two called Sheng, co-created with the input of psychologists, counsellors, and secondary and high school students.

"The knowledge base was developed by the users, with the users."

Dr Victoria Mukami

- A voiceflow engine ensures interactive, confidential use.
- The chatbot is capable of referring users directly to medical services.
- The chatbot was piloted with 100 young people.
- Users interacted with the chatbot for an average of 16 minutes.
- Young people subsequently used the pilot's WhatsApp group to ask if they could share the bot with friends.

Background

AI4D is an initiative by IDRC and the FCDO to fund researchers in the Global South to strengthen health systems by leveraging contextualised responsible artificial intelligence (AI) solutions to improve sexual, reproductive and maternal health for women and girls and support more effective and equitable preparedness and responses to epidemics and pandemics.
HASH is a consortium supporting the responsible use of AI innovations in maternal, sexual and reproductive health.

The team is grateful to HASH, for organizing seminars to support the development of AI models, and for overall support.

Overcoming barriers

- Users hoped the chatbot would answer all SRH questions. The team is working to broaden the SRH knowledge base.
- Sheng (a mixture of English and Swahili) evolves rapidly. "We got students to help us update the knowledge base," says team member Dr. Consolata Gakii.
- To strike the right tone, the team avoided LLMs in developing responses. Instead they wrote them, having a counsellor check each one.

"We wanted sympathetic responses. We didn't want the bot saying 'Sorry, I don't understand.'"
Dr. Victoria Mukami

Reaching Out

"Every community is unique. The question is, always, are they talking to our local problems?"
Dr. Consolata Gakii

The team has posted a link online to reach beyond formal education settings. The chatbot's back-end shows that, though designed with particular focus on women, 55% of current users are men. The team has raised funds to further research youth in work, with an upcoming pilot for 60 users.

Moving Forward

The team is seeking support that will help them to:

- Expand the project to rural and low-literacy settings, with the chatbot introduced to users by school curricula.
- Add a component capable of referring HIV positive users to counselling.
- Incorporate more languages, including all (s)languages spoken in Kenya.
- Explore taking the project to other countries of East Africa.
- Support pregnant adolescents and adolescent mothers to understand the role of SRH in preventing more unwanted pregnancies.

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