

Usability Evaluation of a Mental Health Resource Chatbot (Tabatha-YYC)

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INTRO

- Conversational agents or “Chatbots,” common in the commercial sector, are increasingly being used in the health information sector
- Accessing mental health resources is crucial for youth at risk of HIV, as poor mental health is higher among both people at risk of HIV and those living with HIV
- **Objective:** Test the usability of a chatbot, Tampa Bay Area Treatment & Health Advisor (Tabatha-YYC), to improve ease of access to mental health resources to youth aged 16-24 years at risk of HIV at an urban youth sexual health clinic in Florida

METHODS

- Timeline June 2021-May 2022
- Youth Advisory Board (n=7) provided feedback on chatbot creation
- Chatbot prototype tested with naïve users (n=20)
- Quantitative data collected via survey with the Health Information Technology Usability Evaluation Scale (Health-ITUES)
- Rapid inductive analysis of end-user qualitative interviews and think-aloud testing procedures

Qualitative Feedback: Users’ Perspectives

Perceived Usefulness

“This is something that I can implement in my everyday life, you know, that’s simple, that’s quick, that can get my mind moving.”

Engaging & Accessible

“It’s easily accessible, you know, like if you can access it from your phone. You take your phone everywhere. So even if you’re not sitting down at a computer, you know, you’ll still be able to access it or chat with the bot.”

Importance of Privacy

“So just like helping these youth stay anonymous, and, you know, reassuring them that you know, aren’t gonna run back and tell their parents you know, personal matters because that, I feel like that could definitely be a barrier to some youth, you know...”

Challenges in User-Control

“I think they were a little bit quick just because it was kind of like one message after the next after the next. I just didn’t get to read them all before they came through or before they, before the next one came up.”

Quantitative Feedback: Health-ITUES Scores (n=20)

Scale	Mean	(SD)
Impact	4.3	0.8
Perceived usefulness	4.4	0.8
Perceived ease of use	4.5	0.7
User control	3.6	1.3
Overall health-ITUES score	4.3	0.9

*Rating provided on a 5-point Likert Scale with 5 being the highest or best score

RESULTS

- 20 youth from diverse racial and ethnic backgrounds between the ages of 16-24 years tested the chatbot
- Tabatha-YYC had high usability rating
- Highest Health-ITUES score in perceived ease of use and perceived usefulness
- Lowest Health-ITUES score for user-control
- The overall health-ITUES score of 4.3 met the optimum cut point for usability
- End-user feedback corroborated the quantitative findings from the Health-ITUES scale

CONCLUSION

- Tabatha YYC is a promising technological intervention to link youth to needed mental health resources
- This chatbot is an avenue to use technology to help increase access to personalized mental health resources in under-resourced communities, providing support to staff in youth sexual health clinics in the Tampa Bay Area
- Future work will integrate user feedback to improve the overall user experience and begin testing this chatbot with a larger audience



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