C4C Study Data Documentation

1. Background

As mobile phone ownership and network coverage expand globally, particularly in low-and middle-income country (LMIC) settings, digital tools increasingly offer a way to support access to high-quality, person-centered family planning (FP) information. The use of digital interventions is recognized as a social and behavioral change strategy and a high-impact practice (HIP) for promoting, adopting, and maintaining healthy sexual and reproductive health behavior (HIPs, 2018). However, evidence is limited about if and why people would seek FP information from a chatbot, what they like and dislike about interacting with this type of digital tool, and how it could influence their FP intentions.

To help fill this gap, the USAID-funded Research for Scalable Solutions project assessed the Counseling for Choice (C4C) chatbot developed by Population Services International (PSI) in Cote d'Ivoire to explore why people use the chatbot, and barriers and facilitators to its use. The C4C chatbot, called "Gabi the virtual assistant" was launched by PSI on Facebook and WhatsApp in French, in August 2020. The content of this decision tree-based chatbot is divided into three components that branch off once the user answers a few background questions about themselves including their gender, age, and region of residence, and selects which one of the three branch topics they would like to learn about. The three branches include 1) information about a range of contraceptive methods ("all methods" branch), 2) information about the menstrual cycle ("periods" branch), and 3) individualized method recommendations and referrals ("recommended methods" branch). Findings are expected to help strengthen the chatbot for scale-up in Cote d'Ivoire and other countries.

2. Objectives

This study aimed to assess the feasibility and acceptability of using an interactive, online, health-promotion chatbot designed to improve FP knowledge and access. Specifically, this study aimed to:

1. **Describe user characteristics** in terms of who uses the tool, why individuals of both genders choose to use the tool, and how they learned about it.
2. **Describe how users interact with the tool**, including their trajectories of using the three different branches.
3. **Document users' perceptions** of the tool's effect on their self-efficacy and FP behavioral intentions
4. Document the interest of the tool users in **other forms of self-care**.

3. Methodology

This was a cross-sectional, mixed-methods study conducted with women and men who interacted with the chatbot in Cote d'Ivoire.

The study collected data through three instruments:

1. **De-identified chatbot back-end data** extracted for the study from the chatbot database to examine chatbot uptake and user trajectories by basic user demographics (sex, geography, and age group).
2. **Structured online questionnaires** (one for women, one for men) that collected data on user characteristics, FP history, reasons for using the tool, satisfaction with the experience, and perceptions of how the tool influenced FP-related self-efficacy and behavioral intentions.

3. **In-depth telephone interviews** with a purposely selected subgroup of female chatbot users who completed the online questionnaire to delve deeper into acceptability, perceptions, and challenges with using the chatbot. The three sub-groups for the in-depth interviews included: those who interacted with the "all methods" branch and or the "periods" branch, those who visited but didn't complete the "recommended methods" branch, and users who completed the "recommended methods" branch and were provided with a list of 2-3 recommended FP methods.

4. Publicly available datasets

Only the structured online survey could be de-identified and made publicly available. The qualitative in-depth interview transcripts could not be fully de-identified and made publicly available. The de-identified chatbot back-end data also cannot be publicly available.

Structured online questionnaire dataset

The structured online questionnaire dataset has 280 observations. Each row represents chatbot end-user self-directed e-survey responses between January 13, 2022, and July 11, 2022. The online questionnaire respondents are a convenience sample of chatbot users who agreed to participate in a survey about their experiences with the chatbot during the study period. We originally aimed to recruit participants until we reached a maximum of 300 survey responses or reached the end of the data collection period, whichever came first. The online survey sample is not representative nor generalizable of all C4C chatbot users. Variables that could lead to deductive disclosure were dropped from this dataset.