Participant Information Sheet

Sofia: Conversational Agent to Support the Self-report of Health and Well-being

Objective

This study aims to understand how conversational agents might be designed to support the self-report of health and well-being, especially in a diary format using speech interfaces like smart speakers. In particular, we want to investigate the effectiveness of the conversational agent and the engagement in self-reporting practice.

We seek to support this aim by comparing two distinct platforms: a conversational agent (CA) - Sofia, and a web application (WA) designed to support daily diary logging and self-report on a health questionnaire.

Procedure

As a participant, you will be assigned to one of the two groups: Group CA, in which the participants will maintain daily diaries and respond to the WHO-5 questionnaire via Sofia using Google Home Mini; and Group WA, in which you will use a web application on your own device.

At the beginning of the study, you will be asked to sign a consent form and provide demographic information which will include: name, email, age, sex, education level, occupation, health conditions, technological capabilities, and prior experience using CA/WA.

If you are in Group CA, you will be provided with a Google Home Mini with the application named "Sofia" installed and configured. See the Instructions on 'how to use Sofia' attached to this document to learn what you can say to Sofia. Using Sofia, you can log daily diaries in a conversational fashion. Once every two weeks, Sofia will also ask you to respond to a WHO-5 health questionnaire, in which you can summarize your well-being over the past 2 weeks.

If you are in Group WA, you will be provided with the link to a web page that you can access in a web browser using your smartphone or computer. We encourage you to bookmark this web page (URL) and set up a daily reminder on your phone to enter the data on this web page. Once every two weeks, you will be asked to respond to the WHO-5 health questionnaire on the same web app.

The study will last for 8 weeks. During the study, if you have any questions or if you run into any issues or you want to withdraw your participation, you can contact Raju Maharjan at rajm@dtu.dk.

At the end of the study, you will fill out the User Experience Scale. CA participants will additionally fill out the SASSI questionnaire to provide your subjective assessment of Sofia. CA participants will also participate in a post-study interview.

Compensation

Upon completion of the study, you will be given a Google Home Mini device for your participation.

Data collection and confidentiality

We collect demographic data on paper, data from the platforms, and post-study interview recordings. We do not collect any voice data from Sofia.

The demographic data we collect include:

1. Name
2. Email
3. Age
4. Sex
5. Education level
6. Occupation
7. Health conditions
8. Technological ability

The data we collect from the platforms include:

1. Daily diary entries
2. Self-reports to the WHO-5 health questionnaire
3. Data reflecting your usage of the platform for the duration of the study

Your conversation with Sofia will automatically be transcribed and recorded as text. The transcript will be used for data analysis purposes only, and will not be made public in any way. All the collected data will be stored securely. When we report the results of the study, your name will not be mentioned anywhere. If we choose to quote something you said, a pseudonym will be used. We do not collect any voice recordings from Sofia. The post-study interview of CA participants will be audio-recorded and transcribed.

For how long is personal data stored?

At present, we cannot say for which period we will store your personal data. However, we can inform you that we will take into consideration the need for scientific rigor and audit as well as privacy and security concerns when determining the period for which your personal data will be stored, in accordance with the Technical University of Denmark's policy on the retention of primary materials and data. Audio recordings will be deleted following transcription.

Will personal data be passed on to others, such as researchers at other universities?

No. All data gathered during this study will be stored securely in accordance with the General Data Protection Regulations and other requirements. Participants' anonymity will be maintained in all publications. Only researchers at the Technical University of Denmark (DTU) will have access to this data.

We are permitted to process your data in accordance with the rules in the General Data Protection Regulation (GDPR). We must inform you of the rules that apply to our work with your data.

☐ Recital 26, concerning information which does not relate to an identified or identifiable natural person or to personal data rendered anonymous in such a manner that the data subject is not or no longer identifiable.

☒ Article 6 (1) (a), which gives the Technical University of Denmark the right to process non-sensitive personal data about you on the basis of your consent.

☐ Article 6 (1) (e), which gives the Technical University of Denmark the right to process non-sensitive personal data about you without your consent, as the research project is deemed in the interest of society and it is necessary to process personal data in order to conduct the research project.

☒ Article 9 (2) (a), which gives the Technical University of Denmark the right to process sensitive personal data about you on the basis of your consent.

☐ Article 9 (2) (j), which gives the Technical University of Denmark the right to process your sensitive personal data for scientific research without your consent.

Participants' rights under General Data Protection Regulation (GDPR)

Under the General Data Protection Regulation, you have a number of rights in relation to our registration and processing of data about you. Please contact us if you wish to exercise these rights.

Person responsible for storing and processing of personal data

The Technical University of Denmark, CVR no. 30060946, is the data controller responsible for processing personal data in the research project. The research project is headed by Prof. Jakob E Bardram, who can be contacted at jakba@dtu.dk, +45 45 25 53 11, or at the Technical University of Denmark, Richard Petersens Plads, Building 324, Room 160, 2800 Kgs. Lyngby.