Plan Overview

A Data Management Plan created using DMPonline

Title: Designing Mindfulness Conversational Agents for Persons with Dementia and Caregivers

Creator: Cassandra Seah

Principal Investigator: Rafael A. Calvo

Affiliation: Imperial College London

Template: Imperial College London Generic DMP

ORCID iD: 0000-0003-2238-0684

Project abstract:

Mindfulness for dyads (persons with dementia and their caregivers) has benefits, and conversational agents (CA), like Alexa, is a novel way to support dyadic mindfulness. However, such interventions' needs are poorly understood. This study explored user needs using an imagined prototype because the intervention did not yet exist. We address this gap by better understanding user needs and preferences of dyads for mindfulness CA, using an iterative user-centered design process and a working prototype. Dementia and mindfulness experts and end-users (caregivers and persons with dementia) were interviewed. Four design iterations resulted in general and detailed user needs that were then integrated into the prototype. General needs include accessibility, calming, positivity, relatedness, reminders, effectiveness, enjoyability, awareness, addressing unintended consequences, and removing distractions. The prototype was favored with a high potential to develop into mindful habits, which suggests that identified needs could be used to support mindfulness practices using CA, which are helpful for dyads.

ID: 125543

Start date: 13-09-2019

End date: 31-03-2024

Last modified: 08-06-2023

Grant number / URL: https://www.imperial.ac.uk/study/fees-and-funding/postgraduate-doctoral/grants-scholarships/presidents-phd/

Copyright information:

The above plan creator(s) have agreed that others may use as much of the text of this plan as they would like in their own plans, and customise it as necessary. You do not need to credit the creator(s) as the source of the language used, but using any of the plan's text does not imply that the creator(s) endorse, or have any relationship to, your project or proposal

Designing Mindfulness Conversational Agents for Persons with Dementia and Caregivers

Administrative details

Project Name/Title

Designing Dyadic Mindfulness Conversational Agents for Persons with Dementia and Caregivers

Principle Investigator/Researcher

Rafael A. Calvo
Talya Porat
Cassandra Seah Ei Lyn

ORCID iD (if applicable)

https://orcid.org/0000-0003-2238-0684
https://orcid.org/0000-0002-6410-2028
https://orcid.org/0000-0002-5478-351X

Project Description

Mindfulness for dyads (persons with dementia and their caregivers) has benefits, and conversational agents (CA), like Alexa, is a novel way to support dyadic mindfulness. However, such interventions' needs are poorly understood. This study explored user needs using an imagined prototype because the intervention did not yet exist. We address this gap by better understanding user needs and preferences of dyads for mindfulness CA, using an iterative user-centered design process and a working prototype. Dementia and mindfulness experts and end-users (caregivers and persons with dementia) were interviewed. Four design iterations resulted in general and detailed user needs that were then integrated into the prototype. General needs include accessibility, calming, positivity, relatedness, reminders, effectiveness, enjoyability, awareness, addressing unintended consequences, and removing distractions. The prototype was favored with a high potential to develop into mindful habits, which suggests that identified needs could be used to support mindfulness practices using CA, which are helpful for dyads.

Data Collection

What types of data will you collect or create?

Qualitative (Preferences interviews) and quantitative data (Pre post assessment results) will be generated and analysed.

These data include:
Interview responses from users and experts on person with dementia and their caregiver's needs pertaining to dyadic mindfulness conversational agents

Survey responses from users on their preferences of guided mindfulness prototype use

MoCA results of persons with dementia

Pre Post assessment results for persons with dementia and caregivers for 1. MIDI sense of control, 2. perceived stress scale, 3. penn stage worry questionnaire and 4. the unidimensional relationship closeness scale.

Survey and interview responses from persons with dementia and their caregivers pertaining to their experiences and preferences after using the mindfulness prototype independently for a period of 30 days.

What file formats will be used?

MoCA tests, and transcripts will be stored in word documents. (.docx format)

Analysis will be stored in Nvivo files. (.nvpx format)

Surveys will be stored in word documents (.docx format) or picture format (.jpeg)

Pre study and post study assessments, daily worksheets and post study interview will be stored in picture format (.jpeg)

Will you create any software or write any code to process or analyse data?

- No

What quality assurance processes will be adopted?

Quality will be assured through routine monitoring by the lead country researcher and phd student.
Data will be collected and prepared according to published standard protocols in the field.

Ethics and Legal Responsibilities

Does your research involve human participants?

- Yes

Have you applied for/obtained ethical approval?

- Yes

Have you obtained informed consent?

- Yes

Will you be processing/collecting personal data?

- Yes

Will you be processing/collecting special categories of personal data (please select all that apply)?

- None of the above

Are there any IP or copyright restrictions which might influence your use or sharing of the data?

- No

Data Storage and Security

How much data do you expect to generate?

- < 1 TB

How will you store and back-up your data during the project?

Data will be initially stored locally on the PCs on which it was acquired. Afterwhich data will be archived to one drive. Data that has been analysed or is in the process of analysis is backed up regularly on dedicated disk space on a Seagate hard drive.

How will you manage access and security?

Any personal data will only be accessed by authorised members of the project.

Data Documentation and Metadata

How will the data be documented to ensure it can be understood?

A data dictionary will be created that defines the data collected in each document.

Will you be using any domain specific or widely used metadata standards to describe your data?

- No

Data Preservation and Sharing

What are your plans for long-term preservation of the data?

By the end of the project, the final dataset will be transferred to the Imperial College One Drive repository, which ensures sustainable archiving of the final research data.

How will you share the data?

'To facilitate the sharing of data, project data will be made available upon request.'

Will there be any restrictions on accessing the data?

- Yes (please give details)

'Data that cannot be shared publicly (e.g. to protect patient confidentiality) will be by request only. The PI will review each request on case-by-case basis. Upon approval the data requester will be asked to sign a data sharing agreement.'

How will potential users find out about your data?

'All published papers will include a data access statement providing details of where the dataset can be found and under what conditions it can be accessed.'

Responsibilities and Resources

Who is responsible for implementing this plan?

Along with the PI, members of the project team will have responsibility for study-wide data management, data security and quality assurance of data.

Will you require any additional resources to deliver this plan?

We have sufficient storage to undertake these tasks.