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UNIVERSITY OF CAMBRIDGE

Cambridge Mind-App (CaM-App):
Mental health, loneliness, everyday behaviours and technology use during COVID-19

Dear Participant,

We would like to invite you to participate in our research project which investigates how **social isolation** affects **mental health and loneliness**, and how this is **related to everyday behaviours such as digital technology use.** This study is planned to run **for approximately 8 weeks.**

This study has been reviewed by the University of Cambridge Research Ethics Committee [Project ID Number: PRE.2020.048].

It is very important for you to know that **you don't have to participate**. But if you think that you may be interested in participating, we would like to tell you why the research is being done and what you would need to do. Please take time to read the following information carefully. You can contact any member of our team if there is anything that is not clear or if you would like more information (contact details below).

What is this study about?

We are interested in examining how social distancing measures experienced during COVID-19 affect mental health, and how this may be related to other behaviours. We will use information collected from your mobile phone using a specific app called 'EARS' (Effortless Assessment Research System) developed by The Center for Digital Mental Health at the University of Oregon, USA.

Why are we doing this study?

This research aims to understand how things like social media use, digital communication and physical activity may relate to any consequences of social distancing.

Who can take part in the study?

Anyone in the UK aged 12 or over who speaks English, and who uses an iPhone (iPhone 7 or newer with iOS 13+) or Android (Android OS version 6.0 or greater) can take part in this research.

What will happen in the study?

If you agree to be in this study, we will ask you to do the following things:

Install the EARS app using in-app instructions. This app will collect several types of data from your phone (detailed below). This data will be encrypted (stored in password protected files) on a secure server.

Give a Daily Status Report. Each day you will be asked a set of short questions about your general well-being over the past day. Opening the application to answer these questions helps make sure the application stays active on your phone. If you do decide not to answer these questions, we ask that you open the application to keep it running.

Weekly and Montlhy Reports. At the end of each week we will send you a link to a slightly longer questionnaire asking questions about your social interactions in the past week, your current feelings of loneliness, and questions about your mood. ⹀

Participate in Snapshots Surveys. On a small number of randomly selected days, you will be asked to complete a short survey up to seven times a day between 9am and 11pm. These one-minute surveys will appear on your phone every couple of hours and ask a set of questions about how you are feeling. If you need to have your phone turned off (for example, when you are in school), you will not have to answer these questions. You may decline to answer any of the surveys or questions.

In total, this study will **run over the course of approximately 8 weeks**. If you agree to follow up studies, you may be asked to fill in some follow-up questionnaires for up to six months after the

study. **You can choose to stop your participation at any time**.

What type of information will be collected via the EARS application?

Phone Usage. EARS will collect different information about how you use your phone, including how much you use certain phone applications, call statistics (duration and frequency), and how long you spend on your phone per day. EARS will not collect the names of the people you call or interact with, nor the content of what you type or say during phone or video calls.

Keyboard Data. EARS will install a specialized keyboard on your phone, which records *when* you are typing into an app. EARS will not record the exact words or letters you type, but rather stores **when** you were typing and **which app** you were using at that time.

Physical Activity. EARS will collect accelerometer data from your phone to understand your physical activity (e.g. duration of light/ moderate/ intense activity). The app will not store location (i.e. GPS coordinates).

Other data on phone use. We will also collect data on when the phone is charging and how much light the phone is exposed to in order to understand things like basic sleep routines.

What are the risks of taking part?

There are no direct risks associated with taking part in this study. The data collection over the EARS app is designed so that the risk of sharing identifiable data is minimised.

The EARS app has been made as lightweight as possible on your phone. Memory usage is minimized to about 1-2% of memory in both the Android and iOS versions. In addition, the app moves most Cloud uploads to late at night and when the device is connected to a Wi-Fi network, so the tool consumes no more than 15% of the battery over a 16-hour period.

Some of the questions we will ask you will be about your psychological well-being (for example, how lonely you feel). If you feel stressed about answering these questions, **you can stop the surveys at any time**. Because many of the

questions we ask are related to mental health, we provide a list of mental health support contacts in your country that you can contact in case you feel unwell.

What are the benefits of taking part?

While there are no immediate benefits nor compensation for taking part in the study, this research might help us develop new interventions to improve mental health and provide recommendations for those who are undergoing social distancing.

Can I change my mind?

You **can change your mind at any time!** You don't have to give anyone a reason for why you no longer wish to participate. There **will be no consequences for you if you don't want to take part.**

If at any time after the application is installed you wish to discontinue the study, **please contact us to make sure the tool is completely uninstalled from your phone.** At that time, you can let us know whether you want us to delete your information.

What if I feel something went wrong?

If you have any concerns about any aspect of the study, please contact Professor Blakemore, Dr Orben or Dr Tomova (contact details below). If you feel the research team has not dealt with your concerns to your satisfaction, you may lodge a complaint with the Information Commissioner's Office at https://ico.org.uk/.

How do I find out more about the study?

You can email questions to or call any member of our research team:

CaM-App Team: cam.app@psychol.cam.ac.uk

Professor Sarah-Jayne Blakemore: sjblakemore@psychol.cam.ac.uk

Dr Roger Kievit: rogier.kievit@radboudumc.nl

Dr Livia Tomova: lt503@cam.ac.uk

Dr Amy Orben: aco35@cam.ac.uk

Dr Lydia Speyer: ls945@cam.ac.uk

Would you like to participate in the study?

If you are interested in taking part, your parent/caregiver will need to complete a Parental Consent form. You will also need to complete a Participant Assent form and a short quiz to make sure that you have understood the information provided. You can complete these online following a link that will be provided to you by your school.

Please contact one of the research team if you need any assistance or have any questions.