

INDIANA UNIVERSITY INFORMED CONSENT STATEMENT FOR RESEARCH

Developing Artificial Intelligence (AI)-Enabled Mental Health Analytics to Objectively Identify and Measure Depressive Behaviors in College Students Protocol # 19663

You are being asked to participate in a research study. This consent form will give you information about the study to help you decide whether you want to participate. It is your choice whether or not you want to be in this research study. Please read this form, and ask any questions you have, before agreeing to be in the study.

The purpose of this study is to assess the role of technology in helping students' understanding of psychological well-being.

We are asking you if you want to be in this study because you are a first-year undergraduate student at Indiana University Bloomington who owns an iPhone.

The study is being conducted by Indiana University's Assistant Professor Dr. Sagar Samtani from the Department of Operations and Decision Technologies at the Kelley School of Business, Assistant Professor Dr. Edlin Garcia from the Department of Health & Wellness Design at the School of Public Health, and Distinguished Professor Dr. Bernice Pescosolido from the Department of Sociology. The study is funded by the IU Vice Provost for Research and the Kelley School of Business.

If you agree to be in the study, you will do the following things.

- Download the MHAI-Pal mobile application to your iPhone during New Student Orientation.
- Create a profile and respond to sociodemographic background questions (age, sex, gender, race, ethnicity, first generation college status, income group perception, degree program, perceived health), and select sensor signal access and permissions (location, Bluetooth, and health data) on the mobile application to be collected from August 2024 to May 2025,
- Respond to a single 30-minute baseline survey at the start of the study via the mobile application (psychological well-being questionnaires and mental health literacy),
- Respond to a total of 3 biweekly 2-minute follow up surveys via the mobile application for the first six weeks, (psychological well-being questionnaires), with one being approximately up to 10 minutes longer about your friends and family
- Respond to a total of 6 monthly 2-minute follow up surveys via the mobile application from November to April (psychological well-being questionnaires), and lastly, with one being approximately 5 minutes longer about events experienced since start college

- Respond to a single endline 30-minute survey (psychological well-being questionnaires and mental health literacy), at the conclusion of the study.

You will be in this study for about one academic year (August 2024-May 2025).

Before agreeing to participate, please consider the risks and potential benefits of taking part in this study.

You may be uncomfortable while answering the survey questions. While completing the survey, you can skip any questions that make you uncomfortable or that you do not want to answer.

There is a risk someone outside the study team could get access to your research information from this study. More information about how we will protect your information to reduce this risk is below.

We don't think you will have any personal benefits from taking part in this study, but we hope to learn things that will help researchers in the future.

You will be paid for participating in this study. We will use a tiered compensation scheme to incentivize the sustained participation necessary for this study. You will be eligible to receive compensation up to \$65 total value in a Starbucks e-gift card funds if you complete all study procedures.

- Pre-incentive for downloading the application and enrolling in the study will include U Bring Change to Mind (UBC2M) backpack with UBC2M swag: back scratcher, shoelaces, sunglasses, and t-shirt (swag may vary dependent on availability).
- Completion of the baseline survey can earn participants \$10.
- Completion of each of the nine follow-up surveys can earn participants \$5, for a total of \$45 possible compensation (9 follow up surveys x \$5). Disbursed in \$15 increments.
- Finally, completion of the endline survey can earn participants an additional \$10.

The total possible value of compensation for a participant completing all study procedures is \$65, with incrementally lower compensation values for those with incomplete study procedures. All compensation will be automatically e-delivered to participants following completion study activities in increments of \$10 for the baseline and endline and \$15 for follow-ups.

We will protect your information and make every effort to keep your personal information private, but we cannot promise complete confidentiality. No information which could identify you will be shared in publications about this study. Identifiable electronic subject data (health data, accel, gyro) will be collected via a two-phase encryption and will be stored with a decryption key owned by PI and

doctoral student. The protection of participant privacy through the removal or anonymization of personally identifiable information (PII) will be implemented at various stages of the data flow. Initially, upon collection, data will be stored (i.e. cached) locally, adhering to Apple's encryption standards before transmission. This encrypted data is then transmitted using SSL certificates to the Jetstream server, where a two-step encryption process takes place. Firstly, the data is encrypted upon arrival and then re-encrypted before being sent to our backend MySQL server for storage, which utilizes AES encryption. Afterwards, permission to access this data will only be restricted to specific individuals such as the Principal Investigator (PI) and lead graduate students. Collected survey data, identified only by IU username which will be encrypted prior to being stored securely by SQL database on Jetstream, and then downloaded to a secure database and server maintained by Samtani's research team in the highly secure UITS data center. All files will be kept on a secure IU server. The systems administration staff has designed a number of processes for preventing intrusions or data loss on the Jetstream servers. Remote access to the servers is tightly controlled by user IDs, passwords, and two-factor authentication through DUO. Physical access to servers is restricted per the security protocols of IU's data center.

Only as necessary for survey administration, a limited number of Samtani's research team can view information that identifies any sample member as having participated in the survey. All staff complete required human subjects and FERPA training.

All survey data and sample information are stored on a secure IU Jetstream server for ten years.

Your personal information may be shared outside the research study if required by law. We also may need to share your research records with other groups for quality assurance or data analysis. These groups include the Indiana University Institutional Review Board or its designees, and state or federal agencies who may need to access the research records (as allowed by law).

Information collected for this study may be used for other research studies or shared with other researchers who are conducting their own research studies. This may include sharing with researchers outside Indiana University and sharing with private companies. It may also include making the information available in public and private databases of research data so that other researchers can use the information to answer research questions.

If we share your information in this way, we will remove information that could identify you, such as your name and contact information before any information is shared. Since identifying information will be removed, we will not ask for your additional consent for this sharing.

If you have questions about the study or encounter a problem with the research, contact the researcher, Dr. Sagar Samtani or Dr. Edlin Garcia by email at MHAIPAL@iu.edu by phone at (812) 855-8925 or (812) 855-3102.

For questions about your rights as a research participant, to discuss problems, complaints, or concerns about a research study, or to obtain information or to offer input, please contact the IU Human Research Protection Program office at 800-696-2949 or at irb@iu.edu.

If you decide to participate in this study, you can change your mind and decide to leave the study at any time in the future. If you decide to withdraw, call any research staff member or one of the principal investigators and inform the research staff member of your decision. Once you express that you would like to be withdrawn from the study, you will be immediately removed from the study. You will receive the dollar amount compensation up to when you withdrew according to the previously described payment arrangement.

We would like to communicate with you about this study by text message and/or email. We might use text or email to send you reminders about upcoming study surveys, check on how you are doing, or tell you about the progress of the research.

Text messaging and email are not secure methods of communication. The information sent over text or email, which may include sensitive or personal information, could be accessed or read by someone other than you. If you would like us to communicate with you via text or email, please initial the lines below and provide the phone number(s) and/or email address(es) you would like us to use.

_____ I authorize the researchers to send me emails related to this research study
Email address for this communication: _____

_____ I authorize the researchers to send me text messages related to this research study
Phone number for this communication: _____

You can still participate in this study even if you do not want us to contact you by text or email.

PARTICIPANT'S CONSENT

In consideration of all of the above, I agree to participate in this research study. I will be given a digital copy of this informed consent document to keep for my records.

- Yes, I agree (by selecting yes, you agree to participate in the study)
 No (this will close out from continuing forward with the study)