# STATISTICAL ANALYSIS PLAN

Evaluating a Digital Peer Mentoring Platform With College Student Populations

NCT05764785

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This study was designed to examine whether using MentorPRO with a peer mentor – compared to peer mentoring-as-usual (control) - during a summer bridge program was related to significantly greater reduction in mental health symptoms and improvement in wellbeing indices. Inclusion criteria included elevated mental health symptoms, 18-years-old or older, English proficiency, and participating in the summer bridge program at University of Massachusetts Boston.

**Data Analysis Plan from IRB Protocol:**

- **Data analysis:** The data will be analyzed both quantitatively and qualitatively. The procedures are outlined below to address each of the research questions:
    - Research Question 1: What is the acceptability and feasibility of the MentorPRO mentoring program?
        - Recruitment, retention, and adherence to the MentorPRO mentoring program and application will be evaluated to determine the acceptability and feasibility of the program.
        - Acceptability of MentorPRO will also be assessed through open-ended questions and surveys commonly used to evaluate online programs.
        - Qualitative analyses will be conducted to evaluate the level of participants' engagement with mentors via the in-app chat messaging feature.
        - Mentors' responses to survey questions will examine initial mentor feasibility and acceptability of MentorPRO.
    - Research Question 2: Does mentoring with MentorPRO demonstrate an impact on efficacy for student academic outcomes (i.e., GPA) and indices of wellbeing (i.e., mental health, connectedness, academic self-efficacy, and overall well-being) among a diverse sample of incoming or first year college students?
        - Quantitative analyses will be conducted to determine whether level of engagement with mentors and the app (e.g., via frequency of in-app chat messaging, frequency of in-app survey completion and check-ins) relates to changes in academic outcomes and indices of wellbeing, as well as to broadly model how these domains change over the course of students' participation.
        - Group comparisons will be conducted to examine if there are differences in final mental health and wellbeing measures across groups (intervention and control). Baseline demographics and wellbeing indices will be used as covariates in analyses.
    - Exploratory analyses will also be conducted on the data to examine whether other trends or patterns emerge from the data.
- **Data integrity:**
    - In order to ensure quality control of the data collected via the Qualtrics survey, participants will be prevented from submitting multiple responses by enabling this feature within Qualtrics. Data will be checked for missingness.

The final Clinical Trials report findings will follow this analytic plan. We will report descriptive statistics for the sample and primary and secondary outcome measures. Power analysis will be performed to determine that the sample size is adequate to detect a statistically significant difference given the anticipated effect size. Using intention-to-treat analyses, we will conduct repeated measures ANOVAs with two time points (pre and post summer bridge program), to examine whether significant interactions emerge between time and assigned condition (MentorPRO vs. control) on main outcome measures (depression [PHQ-9] and anxiety [GAD-7]

self-reported symptoms and overall wellbeing) and secondary outcome measures (academic self-efficacy, sense of belonging to the university, and cognitive load). To correct for multiple comparisons, we will use a Bonferroni correction, alpha = .05 divided by six tests, resulting in a final alpha of .008.