

The Effects of Personalized Text Messages on Diet Quality and Anthropometric Markers in College Students – A Protocol for a 12-Week Randomized Control Pilot Study

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Objectives: Consumption of highly processed foods and beverages, and inadequate fruit and vegetable intake is common among college students. These low diet quality eating patterns may predispose students to excess weight gain, metabolic derangements, and risk for chronic health conditions later in life. It is currently unknown if personalized text messages can improve eating patterns in this population. The objective of the present study is to examine the effects of personalized text messages on diet quality and anthropometric markers in college students attending a public Midwestern university.

Methods: A 12-week randomized, two-arm, parallel design pilot study will examine the effects of personalized text messages (INV) compared to generic text messages (CON) on diet quality and anthropometric markers. Recruitment will be delimited to healthy (i.e., no diagnosis of chronic health conditions), undergraduate students ≥ 18 years old with normal weight, overweight, or obesity, and a low diet

quality score (assessed during the initial screening survey). Students without access to a text-capable mobile phone and those who engage in >420 minutes of physical activity per week will be excluded. One-way short message service (SMS) will be utilized, and text messages will be sent between 7 AM – 7 PM according to a pre-determined schedule (i.e., each participant will receive seven text messages per week during weeks 1–8 and five text messages per week during weeks 9–12). Thirteen areas of focus with five distinct text messages per area were created for the INV group using a validated diet quality screener. Text messages were reviewed by two dietitians and were further refined based on feedback from four virtual focus groups ($n = 13$ graduate nutrition and/or health majors attending U.S. universities). General, non-nutrition text messages (e.g., handwashing) will be utilized for the CON group, and each area of focus will consist of five distinct text messages.

Results: Study approval has been granted by the University's Institutional Review Board. Recruitment activities have commenced, and data collection is ongoing.

Conclusions: Findings will inform the development of effective and sustainable mobile health initiatives for college students.

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