Physical Activity Text Messaging Intervention for a Food Service Employee Population

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ABSTRACT

Physical inactivity is ranked fourth as a risk factor for mortality and contributes to increased risk for chronic diseases. At particular risk for physical inactivity and chronic diseases are low-income working adults. These low-income wage earners include food service workers who represent a growing industry, but are among the lowest wage earners in the country. Worksite clinics are now being used to address health concerns of employees, including health promotion and chronic disease prevention programs. With the exponential growth and widespread usage of cell phones and text messaging, there is a new generation of technology via mobile health (mHealth) available for health promotion. A small number of studies have shown that physical activity text messages can be effectively used to help adults improve their physical activity. However, the use of text messaging within the context of promoting physical activity for low-income working adults is understudied.

We recently conducted focus groups at three clinics with low-income patients to assess text message use and develop physical activity text messages. They indicated familiarity with and use of text messaging and enthusiasm for the technology as a means of delivering a physical activity intervention. They also generated a data bank of over 170 physical activity text messages. The purpose of the proposed mHealth project is to use this physical activity text message data bank in a study that will test the feasibility and effect sizes of delivering a text message intervention (Text4Walking) to increase physical activity in food service employees.

Using a one-group 12-week longitudinal design, employees (N=32) aged 30 to 65 will be recruited from a food service worksite, that is a catering facility that prepares food for retail and airline customers. In this intervention study, guided by a Physical Activity Health Promotion Framework, participants will wear accelerometers to measure their daily steps, and they will receive 36 text messages (three per week), over a 12 week period of time. They will also receive feedback when they text in their daily steps once weekly, as well as receive feedback on their steps during three study calls. The behavioral outcomes measured at baseline and 12 weeks will be adherence to physical activity (using an accelerometer and self-report), aerobic fitness (step test) and body composition (BMI and waist circumference).

A repeated-measures multivariate analysis of variance (RM-MANOVA) will be performed at baseline and 12 weeks. We hypothesize that we will have significant within group improvement on physical activity and physical fitness outcomes, and body composition will remain stable, from baseline to 12 weeks. If the data validate our hypothesis, we will have identified a potentially innovative and efficient strategy for delivering a physical activity program in the context of a food service worksite. These data will provide pilot data for a larger randomized controlled trial.

For more information about this project, please contact:
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