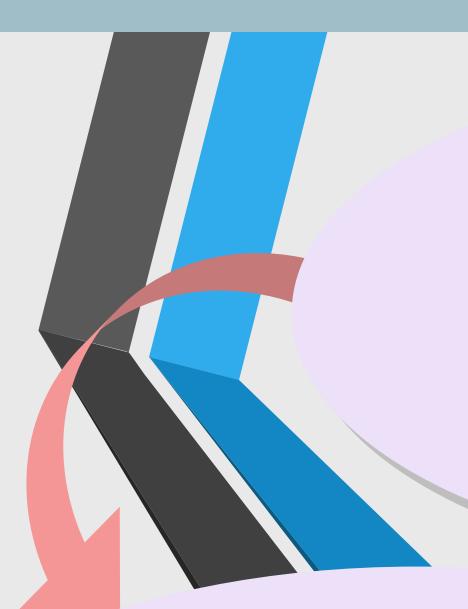
## The feasibility of digitalizing health promotion intervention to reduce breast cancer risk among Chinese American women

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#### Introduction

**Purpose:** This project aims to test the feasibility of a 6-month RCT intervention to reduce central obesity, promote a healthy lifestyle, and breast cancer prevention among Chinese American women from an urban city in northern California.

**Background**: Studies have found that assimilation stress and obesity are associated with an increased risk of breast cancer in Chinese American women.

Smartphone-based interventions provide a convenient platform for participants to engage in healthy lifestyles.

Asian American women have the highest rate of smartphone ownership compared to women of other racial/ethnic backgrounds.

#### **Materials**

The intervention includes 12 weekly educational modules delivered through a social networking app, a wearable device to track daily activity, and biweekly individually tailored reminder messages.

The concepts of the 12-week intervention were based on the Social Cognitive Theory (SCT) and an adaptation of a Healthy Mothers Healthy Children program (Chen. JL).

Educational modules were developed by the research team based on upto-date literature and translated into Chinese. Modules were recorded as video files.

#### Conclusion

- Using smartphones and phone apps can be feasible to deliver community-based health promotion intervention to the minority community where most participants have limited English proficiency.
- Providing regular reminders and support help keep participants completing the education modules.
- Limitations
  - Study recruitment and follow-up were interrupted during the Covid-19 pandemic when the shelter-in-place ordinance was in place.
  - The face-to-face contact helped engage and motivate the participants to continue the project and wear the wearable device. However, the in-person contact needed to be discontinued.

#### Results

#### Phase I:

3 community volunteers and 2 clinicians participated in the advisory board to review the content outlines of educational modules.

#### Phase II:

<u>Participants:</u> 18 women completed the pilot study. The average age was 40.7 years, and the average years in school were 12.7 years. 78% of the participants were married, and 50% self-identified as having a chronic illness condition.

Adherence: 90% of the participants completed the educational modules.

Weekly steps: On average, the invention group (n=10) had 6500 more weekly steps than the control group (n=8).

Body weight: There was only a slight decrease during the 3 months among intervention participants (-0.01Kg)

<u>Waist Circumference:</u> The waist circumference was decreased by 2.42 cm during the 3 months.

### Methodology

Phase 1--Refine and develop intervention modules with an advisory committee panel to review the module content to ensure cultural appropriateness and scientific rigor

Phase 2- Recruit Chinese American women from the community for the feasibility testing of the intervention. Women who were 18 years older, premenopausal, had a child under 18 years old, had a waist circumference greater than 80 cm, and owned a smartphone were invited to participate in the project.

All study materials and intervention modules were provided in both Chinese and English.