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## Feasibility of mHealth technology use among a sample of isolated rural men at high risk for cardiovascular disease

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# Feasibility of mHealth technology use among a sample of isolated rural men at high risk for cardiovascular disease

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## Background/Purpose

- Isolated rural men are considered a health disparities group at high risk for cardiovascular disease.
- Technologies for self-monitoring for healthy eating, activity and weight loss (ie mHealth) may show promise for engaging rural men in lifestyle modification.
- This study investigated the feasibility of men from rural isolated areas to use a fitness monitor with text messaging support over a 3-week period.
- The study examined the men's daily monitor use for tracking activity and eating, and assessed via written survey, their perspectives about mHealth.

## Subjects

- Twelve men, ages 40-69, from a US Department of Agriculture defined isolated rural area, participated.
- A purposive sample originally recruited to participate in a focus group about their perceptions of the utility of mHealth.
- Age: 50.9±8.6 yrs & Baseline BMI: 25-44 kg/m<sup>2</sup> [34.8±6.6 kg/m<sup>2</sup>]
- Eligibility included having cell/smartphones capable of sending/receiving text messages, access to a computer, willing to use a fitness monitor and have research personnel access the men's logs.



mHealth Activity Tracker showing step count



Sample dashboard view on computer, tablet or smartphone after mHealth device sync

## Materials/Methods

### Visit 1 Assessment & Instructions

- Baseline health histories & vital signs
- Training using the fitness monitor
- Asked to wear the monitor daily for 3 weeks & sync daily with computer

### Electronic Reminders

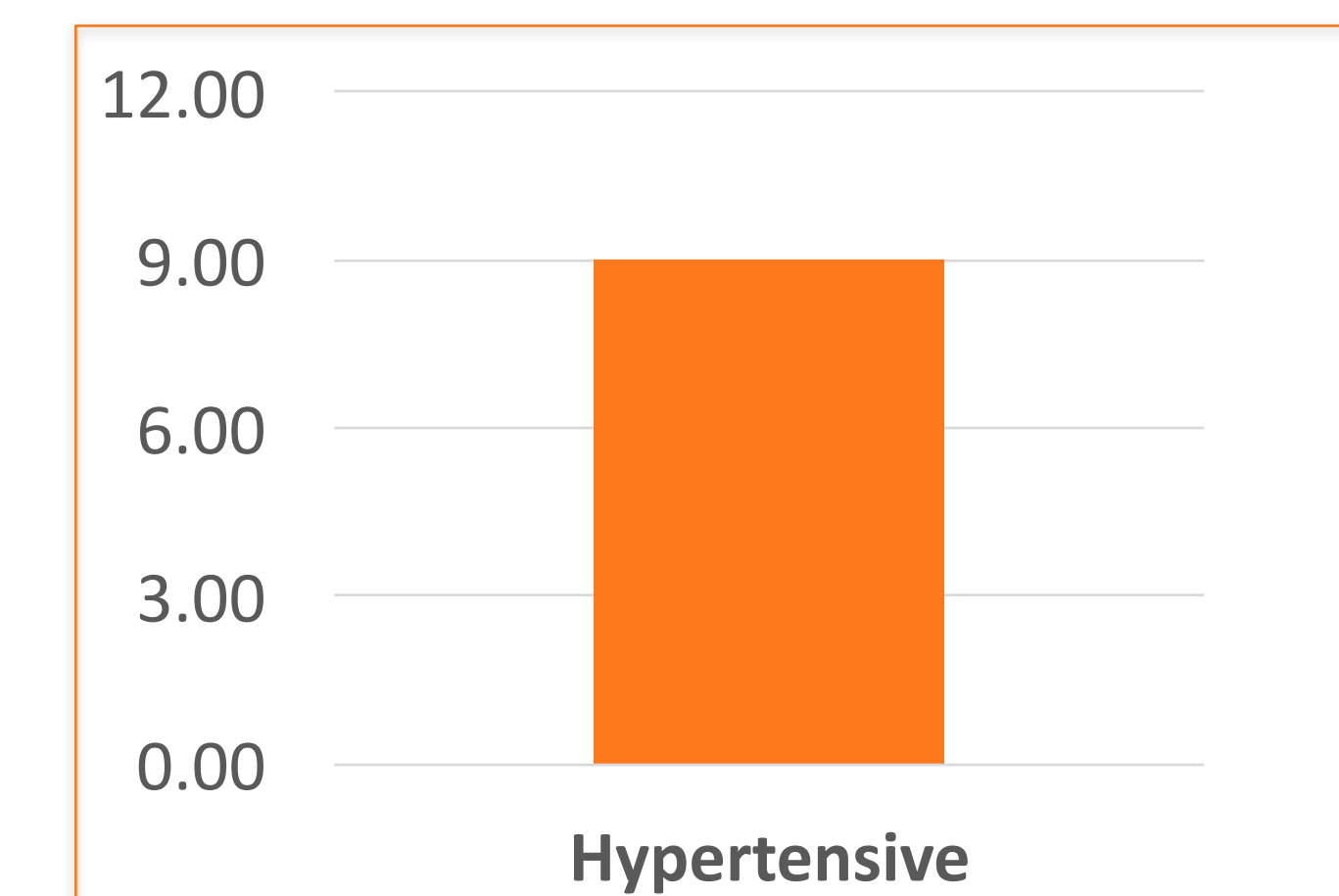
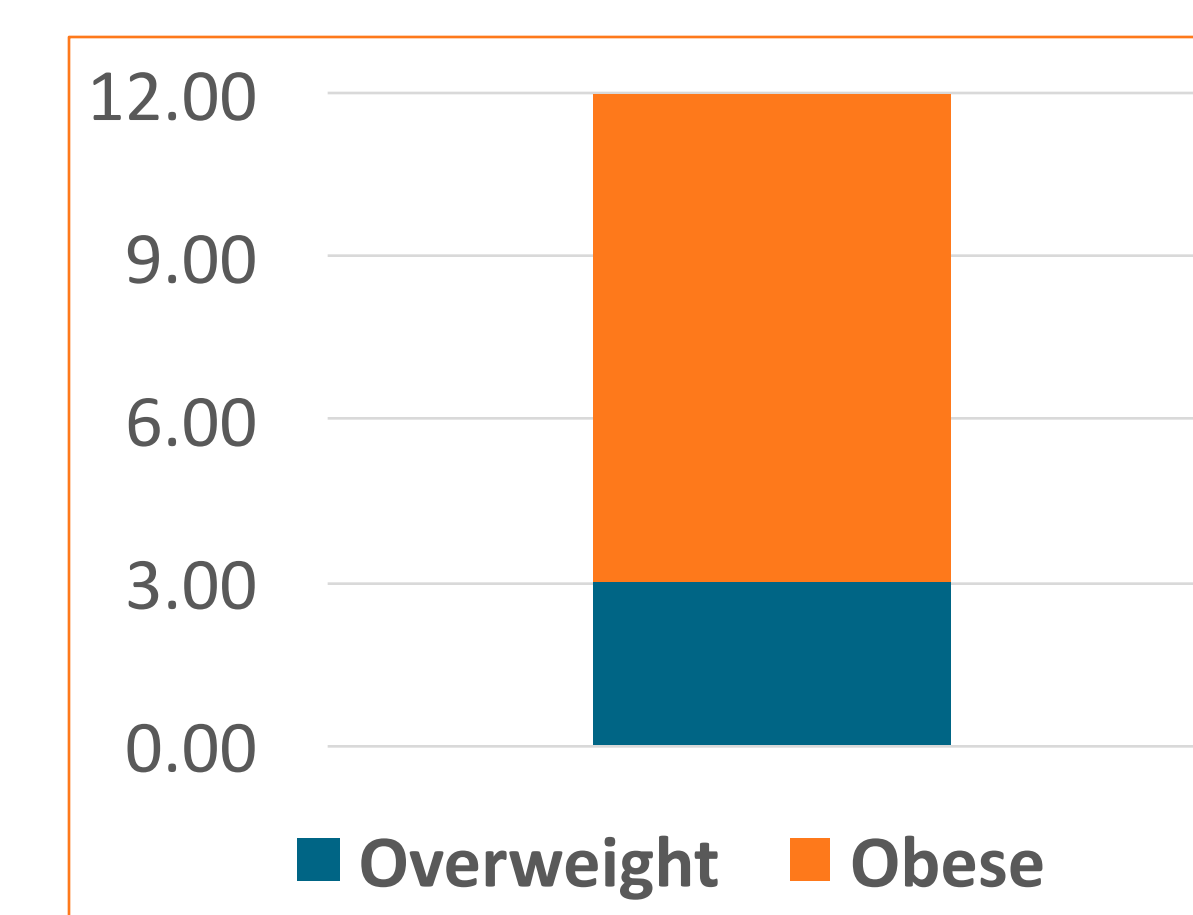
- Received 1-3 text messages/day for 3 weeks
- Topics: education and motivation for self-monitoring

### Visit 2 Assessment & Instructions

- Completed post-intervention surveys about their fitness monitoring
- Descriptive data were used for analysis

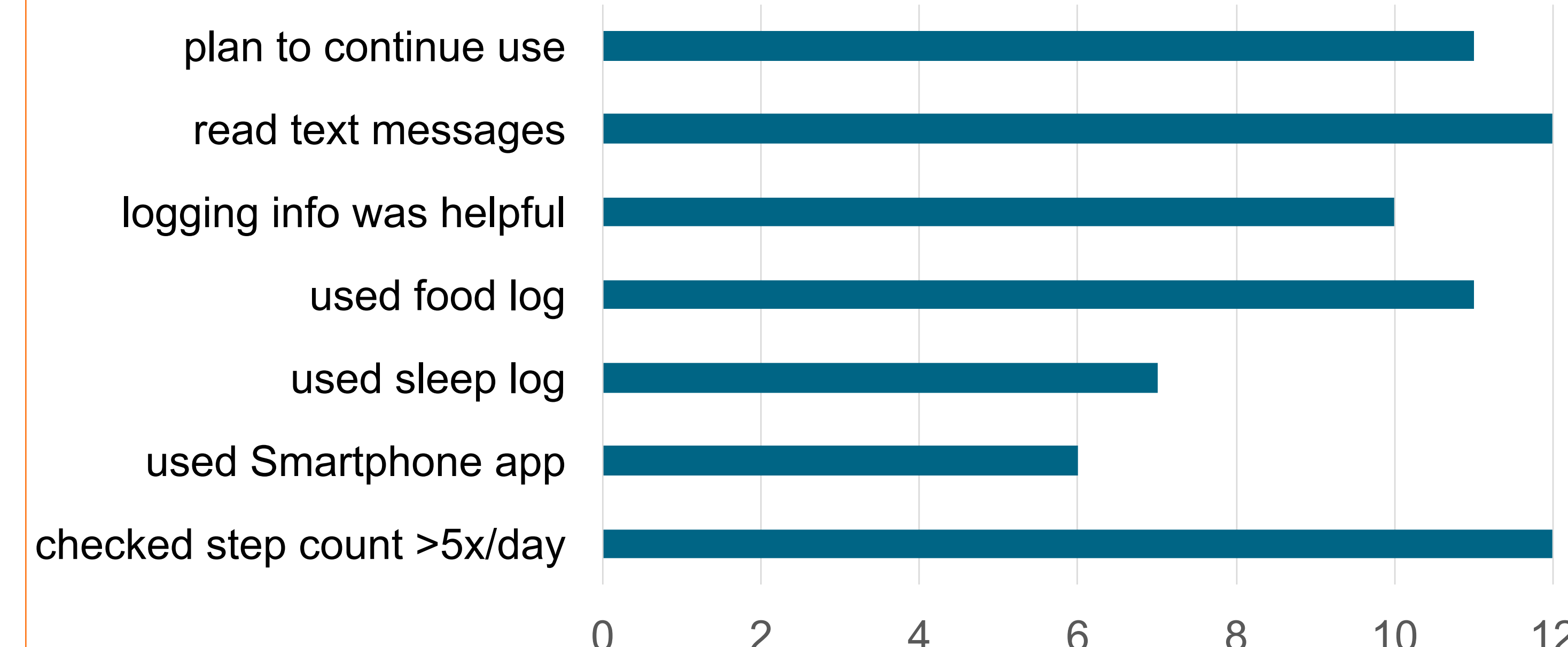
## Results

Nine of 12 men wore the monitor during all 21 days, two wore it 9 and 15 days respectively and one lost the monitor.



- Only four being treated with medications.
- One man was hypertensive stage 2 under no treatment and another was pre-hypertensive.

### mHealth Survey Results (n=12)



## Conclusions

Men were not well managed for blood pressure or overweight/obesity. Both the log records and the survey results indicated that using fitness monitors was feasible and acceptable among this population.

## Clinical Relevance

Using mHealth appears feasible as an action-oriented tool for therapists to recommend for lifestyle self-monitoring in isolated rural men. The findings reinforce the important role of therapists in routinely assessing vital signs and making referrals as appropriate.

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