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/m² [34.8±6.6 kg/m²]
- 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.

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.

![mHealth Activity Tracker showing step count](Image)

![Sample dashboard view on computer, tablet or smartphone after mHealth device sync](Image)

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.

References


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