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Acceptability And Behavior Change In A Pilot mHealth Physical Activity Intervention

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ACCEPTABILITY AND BEHAVIOR CHANGE IN A PILOT MHEALTH PHYSICAL ACTIVITY INTERVENTION

Moon, M. [1,2], Yeager C. [1,2], Ross K. [1,2], Steel C. [1,2], Materia, F. [1,2], Catley D. [1,2], Gill H.S. [1], Berkley-Patton J. [3], Glover K. [1,2], Carlson, J.A. [1,2]

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Background

- Marginalized communities experience barriers to physical activity due to resource inequities
- Mobile health (mHealth) interventions show promise for reaching a wide audience at a low cost

Purpose

- To evaluate the ActiveKC program, an 8-week pilot mHealth physical activity intervention for participants from marginalized communities

Methods

- East KCMO residents were recruited from community health fair events and the CM PCC
- The ActiveKC intervention was delivered and evaluated among participants who were not meeting 2/3s of the Physical Activity Guideline
- Participants were 8-88 years old (83% Black, 87% female at birth); most youth participated with a parent/caregiver
- Garmin activity monitors collected daily step counts
- Automated SMS messages were sent 5 days/week
- Messages were tailored using the participant's Garmin data, some used two-way SMS
- Messages facilitated self-monitoring & self-efficacy
- Intervention acceptability was measured via post-intervention survey
- Mixed-effects regression evaluated step changes

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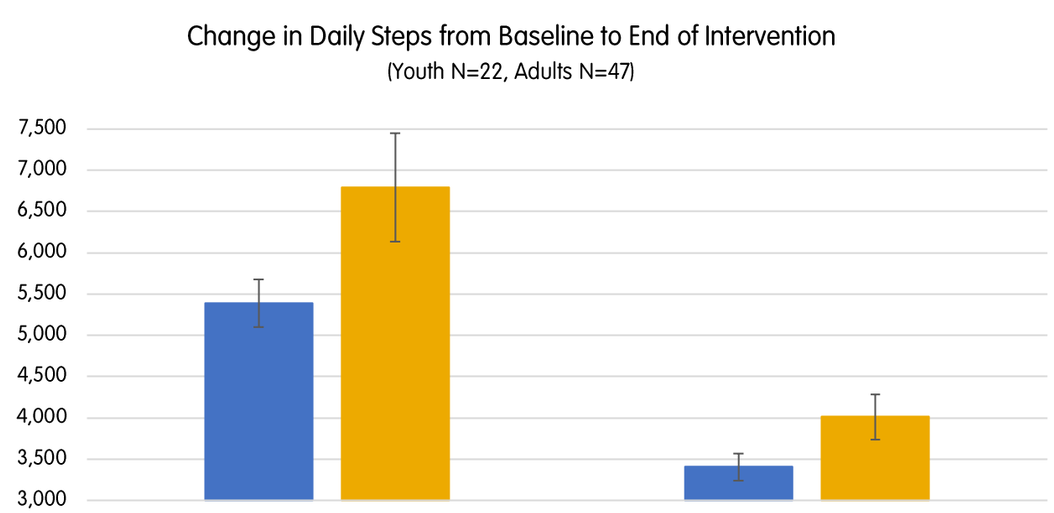

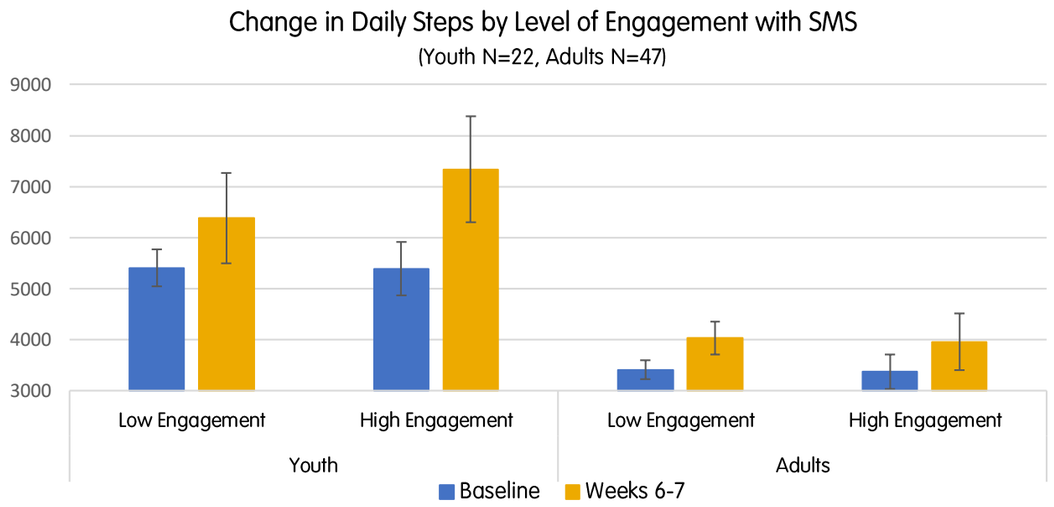

Error bars represent ±1 SE from the estimated mean, based on the regression models

Step Counts Corresponding to Physical Activity Guidelines			
Age group	Guideline (minutes)	Guideline (steps)	2/3 Guideline (steps)
Youth	60 minutes/day	12000	8000
Adults	30 minutes 5x days/week	7500	5000

99%
of ActiveKC participants believe the program helped them be more physically active

98%
of participants would recommend ActiveKC to

Results

- Daily steps increased by:
  - 1406 (95%CI=-94, 2907; p=.065) in youth
  - 609 (95%CI=-30, 1248; p=.061) in adults
- Youth with higher SMS engagement had greater increases in daily steps
- Youth and adults with lower baseline step counts had greater increase in daily steps
- Adults who participated with their child were more engaged with the SMS
- 99% of participants indicated ActiveKC helped them be more physically active; 98% would recommend the intervention to family and friends

Conclusions

- mHealth interventions that integrate consumer wearables and personalized SMS offer promise for increasing physical activity among marginalized community members
- Future research is needed to identify optimal levels of resources/contact for improving adoption, engagement, and effectiveness
- We aim to investigate future iterations of the intervention that use longer durations and integrate additional components to target larger increases in PA. Benchmarks based on previous studies are 2000-3000 steps/day in youth and 1500-2000 in adults

Acknowledgments

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