Environmental and Personal Barriers and Facilitators Impacting the Experiences of Adults Participating in an Internet-Facilitated Pedometer Intervention

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STUDY AIM

- To explore individual, social, and physical environment characteristics that hinder or facilitate physical activity among previously "inactive" adults during a 12-week community-based internet-facilitated pedometer intervention.

RATIONALE

- Pedometer-based interventions encourage adults to be more physically active (PA)[1,2].
- Internet-facilitated pedometer interventions are becoming common and thus a better understanding about the barriers experienced by participants is needed to improve delivery and effectiveness[3].
- The neighbourhood built environment is associated with pedometer steps[4].
- Pedometer interventions may influence how individuals perceive their neighbourhoods[5].

PEDOMETER INTERVENTION

UWALK

- Informed by an internet-facilitated pedometer intervention undertaken in Australia[6].
- Uses health promotion approaches (social cognitive theory) to empower individuals to walk more, including achieving 10,000 steps/day (e.g., *how-to-guides, posters, activity monitors, videos, maps and tracking, PowerPoints*)[7].
- Encourages participants to self-monitor their steps, undertake individual and group challenges, and receive feedback to assist them in increasing steps and PA[7].
- Participants manually upload their steps to the UWALK website (http://uwalk.ca).

METHOD

- 23 participants (82.6% women; ages 24-68 years) who registered for UWALK.
- Participants recruited from 499 inactive adults with no mobility limitations and living in Calgary (Canada), who had self-selected to participate in UWALK for 12-weeks.
- Semi-structured telephone interviews.
- Qualitative description[8] used to develop a comprehensive summary of perceptions and experiences during UWALK.
- Content analysis[9].
- Quality checks undertaken during coding, analysis, and interpretation processes[10].
- Participant's neighbourhoods had moderate walkability (WalkScore® mean=43.7±25.1).
- Participants reported high confidence and intention to achieve 10,000 steps/day.
- Participants recorded steps on average of 59±27 days and undertook on average 8,433±3,912 steps/day during UWALK.

HIGHLIGHTS

- Wearing pedometers increased awareness of participant's current PA.
- Tracking pedometer steps motivated UWALK participants to be physically active.
- Individual and environmental factors influenced engagement in UWALK.
- Destinations, nature, and pathways supported PA during UWALK.
- Garbage, the homeless, and off-leash dogs hindered PA during UWALK.

Neighbourhood and personal characteristics influencing UWALK participation

Creating (in)activity awareness

Wearing pedometers prompted participants to modify their activity

"I just became more aware that if I just sit at the computer all day and do my work, then I'm not going to reach my steps, but on those days when I would, you know, walk or do something different, that I would definitely reach my steps…"

"You know you set the goal of 10,000 a day and when you're not doing that, you go take the dog for an extra walk or something so it does, yeah, it gives you a benchmark and you know you do get motivated."

Commitment to physical activity

Participants used strategies to overcome barriers during UWALK

"What I did start to do is actually purposely park further from the store, like I found it was like, oh well I don't need to park like right outside the door. I can park you know halfway through the parking lot, I can walk further so I started to make that change."

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Incorporating activity for transportation

Active transportation was effective for accumulating steps

"Sometimes I'd make a point of going you know I just needed milk so I would go walk to the grocery store versus driving my car."

"Well my husband always wants to walk if we're going somewhere close-ish like there's a lot of things we can walk to within a kilometer and that's kind of the rule, we walk if it's less than a kilometer, so that made it easier."

Importance of nature and changing scenery

Nature and green space informed walking decisions

"There's a really nice park, like, it has a well-defined bike path and, like, a walking pedestrian thing, so that's quite helpful. There's lots of greenery and, like, footpaths so I enjoy that."

"It's just houses and shops and yeah it's not very stimulating and also there is a green space, but again, it's just people sleep there overnight because they're homeless and also there's lots of garbage and people have their dogs off leash".

Providing participants enrolled in internet-facilitated pedometer interventions with strategies for overcoming barriers, instructions for exploring their local environments, and approaches for incorporating active transportation into daily routines, may improve adherence and, ultimately, increase physical activity.

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