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A Grounded Theory Study of Orienting Mobile Health for Physical Activity

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Introduction

Excess weight, a prevalent concern worldwide and in New Zealand.

Mobile Health (mHealth) provides a cost-effective alternative to traditional weight-loss programmes through behavior change.

Physical activity (PA), a key component of lifestyle interventions and helps reduce the prevalence of excess weight issues.

Qualitative studies focused on users' experiences with mHealth's functionality in weight management.

Low participation in PAs.
Hard to describe and intervene with a generic theoretical model.

In-depth, substantive GT-based research should have the application potential.

Research question

What is the nature of people's perspectives and actions in using mHealth for PA within their social context?

- In this research, mHealth is defined as

  any devices and associated apps (wearable or on a smartphone) that support PA.

Methods

- Sampling strategy - purposive sampling.
- Inclusion criteria - aged over 18 years,
  having long-term weight issues,
  are able to recall experiences of using mobile technology to engage in PA,
  are able to speak English, and
  have lived in New Zealand for at least six months.
- Face-to-face or online semi-structured interview.
- Interviews processed using NVivo 2020.
- Ethical Reference: UAHPEC23834.

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Preliminary findings – *Demographic characteristics*

- 22 participants were interviewed, predominance of female participants (68%).
- Ages ranged from 18 to 61 years, high proportion (50%) in the 18-29 age group.
- 11 reported having a BMI of 25.0 or above.
- Most kept track of PA with at least two techniques for more than one year.
- Average score for mHealth's success at increasing PA was 62.64 (SD =21.315)

Preliminary findings - *Key concepts*

Thematic dimensions	*Categories*
Motivation	Intrinsic factors External factors
PA Behavioral Responses	Routines formation Behavioral conflicts
MHealth Evaluation	Engagement Risks/skepticism
Social Interaction	Familial and interpersonal support A wider social connection

Preliminary findings - *Key concepts (cont.)*

Motivation

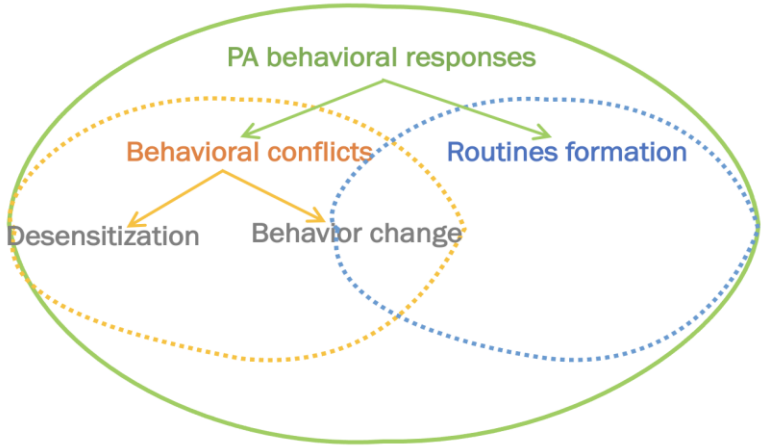
- Intrinsic factors (e.g., weight-related perception and a sense of lifestyle change) - determinants on initial power of PA participation.
- External factors (i.e., mHealth).

> *I've been interested to see how particular apps have become popular and how widespread they are used to monitor physical activity. [L2, male]*

Preliminary findings - *Key concepts (cont.)*

PA Behavioral Responses

PA failure
Quit using mHealth
-
+
PA success
Keep using mHealth



Preliminary findings - *Key concepts (cont.)*

PA Behavioral Responses

- Routines formation

> *It [the app] gives me a proper plan, a result, [and] analyzes data on how much exercising I did … kind of keeps tracking everything that I was used to doing before, and how I'm progressing with my exercise. [S1, male]*

- Behavioral conflicts

> *I haven't used it [the app] again since … I understand what my routine is. And then, once I understood that, I kind of lost it. Interesting really? [L2, male]*

Preliminary findings - *Key concepts (cont.)*

MHealth Evaluation

- Engagement

  E.g., high acceptance, better mastery of general use, incorporation into PA routines, increased motivation to be physically active.

- Risks

  E.g., addiction or abuse, psychological weariness, inequity for multicultural groups, validity and reliability of measurements.

Preliminary findings - *Key concepts (cont.)*

Social Interaction

- Familial and interpersonal support
  - Most involved parties - family and close friends.
  - Neutral to positive responses.

- A wider social connection
  - Lower acceptance of public disclosure, e.g., social media.
  - Alternatives, e.g., peer social sharing.

Conclusion

- Eight main categories were generated across the four thematic dimensions.
- Provide a preliminary conceptualization framework.
- Inform next stage of convergent interviewing.