Active2Gether

Smart coaching strategies that integrate social networks and modern technology to empower young people to be physically active
Acknowledgement

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Aart van Halteren  Adnan Manzoor Rajper  Julienka Mollee  Anouk Middelweerd
Lifestyle problem

Hallal et al, Lancet 2012
Young adults


Figure 1. Physical activity behaviors among Canadians transitioning from adolescence into early adulthood

OBiN, 2011

HLS conference 16 November 2015
Aim

- Promote PA among young adults
- Personalized and smart
- Appealing and easy to use

➢ 58% of the Dutch population owns a smartphone
Approach

Sport participation  Active transport  Taking the stairs
REASONING ENGINE
Reasoning engine

- Social cognitive theory (Bandura, 1989)
- Ecological models
- Other evidence
From theory to computational model
Work flow

User input → Education → Coaching → Feedback → Module selection → Opportunity detection → Intervention selection

Message selection

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<th>Intervention</th>
<th>Target concept</th>
<th>Simulation result</th>
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HLS conference 16 November 2015
August 25th, 8PM: You told us that you find it hard to keep up with your workout schedule. Why don’t you ask your active friends how they do it? Maybe you’ll find a way that works for you.
What is the best way to change self-efficacy to promote lifestyle and recreational physical activity? A systematic review with meta-analysis

Ashford et al, 2010

Pilot tests

Focus group discussions

Survey

What features do Dutch university students prefer in a smartphone application for promotion of physical activity? A qualitative approach

Anouk Middeldorp, Carolee Mvan der Laan, Marjoleijn van Straaten, Julia S Molker, Mijani Stuij, Saskia J.R Velde, Johannes Bug

Abstract

The transition from adolescent to early adulthood is a critical period in which there is a decline in physical activity. Both college and university students make up a large segment of this age group. Smartphones may be used to promote and support PA. The purpose of this qualitative study was to explore Dutch students' preferences for potential features of a smartphone application to promote physical activity. Four focus groups with 22 students were conducted in 2010. The six main features that were recommended were a running distance tracker, timedefinitions, a pedometer, a fitness level tracker, a speedometer, and the possibility of competing with friends. The results indicate that students appreciate the possibility of competing with friends, which may increase their motivation to participate in physical activity.
Hi Saskia,

Om actiever te worden, helpt het om doelen te.....?
Social comparison theory holds that we learn about our own abilities and attitudes by comparing ourselves to other people.

- Upward
- Downward

Source: wikipedia
### Social comparison

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Active2Gether App

• Three components
  – The synchronization of time and context dependent messages and questions
  – Context monitoring in terms of location data
  – A web view to show daily activity data
Active2Gether evaluation

- Effectiveness
- User appreciation
- Model validation
Evaluation

Mediators:
- Social support
- Self-efficacy
- Outcome-expectations
- Self-regulation skills (planning, monitoring, etc)
- Intentions

Outcome:
- % meeting the guidelines
- Time spent in MVPA
- Time spent on active transport
- Time spent on sports
- # stairs taken

Personalized
Random
Fitbit
Information
Summary

• Tailoring by means of computational model

• Taking context into account
  – Social
  – Physical

• Careful selection of behaviour change techniques
THANK YOU FOR YOUR ATTENTION