Health campaign using wearables

Contemporary Challenges in Personalized Advertising

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Aim of the myMovez project

• Promoting a healthy lifestyle for children and adolescents.

• Energy intake and energy expenditure

• Focus on physical activity
Physical Activity Guidelines

- Exercise (WHO, 2014)
  - at least 60 minutes of moderate- to vigorous-intensity physical activity daily.

- Lifestyle physical activity (Tudor-Locke, 2013)
  - Boys: 13,000 steps
  - Girls: 11,000 steps

- 80% of the youngsters do not meet these guidelines (Hallal et al., 2012)
Interventions

- Formal interventions to promote physical activity have little effect

Lifestyle physical activity?
(Peer led) social network intervention

• Most physical activities require peers (e.g. Soccer, hide-and-seek, dodgeball, etc)

• Social network intervention

• We will identify the influential peers within a classroom and ask them to promote physical activity

• Effective in reducing alcohol and tabacco use.

How to measure the effectiveness?!
Wearable lab
Fitbit

**Monthly Totals**
- 281,194 steps
- 0 floors
- 210.10 km
- 87,807 calories

**Totals**
- 13,914 steps
- 0 floors
- 10.37 km
- 2,995 calories
Smartphone

- Communication with Fitbit and server
Smartphone

- Communication with Fitbit and dataset
- Assessment of social network
Smartphone

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- Assessment of social network
- Cycling activities
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- Questionnaires (e.g. Daily food intake)
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- Social platform
- Communication with Fitbit and dataset
- Assessment of social network
- Cycling activities
- Questionnaires (e.g. Daily food intake)
- Social platform
- Pictures (e.g. media exposure or food)
Smartphone

- Communication with Fitbit and dataset
- Assessment of social network
- Cycling activities
- Questionnaires (e.g. Daily food intake)
- Social platform
- Pictures (e.g. media exposure or food)
- Objective measure of social network
Beacon network
Beacon network
Triggers

Based on:
- Physical activity
- Proximity
- Time
- Answers to questions
- Lack of data

We can:
- Send (push)messages
- Ask questions
- Stimulate to perform behavior
- Let them post messages on the message board
Research questions

• When during the day are youngsters physically active?
• Are friendships based on physical activity levels?
• Do friends (or classmates) influence each other’s physical activity levels?
• Are youngsters more (in)active when they are together?
• Do youngsters model their behaviour after popular peers

And how can we stimulate physical activity?

• By sending different types of messages?
• By using the influential peers to spread out the messages?
• Who are the influence agents and how do they influence the rest of the class?
Planning:

• Next month we will begin with a few pilot studies

• In February 2016 starts the main project:
  - Current state of affairs
  - Who are important in influencing physical activity

• 1250 primary school children
• 1250 secondary school adolescents.

• In 2017, we will start the intervention phase
Thank you

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