MyMovez – What a fun way to do research!

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Main Research Questions

How can peer and parent influences promote a healthy lifestyle?
Which network positions, personality traits and message types are crucial and/or effective?

3 PhD projects on Nutrition, Physical Activity & Media investigate short and long term effects of children's daily lifestyle, social influence factors and several mobile health campaigns on eating and drinking, physical activity and media behaviors.
Among other things, the projects focus on underlying mechanisms of

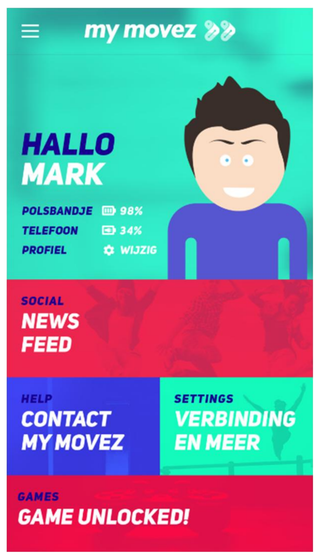
- Social modeling behavior
- Support/sabotage on life style decisions
- Promotion/rejection of (un)healthy behaviors

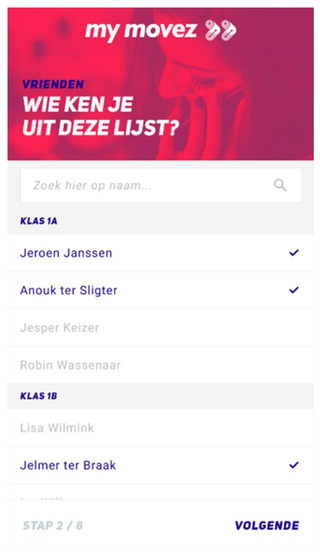
5 Year Project Outline in 3 Phases

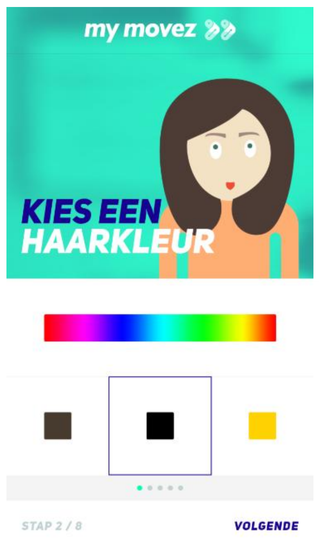
I. Longitudinal baseline measurements (February, April & June 2016)
II. Follow-up measurements (February & September 2017) and development intervention
III. Intervention & evaluation (February – June 2018)

Preparation (September 2014 - December 2015)

- Acquisition of the 'Wearable Lab' (e.g., smart phones & activity tracking bracelets)
- Development research application 'MyMovez app'
- Recruitment primary and high schools and participants







Picture 1-3. Different MyMovez app screens **Picture 4.** Activity bracelet

Preliminary data wave 1

Descriptives

- N=931 (46.8% boys; *M* age=11.39±SD=1.32; 39.8% primary school; 92.6% Dutch);

Nutrition based on self-reported snack and drink consumption list (3x/wk)

- *M* daily snack intake=843.24kcal±SD=665.40 (unhealthy snacks 617.31kcal±SD=582.90);
- *M* daily drink intake=491.22kcal±SD=518.45 (sugar/energy drinks 349.11kcal±SD=432.55);
- Fruit & vegetables available at households (76.1%) and schools (34%);
- Children help in food preparation in 54.7% of households;

Physical activity based on activity tracking (min. 3 days/wk; N=612)

- *M* 8.994 steps/day±SD=3663; 19h±SD=1,5 sedentary behavior (incl. sleep); 4h± SD=1h light intensive PA; 24min.±SD=20min. moderate intensive PA; 14 min.±SD=15min. vigorous PA.

Media use

- TV 100 min./day±SD=81; Internet 100 min./day±SD=80; Gaming 66 min./day±SD=75.

Preliminary Findings

(Un)healthy snack & sugary beverage intake (kcal) and TPB

- Data were analyzed using SPSS and Mplus for Windows. All models were saturated.
- Figure 2 and 3 show children's intentions to eat healthy by parents' or friends' normative influence. Similar results were found for TPB models on beverage consumption (non-sugary drinks (kcal)).
- Attitude, parents' and friends' injunctive norms (but not descriptive norms) and self-efficacy predicted children's intention to consume healthy snacks and beverages.
- Fruit and vegetable availability at home (but not at school) and food preparation were associated with children's attitude toward healthy eating. Preparing food at home was not associated with self-efficacy.
- No significant differences were found between sex or school level in snacks, but were found in drinks for girls (i.e., no effect of parents' or friends' norms on intention to drink non-sugary beverages such as water).

Method

Measures

The Wearable Lab enables collecting health-related data as well as spreading health messages and campaigns in a fun and modern way!

- Randomized daily short surveys (e.g., personality traits, TPB measures, environmental, motivational and normative factors, media influences);
- Taking photo's a random times a day;
- Social beacon network (smart phones detect each other when participants are spending time together);
- Activity tracking ((intensity) steps and cycling);
- Sociometric data per class and school year to detect influential agents for different behaviors;
- Jokes (e.g., funny memes), riddles, MyMovez news;
- Adjustable avatar and game (play time 5 min./hour).

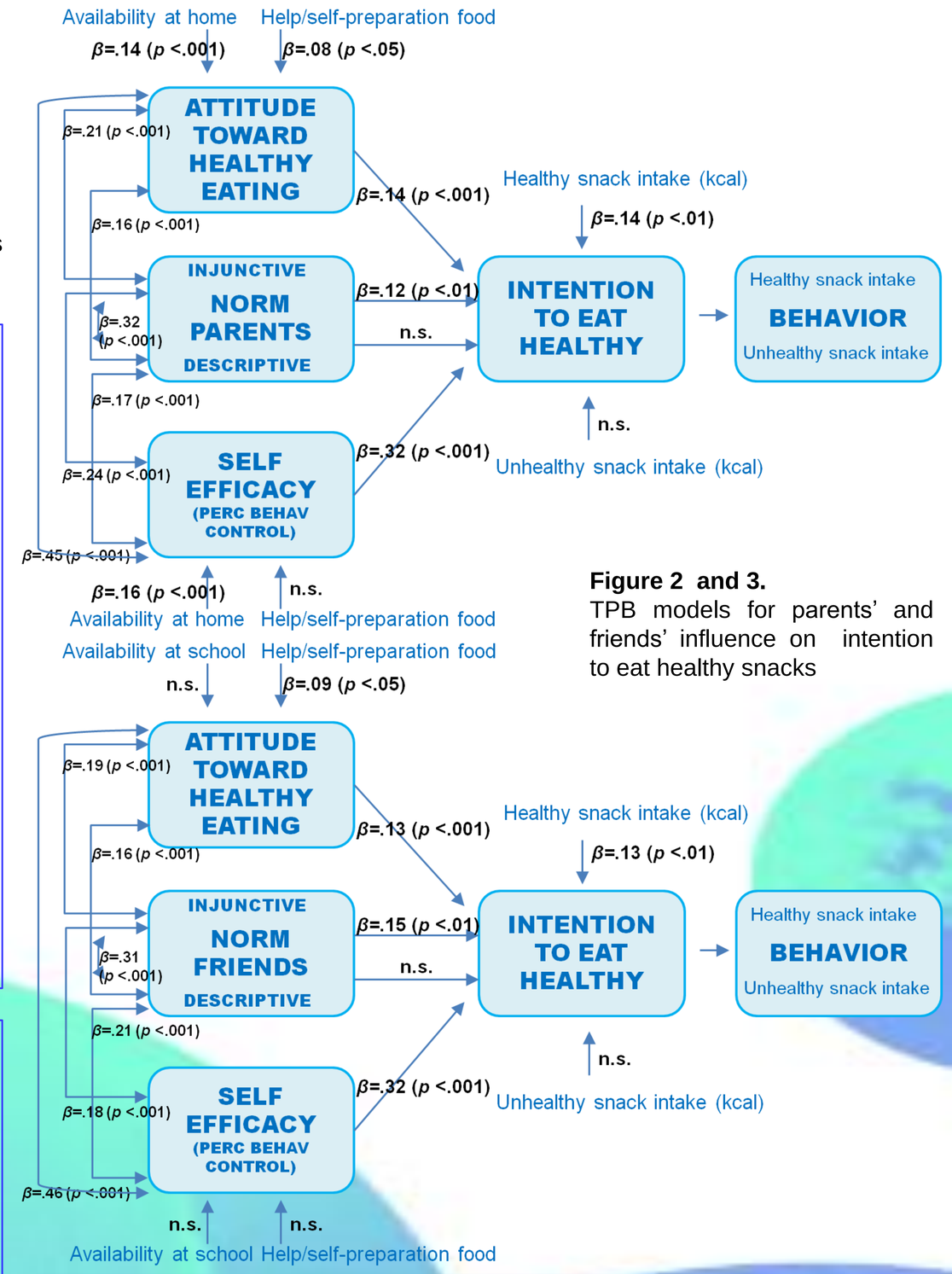


Figure 2 and 3. TPB models for parents' and friends' influence on intention to eat healthy snacks

Discussion

This study shows the influence of injunctive norms on intention to eat healthy besides children's attitude and self-efficacy. Studies investigating different intervention message types on eating behavior have found little effect of injunctive norms (e.g., versus descriptive or health messages). This suggests a difference between injunctive norms in messages versus norms in real life. Intervention studies may benefit from taking injunctive norms into account within children's social networks.