Social Network Interventions to Promote Physical Activity in Adolescents

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Erasmus University Rotterdam
Chung, Ersig, & McCarthy (2017)
Fitzgerald, Fitzgerald, & Aherne (2012)
Salvy & Bowker (2013)
Erasmus School of Social and Behavioural Sciences

Social Network Analysis

Borgatti, Mehra, Brass, & Labianca (2009)
Social Network Interventions

Valente, Palinkas, Czaja, Chu, & Brown (2015)
A Stop Smoking In School Trial

Daily questionnaires
Peer nominations
Social platform
Avatar
Game
Study 1: Mapping Relationships

Van Woudenberg, Bevelander, Burk, Smit, Buijs, & Buijzen (2020)
Comparing the Measurement of Different Social Networks; Peer Nominations, Online Communication, and Proximity Data.

Social Networks
Study 1: Mapping Relationships
Study 1: Mapping Relationships

Nomination

Communication

Proximity

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Study 2: Selecting Influentials

Van Woudenberg*, Simoski*, Fernandes de Melo Araújo, Bevelander, Burk, Smit, Buijs, Klein, & Buijzen (2019)
Identifying Influence Agents That Promote Physical Activity Through the Simulation of Social Network Interventions: Agent-Based Modeling Study.
Journal of Medical Internet Research
Study 2: Selecting Influentials
Erasmus School of Social and Behavioural Sciences

One-year simulations of five interventions

Two most influential positions in social networks

Day 0

Day 364

- Increased in physical activity

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3: Training the influence agents
Study 3: Training Influentials on smartphones
No effect of the intervention

Number of steps

Baseline Intervention

Social network intervention
Control condition
Study 4: Using vlogs

Van Woudenberg, Bevelander, Burk, Smit, Buijs, & Buijen (2020)
Testing a Social Network Intervention Using Vlogs to Promote Physical Activity Among Adolescents: A Randomized Controlled Trial
Frontiers in Psychology

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No effect of the intervention

Baseline
 Intervention
 Post-intervention

Social network intervention
Mass media intervention
Control condition

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Control condition

Social network intervention

Mass media intervention

- Increases the perceptions of the social norm

- More exposure to the vlogs
- Liked the vlogs more
- Closer related to the vloggers

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**Mapping:** Low similarity in the different ways to measure relationships in social networks.

**Selecting:** Most nominated and most close peers are the most influential adolescents in social networks.

**Training:** No evidence that these interventions can promote physical activity in adolescents, but:
- increase perceived social norm
- positive responses to vlogs
Future studies