A longitudinal study of friends’ and parents’ social norms on physical activity

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Introduction

Aim of the MyMovez project is to develop an effective social network intervention method to promote a healthy lifestyle among young people

Involvement of young people’s peer networks in prevention/intervention efforts can be critical for promoting and maintaining healthy behaviors (Salvy, De La Haye, Bowker & Hermans, 2012; Valente & Pumpuang, 2007)

Parental influences may decline when competing with peer influences, because young people experience a strong need for group acceptance that leads to conforming to normative behavior of peers (Valkenburg & Cantor, 2001)

Cross-sectional studies have suggested the importance of social norms for physical activity, independent from social support (Anderssen & Wold, 1992; Ball, Jeffrey, Abbott, McNaughton & Crawford, 2010)
Social norms

There has been no longitudinal research investigating the relative importance of parental and peer influences on PA (and vice versa)

Current study
Parental and peer norms:
- *descriptive norms* (DN): informational non-coercive guidelines
- *injunctive norms* (IN): exert social pressure on one’s behavior

Expectations
- Positive effects of DN: DN less threatening for sense of freedom while IN may lead to dismissal or backfiring of intended effect
- Peer norms stronger than parental norms

Explore
- School type and sex differences
- Self-reported and objectively measured PA
Methods

Phase I *MyMovez project*

- Cross-sequential design, following two cohorts (8-12 y/o and 12-15 y/o) over 3 years

Phase II *MyMovez project*

- Social Network Intervention PA

  (Social network | Mass media | Control)

- \( N \ (T1) = 944; \) 46.1% boys; \( M \text{ age}=11.36 \ (\pm1.38); \) 47.5% primary school

- Cross-lagged Structural Equation Models (SEM) in Mplus
The Wearable Lab

- Smartphone with *MyMovez* research app connected to activity tracker
- Self-reported PA
  *How many days of the week were you active for more than 1 hour a day?*
- Steps & intensity (MVPA)
- DN & IN parents and peers
  *How often do you think your parents/friends are physically active?*
  *Do you think your parents/friends believe you should be physically active?*

*Avatar*  
*Social Buzz*  
*Videos*  
*Games*  
*Activity tracker*
Results

• Self-reported PA
  • Parents perceived as being more active predicted higher child activity (T1-T2)

• Objectively measured MVPA
  • Peers perceived as being more active predicted higher MVPA (T1-T2 and T2-T3 marginal)

- Objectively measured MVPA
  Activity level also predicted norm perceptions:
  • Higher child activity was associated with higher norm perceptions of peers and parents (T1-T2), but for parental norms this may have a negative effect on child activity (T2-T3).

Model fit indices: CFI = 0.95, TLI = 0.92

Model fit indices: CFI = 0.93, TLI = 0.86
Results

Objectively measured steps
- Peers perceived as active role models predicted higher overall activity levels (T1-T2 and T2-T3)

Model fit indices: CFI= .93, TLI= .86

Objectively measured MVPA
Peers perceived as being more active predicted higher MVPA (T1-T2 and T2-T3 marginal)

Model fit indices: CFI= .94, TLI= .88
Discussion

- Perceived descriptive normative behavior of peers was more closely associated with changes in PA compared to normative behavior of parents.
- Differences in self-reported and objectively measured PA behaviors.

- There were no significant differences between school type and sex, and no effects of injunctive norms.

- Perceived norms are typically assumed to affect subsequent activity behavior, but one’s own physical activity level also influences our perceptions of how much others move.

- Social network interventions promoting PA benefit from using peer role models with high activity levels.
Questions & Suggestions

Thank you for listening and have a great day!

MyMovez team

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