Social Network Interventions for Increasing Physical Activity

Antonios Proestakis, Joint Research Centre, EC
Network Interventions


Peer pressure applied in

- social mobilization problems; Pickard et al., 2011
- product adoption; Aral, 2012
- health behaviors; Centola, 2011
- Altruism; Leider, Möbius, Rosenblat 2009
- cooperative behavior; Rand et al. 2009
- in evolution theory; Nowak, 2006
Network interventions and PA

Obesity and physical fitness have been established in the literature as rather "contagious" concepts

- Christakis & Fowler, 2007
- S. E. Carrell, M. Hoekstra, J. E. West, 2011
- Aral & Nikolaides, 2017
Network interventions for changing physical activity behaviour in preadolescents

Antonios Proestakis1,*, Eugenia Polizzi di Sorrentino1,2, Helen Elizabeth Brown3, Esther van Sluijs3, Ankur Mani4, Sandra Caldeira1 and Benedikt Herrmann1
Social Incentives:

My behaviour affects other's welfare and other's behaviour is affecting my welfare.

Social incentives vs. individual incentives in promoting cooperative outcomes (Mani, Rahwan & Pentland, 2013).
Direct Reciprocity Scheme
Direct Reciprocity Scheme

(30)
Direct Reciprocity Scheme
Indirect Reciprocity Scheme
Team Rewards Scheme
Social biking Motivation

- Peer Pressure: The more we bike together the higher the probability to earn a reward together
- Social habits: Social smoking, social drinking... why not Social Biking
- Use Social Capital for behavioral change!
The effect of Social Capital on my walking behaviour when I was 10y

300 extra meters daily, 30% increase!
3 years relationship, about 48km only for Maria!
$SbC_{RY} = 0 \text{km}$
$S_b C_{RY} = 0 \text{km}$

**S-b Bonus:**

$Km = \text{points} = \text{rewards}$

Double for common km

Triple if simultaneously
Social biking puts together social media and biking with friends for active and healthy lifestyle.

16 September – 6 October 2018  #MixandMove #BEACTIVE
Conclusion:

- Increase Number of Bikers
- Increase Biking distance

Social Capital

Short Term

Long Term

- Healthier lifestyle
- Urban planning
- Environmental effect
- Transportation
Thank you for your attention!!