

APP USE, PHYSICAL ACTIVITY AND HEALTHY LIFESTYLE: A CROSS SECTIONAL STUDY

Joan M. Dallinga, Laurence Alpay, Harmen Bijwaard and Marije Baart de la Faille-Deutekom









Introduction

- Physical inactivity is a growing public health concern.
- Need for innovative ways to promote physical activity and a healthy lifestyle
- "Health and Fitness" apps >32.700 (Yuan 2015)





Preliminary evidence

Sports Med (2014) 44:671-686 DOI 10.1007/s40279-014-0142-5

SYSTEMATIC REVIEW

Measuring and Influencing Physical Activity with Smartphone Technology: A Systematic Review

Judit Bort-Roig · Nicholas D. Gilson · Anna Puig-Ribera · Ruth S. Contreras · Stewart G. Trost

A Review of Smartphone Applications for Promoting Physical Activity

Steven S. Coughlin^{*,1}, Mary Whitehead², Joyce Q. Sheats³, Jeff Mastromonico⁴, and Selina Smith^{3,5}

Remote and web 2.0 interventions for promoting physical activity (Review)

Foster C, Richards J, Thorogood M, Hillsdon M

Apps for running

- Participation in running events as health promotion (Chatton 2013; Stevinson 2014; Lane 2010)
- Apps could assist runners





Purpose

To determine the relationship between the **use of apps** and changes in **physical activity**, **health and lifestyle behavior**, and **self-image** of short and long distance runners.



Methods

"Dam tot Damloop"

50,000 participants

6.4 km & 16 km run

Recreational runners



Methods

Cross-sectional study

Participants: 15.000 were invited

Survey: 2 days after event

Topics: Anthropometrics, app use, activity level, preparation for running event, running physical activity (RPA), health and lifestyle, and self-image

Statistical analysis

- Multivariate logistic regression analyses
- Controlled for age, gender, BMI, kilometers per week before preparation and exercise frequency in last year.

Results



Results

Table 1 Significant relationships of app use with changes in RPA, perceivedhealth or lifestyle (n=4307)

16 km		6.4 km	
OR	p-value	OR	p-value
1.43	0.001	1.89	< 0.001
1.59	< 0.0001	1.33	0.038
1.24	0.022	1.24	0.150
1.68	<0.0001	1.13	0.055
1.24	0.021	1.31	0.067
1.75	<0.0001	1.84	< 0.0001
1.69	<0.0001	1.67	< 0.001
0.70	<0.0001	0.70	0.010
1.43	<0.0001	1.45	0.005
1.57	< 0.0001	1.72	< 0.0001
	OR 1.43 1.59 1.24 1.68 1.24 1.75 1.69 0.70 1.43 1.57	16 kmORp-value1.430.0011.59<0.0001	16 km6.ORp-valueOR1.430.0011.891.59<0.0001

Discussion and conclusion

App use was:

- positively related to RPA, feeling healthier, changing lifestyle and self-image;
- positively related to stimulating others to become active;
- positively related to feeling more energetic, eating healthier and maintaining the sport behavior (16 km).

Discussion and conclusion

- No causal relationship
- Intention of maintaining running behaviour higher for app users → prevent drop-out
- Transfer to less active/inactive people?

For future research

- Individual apps / evidence based apps
- Which functionalities work and which do not?
- Collect app data
- Long-term follow-up measurements

Take home message

An app could be an additional stimulus to the training program

@DallingaJoan
@krachtvansport

j.m.dallinga@hva.nl m.baart.de.la.faille@hva.nl







