

Amsterdam University of Applied Sciences

More active and a healthy lifestyle by using apps?

a systematic review

Dallinga, Joan; Zwolsman, Sandra; Dekkers, Vera; Baart de la Faille-Deutekom, Marije

Publication date

2016

Document Version

Author accepted manuscript (AAM)

[Link to publication](#)

Citation for published version (APA):

Dallinga, J., Zwolsman, S., Dekkers, V., & Baart de la Faille-Deutekom, M. (2016). *More active and a healthy lifestyle by using apps? a systematic review*. Abstract from Supporting Health by Technology, Groningen, Netherlands.

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please contact the library: <https://www.amsterdamuas.com/library/contact/questions>, or send a letter to: University Library (Library of the University of Amsterdam and Amsterdam University of Applied Sciences), Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

COMMIT/

Abstract for the Supporting Health by Technology conference in Groningen, the Netherlands, May 27 2016

Title: More active and a healthy lifestyle by using apps? A systematic review

Authors:

Joan Dallinga; Sandra Zwolsman; Vera Dekkers, Marije Baart de la Faille-Deutekom

Presenting author: Joan Dallinga

Subject area: apps, lifestyle, counselling

Abstract describing the poster (50 words)

Applications (apps) or activity trackers, are easily accessible, little time consuming and could assist health professionals in lifestyle counseling. Therefore, the purpose of this study was to provide an overview of the effect of apps and activity trackers on improving or maintaining a healthy lifestyle.

Supporting summary (500 words)

Introduction: Recently, the American Heart Association published a ‘Call to action’ to emphasize the importance of lifestyle counseling (Berra, Rippe, & Manson, 2015). It seems that health professionals (e.g. physicians) do not provide sufficient attention to this important topic, because of a lack of time or tools. Applications (apps) or activity trackers, are easily accessible, little time consuming and could assist professionals in lifestyle counseling. However, little is known about effects of this technology on lifestyle.

Purpose: To provide an overview of effect of apps and activity trackers on improving or maintaining a healthy lifestyle in people who need preventive health interventions.

Methods: We searched for relevant articles on Pubmed, Embase, Cinahl and Cochrane. Based on inclusion criteria defined a priori, titles, abstracts and full-texts were analyzed to find relevant studies.

Results: Seventeen studies were included. Overweight or obese individuals using apps focusing on enhancing physical activity increased number of steps, intention of physical activity, minutes spent on brisk walking and on moderate to intensive activity. Nonetheless, apps that focused on food intake or weight reduction whether or not combined with physical activity functions were not effective in increasing physical activity. Additionally, there was some preliminary evidence that activity trackers increased percentage time spent on moderate intensive activity, reduced sedentary behavior and increased amount of steps per day in overweight adults.

Regarding the outcomes weight and food patterns, most studies included a control or other intervention group without app use, however often no significant differences between the groups were found. There was debate about effects on weight reduction; apps with a clear focus on diet or calorie counting reduced body weight in overweight or obese participants or found a trend towards weight reduction. However, an app that focused on physical activity did not decrease weight. Other reasons for not finding effects of apps on weight were a biased control group and including healthy weight participants. Also, studies did not agree about effect of activity trackers on weight. An activity tracker with or without additional weight loss coaching reduced weight in obese adults, while only using another activity tracker did not reduce weight in overweight females.

Furthermore, there was some preliminary evidence for effects of apps on food patterns. Apps including a function for diet or food intake reduced energy intake, increased fruit and vegetable intake and reduced intake of sugar sweetened beverages. Additionally, after using a weight loss app a trend towards better food patterns was found.

Conclusion: Mixed results were found for the effect of apps and activity trackers on lifestyle. It seems that apps could be effective in changing lifestyle if functions and focus of the app match the desired outcomes and target group. However, it remains unclear what the added value is of apps. Still, no negative effects of apps or activity trackers were found. Given that use of apps or activity trackers in health promotion might save time, it may be a useful tool, however large-scale RCT's with unbiased control groups are needed to confirm this.