

Amsterdam University of Applied Sciences

Getting older adults to exercise with a blended intervention

Mehra, Sumit; van den Helder, J.; van Dronkelaar, C.; Dadema, T.; Cila, N.; Visser, B.; Engelbert, R.H.H.; Weijs, P.J.M.; Kröse, B.J.A.

[Link to publication](#)

Citation for published version (APA):

Mehra, S., van den Helder, J., van Dronkelaar, C., Dadema, T., Cila, N., Visser, B., Engelbert, R. H. H., Weijs, P. J. M., & Kröse, B. J. A. (2017). *Getting older adults to exercise with a blended intervention*. Abstract from Getamoveon Network + 1st Symposium On Enhancing Physical Activity Through Technology, London, United Kingdom.

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: <http://www.hva.nl/bibliotheek/contact/contactformulier/contact.html>, 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.

Abstract for GetAMoveOn Network+ 1st Annual Symposium on Enhancing Physical Activity Through Technology, London – 24th and 25th May 2017.

Preference: oral presentation

Word count: 478 (excluding references)

Getting Older Adults to Exercise with a Blended Intervention

Sumit Mehra, Amsterdam University of Applied Sciences

Physical activity is vital to a healthy life. Not only can it lower the risk of various diseases, older adults can also delay the onset of functional impairments and prolong the ability to live independently if they exercise sufficiently [1]. As a result many community programs have been developed, like the Dutch 'Meer Bewegen voor Ouderen' (MBvO). As part of this program weekly 300.000 older adults exercise in groups under guidance of an instructor.

Due to its limited frequency, however, the weekly MBvO program is not sufficient to attain the proclaimed health benefits [2]. Guidelines prescribe 30 to 60 minutes of moderate intense physical activity for 5 days a week [3]. To achieve those recommendations a home-based exercise program could prove an useful addition to a community based program: in the convenience of their home older adults can continue the exercises they have learnt during the weekly community classes. A focus-group study [4] showed that the MBvO-participants believed additional home exercises would be useful, but also had worries about the safety, self-efficacy and adherence to such an intervention. It was conceived that a blended approach would increase the chances of success.

An app for a tablet was developed to support the self-regulation. It featured 48 instructional videos that demonstrated exercises that were designed by human movement scientists. With a wizard a tailored exercise program could be drawn up in line with personal goals. Furthermore, users could track this progress and evaluate exercises. This can be remotely monitored by a coach with whom users can video call for guidance.

To ascertain the app was sufficiently user-friendly 15 older adults, ranging from 69 to 99 years old, were asked to perform 11 tasks in a usability lab. The participants were instructed to think aloud and after completing the tasks they were interviewed briefly about their general impressions. All responses were classified independently by two researchers.

The results from the usability study indicate that the app appears to be sufficient user-friendly. The vast majority of the users could complete the assigned tasks within reasonable limits: on average within a minute, with occasionally one or two hints. The authors found this not to be alarming. The majority of the users, ranging from 69 to 99 years old, had no prior experience with tablets. It can be presumed that their ability to operate the app will increase with time. Furthermore, being able to get support from a coach is part of the envisioned blended intervention.

Future work will include interviews with long-term users to chart out the experience in course of time. With a currently ongoing randomized control the effectiveness of the blended intervention will also be determined. Amongst 160 older adults the effects on physical and mental health will be measured over a 12 month period.

[1] Fried, L.P., Tangen, C.M., Walston, J., Newman, A.B., Hirsch, C., Gottdiener, J., et al. (2001). Frailty in older adults: evidence for a phenotype. *J. Gerontol. A Biol. Sci. Med. Sci.* 56, M146–M157. doi: 10.1093/gerona/56.3.M146

[2] Stiggelbout, M., Popkema, D.Y., Hopman-Rock, M., De Greef, M., and Van Mechelen, W. (2004). Once a week is not enough: effects of a widely implemented group based exercise programme for older adults; a randomised controlled trial. *J. Epidemiol. Commu. Health* 58, 83–88. doi: 10.1136/jech.58.2.83

[3] Chodzko-Zajko, W., Proctor, D.N., Fiatarone Singh, M.A., Minson, C.T., Nigg, C. R., Salem, G.J., et al. (2009). Exercise and physical activity for older adults. *Med. Sci. Sports Exerc.* 41, 1510–1530. doi: 10.1249/MSS.0b013e3181a0c95c

[4] Mehra S, Dadema T, Kröse BJA, Visser B, Engelbert RHH, Van Den Helder J and Weijs PJM (2016) Attitudes of Older Adults in a Group-Based Exercise Program Toward a Blended Intervention; A Focus-Group Study. *Front. Psychol.* 7:1827. doi: 10.3389/fpsyg.2016.01827