

Physical impairments blur the association between physical activity and loneliness

Citation for published version (APA):

Boekhout - Oppeneer, J. M. (2018). *Physical impairments blur the association between physical activity and loneliness: a longitudinal study*. Poster session presented at New Directions in Behaviour Change, Nijmegen, Netherlands.

Document status and date:

Published: 03/10/2018

Document Version:

Publisher's PDF, also known as Version of record

Please check the document version of this publication:

- A submitted manuscript is the version of the article upon submission and before peer-review. There can be important differences between the submitted version and the official published version of record. People interested in the research are advised to contact the author for the final version of the publication, or visit the DOI to the publisher's website.
- The final author version and the galley proof are versions of the publication after peer review.
- The final published version features the final layout of the paper including the volume, issue and page numbers.

[Link to publication](#)

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal.

If the publication is distributed under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license above, please follow below link for the End User Agreement:

<https://www.ou.nl/taverne-agreement>

Take down policy

If you believe that this document breaches copyright please contact us at:

pure-support@ou.nl

providing details and we will investigate your claim.

Downloaded from <https://research.ou.nl/> on date: 04 Dec. 2021

Open Universiteit
www.ou.nl





Physical impairments blur the association between physical activity and loneliness: A longitudinal study

Janet M. Boekhout, Denise A. Peels, Brenda A.J. Berendsen, Catherine A.W. Bolman, Lilian Lechner
 Department of Psychology and Educational Science, Open University, The Netherlands
 Contact information: janet.boekhout@ou.nl; phone 0031 45 5762448

Background

- Insufficient physical activity (PA) and loneliness are both important determinants of physical and mental health
- Among single older adults insufficient PA and loneliness are highly prevalent
- This study explores the association between PA, loneliness and the presence of physical impairments caused by chronic diseases among participants of the Active Plus65 intervention

Active Plus65 Intervention

- Computer tailored healthy ageing intervention
- Aims to increase PA and to stimulate active citizenship in order to decrease loneliness
- Specific tailoring for physical impairments caused by chronic diseases
- Two self-report questionnaires
- Tailored advice on three occasions
- Online or printed delivery mode

Methods

- Longitudinal intervention study ($N = 548$; mean age = 76 ± 8)
- Assessments at baseline (T0), after three months (T1), and follow up at six months (T2)
- Multilevel Regression Analyses
- Predictor variables: weekly minutes of moderate to vigorous PA (MVPA) and the presence of physical impairments
- Outcome variable: loneliness

Results (1)

On all measurement time points, participants with a physical impairment have a lower degree of MVPA and a higher degree of loneliness than those who are not impaired (figure 1).

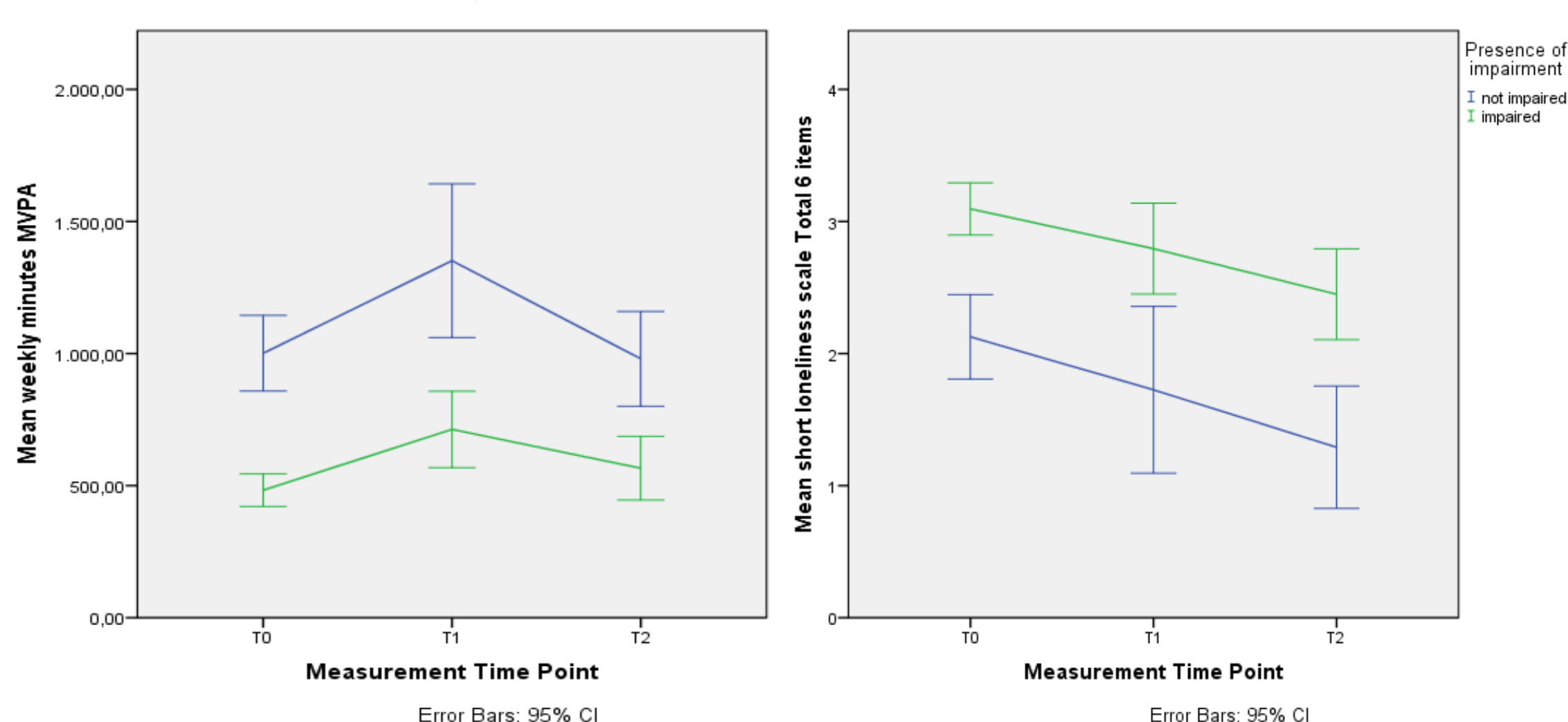


Figure 1. Development over time of both PA and loneliness for the physically impaired and not impaired.

Results (2)

Improvements in MVPA were associated with decreases in loneliness ($B = -0.09$; $SE = 0.04$; $p = 0.020$); this association however became non-significant when the presence of physical impairments was included in the analyses ($p = 0.824$). Having physical impairments in itself was positively associated with loneliness ($B = 0.51$; $SE = 0.10$; $p < 0.001$) (Table 1).

Table 1: Hierarchical multilevel analyses into the T0-T2 relation between physical activity and physical impairments (predictors) and loneliness (outcome variable)

	B	SE	p
Model 1 (n = 548)			
Minutes of MVPA	-0.09	0.04	0.020
Model 2 (n = 547)			
Minutes of MVPA	-0.01	0.06	0.824
Presence of impairment ^a	0.51	0.10	<0.001
Measurement time point	-0.15	0.05	0.001
Model 3 (n = 546)			
Minutes of MVPA	-0.02	0.06	0.767
Presence of impairment ^a	0.52	0.10	<0.001
Measurement time point	-0.15	0.05	<0.001
Gender	-0.04	0.08	0.643
Age	-0.01	0.01	0.376

^a Impaired coded as 1, not impaired coded as 0

Conclusions:

- Participants of Active Plus65 demonstrated an increase in PA and a decrease in loneliness, making it a relevant intervention for the target-population
- The significant negative association found between PA and loneliness was disrupted when the presence of physical impairments was included in the analyses
- The presence of physical impairments was positively associated with loneliness
- The in previous research often found association between PA and loneliness may have other working mechanisms than posited: it may be mainly the presence of physical impairments that dictates loneliness, and less so PA
- For long term improvements in PA and loneliness, developers of interventions should address the presence of physical impairments elaborately

Previous publications on Active Plus65:

- Boekhout, J. M., Berendsen, B. A., Peels, D. A., Bolman, C., & Lechner, L. (2018). Evaluation of a Computer-Tailored Healthy Ageing Intervention to Promote Physical Activity among Single Older Adults with a Chronic Disease. *International Journal of Environmental Research and Public Health*, 15(2), 346.
- Boekhout, J. M., Peels, D. A., Berendsen, B. A., Bolman, C. A. W., & Lechner, L. (2017). An eHealth Intervention to Promote Physical Activity and Social Network of Single, Chronically Impaired Older Adults: Adaptation of an Existing Intervention Using Intervention Mapping. *JMIR Res Protoc*, 6(11), e230. doi: 10.2196/resprot.8093