

University of Groningen

Sport as a medicine for health and health inequalities

de Boer, Willem

DOI:
[10.33612/diss.203332155](https://doi.org/10.33612/diss.203332155)

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version
Publisher's PDF, also known as Version of record

Publication date:
2022

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):
de Boer, W. (2022). *Sport as a medicine for health and health inequalities: essays on the role of sport participation in socioeconomic inequalities in health and health care costs*. [Thesis fully internal (DIV), University of Groningen]. University of Groningen, SOM research school.
<https://doi.org/10.33612/diss.203332155>

Copyright

Other than for strictly personal use, 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), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: <https://www.rug.nl/library/open-access/self-archiving-pure/taverne-amendment>.

Take-down policy

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): <http://www.rug.nl/research/portal>. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

Sport as a medicine for health and health inequalities

*Essays on the role of sport participation
in socioeconomic inequalities in health and health care costs*

Willem I.J. de Boer



**HAN UNIVERSITY
OF APPLIED SCIENCES**

This research was supported by a grant of the HAN University of Applied Sciences

Cover photo: Willem de Boer, 'Kiev (Ukraine)' from the photo book *Soviet Spheres*

Photo back page: Mirte Slump

Printed by Ipskamp Printing

Publisher: University of Groningen, Groningen, The Netherlands

ISBN: 978-94-6421-669-1

© Willem I.J. de Boer, 2022

All rights are reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior permission of the author, or, when appropriate, of the publishers of the publications.



**rijksuniversiteit
 groningen**

Sport as a medicine for health and health inequalities

Essays on the role of physical activity and sport participation
 in socioeconomic inequalities in health and health care costs

PhD thesis

to obtain the degree of PhD at the
 University of Groningen
 on the authority of the
 Rector Magnificus prof. C. Wijmenga
 and in accordance with
 the decision by the College of Deans.

This thesis will be defended in public on

Thursday 17 March 2022 at 16.15 hours

by

Willem Ids Jan de Boer

born on 17 May 1977
 in Dokkum

Promotores

Prof. R.H. Koning

Prof. J.O. Mierau

Assessment committee

Prof. P. Downward

Prof. J. Kiefte-De Jong

Prof. M.J. Postma

Sport is hartstikkene moai. En belangryk.

(Sport is really beautiful. And important.)

Foppe de Haan

former head coach of football club S.C. Heerenveen

Acknowledgements

Science can only be done by standing on the shoulder of giants. Therefore, it is only natural to thank my personal idols such as economist John Maynard Keynes, public health scientist Michael Marmot and the legendary football coach Foppe de Haan for inspiring me, in one way or another, while I was writing this thesis. But apart from those greats with their different wisdoms, this dissertation has benefited immensely from the help and encouragement of many people that I have had the honor of actually meeting or even befriending.

First of all, I would like to thank my supervisors Ruud Koning and Jochen Mierau for their guidance, wisdom, ideas, helpfulness and sense of humor. The discussions and feedback moments we had were perhaps relatively limited in number, but they never failed to have a significant impact on the scientific process, the end product, as well as my personal development. I also want to thank the co-authors of the underlying articles, Erik Buskens, Eva Corpeleijn, Gerjan Navis, Laura Viluma, and especially Jelle Schoemaker and Louise Dekker, for their ideas, insights, practical help and feedback that shaped our research and this thesis.

I am grateful to the HAN University of Applied Sciences for giving me the opportunity to get a PhD and do research on the topics of economics, sport, physical activity and public health. I want to thank the management and my colleagues at the HAN Academy for Sports and Exercise, and in particular Ellen, Jasper, Jelle, Joy, Martijn, Simon and especially Arnoud, for their support, ideas, help and their time listening to my experiences of being a part-time PhD student.

There are many friends and family members that have supported me in small or large ways. Thank you all. In particular I would like to mention Herman, Justin, Mark, Rutger, my parents Jan and Agaath and my children Tobias and Mads for their listening ears, patience, advice, support and love.

Most of all, I want to thank my life partner Mirte, who had to endure all my motions and emotions on a daily basis, but was always positive, patient, caring, supportive and loving: you are amazing.

Willem de Boer
Nijmegen, March 2022

Table of contents

Chapter 1. Introduction	1
Chapter 2. Sport participation and socioeconomic inequalities in health	17
Chapter 3. Sport participation and health inequalities by health status	43
Chapter 4. Socioeconomic inequalities in health care costs	59
Chapter 5. Sport participation and socioeconomic inequalities in health care costs	77
Chapter 6. Covid-19 and socioeconomic inequalities in physical activity.....	91
Chapter 7. Conclusions and policy implications	107
Nederlandse samenvatting.....	115

