



University of Southern Denmark

## Results from Denmark's 2018 Report Card on Physical Activity for Children and Youth

Nørager Johansen, Danielle Louise; Neerfeldt Christensen, Bjørn Friis; Fester, Michael; Koch, Børge; Lund Kristensen, Peter; Runge Larsen, Lisbeth; Sandfeld Melcher, Jesper Ninn; Kryger Mondrup, Tina; Møller, Niels Christian; Have Nielsen, Jacob; Pilgaard, Maja; Præstholt, Søren; Toftager, Mette; Troelsen, Jens; Østergaard, Lars; Skovgaard, Thomas

*Published in:*

Journal of Physical Activity & Health

*DOI:*

[10.1123/jpah.2018-0509](https://doi.org/10.1123/jpah.2018-0509)

*Publication date:*

2018

*Document version*

Final published version

*Document license*

CC BY

*Citation for published version (APA):*

Nørager Johansen, D. L., Neerfeldt Christensen, B. F., Fester, M., Koch, B., Lund Kristensen, P., Runge Larsen, L., Sandfeld Melcher, J. N., Kryger Mondrup, T., Møller, N. C., Have Nielsen, J., Pilgaard, M., Præstholt, S., Toftager, M., Troelsen, J., Østergaard, L., & Skovgaard, T. (2018). Results from Denmark's 2018 Report Card on Physical Activity for Children and Youth. *Journal of Physical Activity & Health, 15*(S2), S341-S343. <https://doi.org/10.1123/jpah.2018-0509>

### Terms of use

This work is brought to you by the University of Southern Denmark through the SDU Research Portal.

Unless otherwise specified it has been shared according to the terms for self-archiving.

If no other license is stated, these terms apply:

- You may download this work for personal use only.
- 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 this open access version

If you believe that this document breaches copyright please contact us providing details and we will investigate your claim.

Please direct all enquiries to [puresupport@bib.sdu.dk](mailto:puresupport@bib.sdu.dk)

## Results from Denmark's 2018 Report Card on Physical Activity for Children and Youth

Danielle Louise Nørager Johansen, Bjørn Friis Neerfeldt Christensen, Michael Fester, Børge Koch, Peter Lund Kristensen, Lisbeth Runge Larsen, Jesper Ninn Sandfeld Melcher, Tina Kryger Mondrup, Niels Christian Møller, Jacob Have Nielsen, Maja Pilgaard, Søren Præstholt, Mette Toftager, Jens Troelsen, Lars Østergaard, and Thomas Skovgaard

### Introduction

There is a need for gathering and translating high quality knowledge on children, youth and physical activity (PA) to guide practice, program and policy development. The purpose of this paper is to summarize the results of the 2018 Danish Active Healthy Kids Report Card on PA for children and youth.

### Methods

The 2018 Report Card includes 10 indicators for PA amongst children and youth (cf. Table 1). In Denmark, robust data is available on 7 of the 10 indicators. Indicator assessment with subsequent grading were based on national surveys related to health and/or PA behaviors (including the HBSC 2014 study,<sup>1</sup> the National Health Survey 2017,<sup>2</sup> the Youth Profile 2014,<sup>3</sup> the Danish Sports Habits study 2016,<sup>5</sup> the School day Movement study 2017,<sup>7</sup> Managing the Primary School area 2017<sup>8</sup> and the SPIF 2018 study<sup>9</sup>), scientific literature (including Møller et al, 2014<sup>4</sup> and Tomkinson et al, 2017<sup>6</sup>) and government reports/legislative documents (including The Day-care Act, The Danish Education Act, and The Act on Non-formal Education and Democratic Voluntary Activity). Relevant data from 2014-2018 was used.

A national committee, consisting of members with different areas of expertise related to PA and human movement among children and youth, graded each indicator based on a structured consensus process. Designated committee members were asked to collect, analyze and present best available evidence on specific indicators and suggest an indicator grading. The presentation and preliminary grades formed the starting point for joint committee discussions to establish consensus on each of the indicators.

Nørager Johansen and Skovgaard are with the University of Southern Denmark, Department of Sports Science and Clinical Biomechanics, Research and Innovation Centre for Human Movement and Learning and Research Unit for Active Living. Neerfeldt Christensen and Have Nielsen are with Danish School Sports. Fester is with the National Olympic Committee and Sports Confederation of Denmark (DIF). Koch is with the University College South Denmark, The National Knowledge Centre for Nutrition, Exercise and Health for Children and Youth. Lund Kristensen is with the University of Southern Denmark, Department of Sports Science and Clinical Biomechanics, Exercise Epidemiology, Research Into Childhood Health (RICH); and the Region of Southern Denmark. Runge Larsen is with the Municipality of Faaborg-Midtfyn, The Mobile Healthcare Center. Ninn Sandfeld Melcher is with the University College Copenhagen. Kryger Mondrup is with the DGI. Møller and Østergaard are with the University of Southern Denmark, Department of Sports Science and Clinical Biomechanics, Exercise Epidemiology, Research Into Childhood Health (RICH). Pilgaard is with the Danish Institute for Sports Studies (Idan). Præstholt is with the University of Copenhagen, Children and Nature – Denmark. Toftager is with the University of Southern Denmark, The National Institute of Public Health (SIF). Troelsen is with the University of Southern Denmark, Department of Sports Science and Clinical Biomechanics, Active Living. Skovgaard ([tskovgaard@health.sdu.dk](mailto:tskovgaard@health.sdu.dk)) is corresponding author.

### Results and Discussion

Denmark's 2018 Report Card cover is displayed in Figure 1 and the grading of each indicator is summarized in Table 1. For the *Overall Physical Activity* and *Sedentary Behaviour* indicators, a firm



**2018** The Danish Physical Activity Report Card for Children and Youth

**Figure 1** — Denmark's 2018 Report Card cover.

**Table 1 Grades and rationales for Denmark's 2018 Report Card**

Indicator	Grade	Rationale
Overall Physical Activity	D-	According to the HBSC 2014 study, 17% of boys and 10% of girls (aged 11-15 years) in Denmark were physically active $\geq 60$ minutes/day. <sup>1</sup> According to the National Health Survey 2017, 35,9% of Danish boys and 21,2% of the girls aged 16-17 years were physically active $\geq 60$ minutes/day. <sup>2</sup> The Youth Profile 2014 show that 25,9% of Danish boys and 10,3% of the girls aged 16-17 years were physically active $\geq 60$ minutes/day. <sup>3</sup> Results from the Quasi-experimental school based Intervention study, CHAMPS study-DK, show that 39% of the boys and 26% of the girls aged 12-16 years were physically active $\geq 60$ minutes/day. <sup>4</sup>
Organized Sport Participation	A-	83% of the 7-15-year-olds in Denmark participate in organized sports. The proportion of children aged 7-15 years participating in organized sport has remained relatively stable in the surveys from 2007, 2011, and 2016 (84%, 86%, and 83%, respectively). <sup>5</sup>
Active Play	INC	Quantitative data on the duration of unstructured/unorganized activities and time spend outdoors is not available at this time.
Active Transportation	B+	In a national representative survey including 3.221 children/adolescents (7-15 years of age), 78% reported cycling, walking, or using children's scooters as transport (e.g. to school) at least two times per week. <sup>5</sup>
Sedentary Behaviours	D+	The National Health Survey 2017 shows that 67,7% of Danish boys and 59,6% of Danish girls aged 16-17 have 2+ hours of screen time in their spare time per day. <sup>2</sup> According to the HBSC study 2014, 64% of the 11-15-year-olds have 2+ hours of television watching in their spare time per day during weekdays, while 84% of the same group watch television 2+ hours during weekends. <sup>1</sup> Furthermore, 56% play video/computer games 2+ hours per day in their spare time on weekdays. 61% play video/computer games 2+ two hours per day on the weekends. <sup>1</sup> Data from the Youth Profile 2014 indicates, that 16-17-year-olds on average are sitting for 8,25 hours per day (boys 8hours/girls 8,5hours). <sup>3</sup> Accelerometer data from the Champs-DK 2015 study indicates, that the 12-16-year-olds averagely are sitting for 590 minutes/day. <sup>4</sup>
Physical Fitness	INC	Danish studies on physical fitness include the following parameters from the Eurofit test: Fitness rating, standing broad jump, handgrip and agility shuttle run (n=7.222 children/adolescents aged 6-16). <sup>6</sup> Based on these data, a suggested grading could be B+. However, there is a lack of data on the parameters: Flamingo balance, sit-and-reach, plate tapping, sit-ups and bent arm hang. This leads to an overall grading of INC.
Family and Peers School	INC	It has not been possible to systematically analyze this indicator. Therefore, it must be considered INC.
Community and Environment	B+	The Danish Education Act makes it compulsory for public schools to offer an average of 45 minutes of physical activity per school day. In 2017, 7/10 schools state that they fulfill this criterion. <sup>7</sup> At the same time, only 20% of schools report that they have a PA-policy <sup>7</sup> and 29% of the local authorities have formulated goals and policies in this area. <sup>8</sup> Physical education (PE) lessons are compulsory from 1st to 9th grade (approximately aged 7-15) with a PE-examination in place for the 9 graders. This ensures a minimum of 60-90 minutes of PE per week. School children are by law ensured access to sports facilities and equipment in public schools. 80% of teachers state that indoor facilities to a high or some extent support the requirements, whilst 67% of teachers state that outdoor facilities to a high or some extent supports the requirements. <sup>9</sup> 82% of teachers who teach PE are specialists within the field. <sup>9</sup>
Government	A-	85% of the 7 to 15-year-olds to a high or some extent assess their local community to have suitable facilities to do sport, and 82% to a high or some extent assess the local community as a good setting to be active. <sup>5</sup> However, children's access to facilities for sport, play and leisure-time activities is unequally distributed geographically. Compared with more rural areas, children living in dense urban settings have lower accessibility to PA facilities per capita, despite that the absolute number of facilities is higher in the major Danish cities. <sup>10</sup>
	A-	Three laws are especially important for children's PA from an early age. The Day-care Act specifies body, senses and movement as one of six key learning themes. The Danish Education Act requires schools to seek cooperation with local sports and leisure-time organizations and ideally ensures that all children are physically active at least 45 minutes each school day. The Act on Non-formal Education and Democratic Voluntary Activity calls for municipalities to support voluntary associations for children and young people under 25 years of age. The latter legislation makes it mandatory to provide financial support for organized sport activities, to provide facilities, and to subsidize rent in privately owned facilities.

assessment of national trends is challenged by the fact that current data only concern children between 11-17 years of age – most of whom are in the latter part of this age range. It most certainly is expected that a larger part of the designated population would meet PA-recommendations if younger children were included. Thus, the reported data does not display a complete picture of the number of children and youth aged 5-17 who adhere to the recommendations for physical activity.

The level of policy and legislative support in relation to PA in a school context is relatively high in Denmark. It is, however, a challenge to implement and maintain stated objectives and targets. In future grading rounds, it may be considered to focus more on the municipal level. In Denmark, local authorities play a key role in the

realization of public strategies on physical education, sport and leisure – including also the school area.

While seven of the ten indicators were assigned a grade in the 2018 Report Card, research and monitoring gaps remain that, if addressed, would better inform the process. Firstly, methodological challenges related to objective versus subjective measures are observed. Secondly, quality data is missing on a total of three core indicators.

## Conclusion

The first Danish Report Card on PA for children and youth from 2016 showed that Denmark performed rather well on strategic and

political levels, but that the impact on the individual level were somewhat scanty. This indicated an implementation gap between the governmental and individual level. Two years later, the implementation issue remains perhaps the greatest challenge – alongside the need for more comprehensive and methodologically solid studies to better address and grade the full range of indicators.

## References

1. Inchley J, Currie D. *Growing up unequal: Gender and socioeconomic differences in young people's health and well-being: Health behaviour in school-aged children (HBSC) study: International report from the 2013/2014 survey*. WHO. 2016. [http://www.euro.who.int/\\_\\_data/assets/pdf\\_file/0003/303438/HSBC-No.7-Growing-up-unequal-Full-Report.pdf](http://www.euro.who.int/__data/assets/pdf_file/0003/303438/HSBC-No.7-Growing-up-unequal-Full-Report.pdf).
2. Sundhedsstyrelsen. Danskernes sundhed– den nationale sundhedsprofil 2017. 2018. <https://www.sst.dk/da/udgivelser/2018/-/media/73EADC242CDB46BD8ABF9DE895A6132C.ashx>.
3. Statens Institut for Folkesundhed. Ungdomsprofilen 2014– Sundhedsadfærd, helbred og trivsel blandt elever på ungdomsuddannelser. 2015. [http://www.si-folkesundhed.dk/upload/sundhedsadf%C3%A6rd,\\_helbred\\_og\\_trivsel\\_ungdomsprofilen\\_2014.pdf](http://www.si-folkesundhed.dk/upload/sundhedsadf%C3%A6rd,_helbred_og_trivsel_ungdomsprofilen_2014.pdf).
4. Møller NC, Tarp J, Kamelarczyk EF, Brønd JC, Klakk H, Wedderkopp N. Do extra compulsory physical education lessons mean more physically active children– findings from the Childhood Health, Activity, and Motor Performance School Study Denmark (the CHAMPS-study DK). *Int J Behav Nutr Phys Act*. 2014;11:121. doi:10.1186/s12966-014-0121-0
5. Pilgaard M, Rask S. (2016): *Danskernes motions- og sportsvaner 2016*. Idrættens Analyseinstitut, København, Denmark. 2016. <http://www.idan.dk/vidensbank/downloads/danskernes-motions-og-sportsvaner-2016/9a94e44b-4cf5-4fbe-ac89-a696011583d5>.
6. Tomkinson GR, Carver KD, Atkinson F, et al. European normative values for physical fitness in children and adolescents aged 9–17 years: results from 2 779 165 Eurofit performances representing 30 countries [published online ahead of print November30, 2017]. *Br J Sports Med*. doi:10.1136/bjsports-2017-098253
7. Dansk Skoleidræt. Bevægelse i Skoledagen 2017. Oxford Research. 2017. <https://skoleidraet.dk/media/6346522/bevaegelse-i-skoledagen-2017.pdf>.
8. Kommunernes Landsforening. *Resultater fra KL-undersøgelse af styring på folkeskoleområdet*, Forår, 2017.
9. von Seelen J, Guldager JD, Bruun TH, Knudsen ME, Bertelsen K. *Status på idrætsfaget 2018 (SPIF-18)*. UC SYD, Haderslev, Denmark. 2018. <https://www.ucsyd.dk/files/inline-files/SPIF-18%20rapport.pdf>.
10. Toft J, Jensen SP. *Idrætsfaciliteter I Danmark 2017– Nøgletal fra Facilitetsdatabasen.dk*. Idrættens Analyseinstitut, København, Denmark. 2017. [https://www.loa-fonden.dk/media/7279/idrætsfaciliteter-i-danmark-2017\\_.pdf](https://www.loa-fonden.dk/media/7279/idrætsfaciliteter-i-danmark-2017_.pdf).