



Congress
2024

Symposium

Striving for global equity in physical activity: insights from the Active Healthy Kids Global Alliance



Dr Salomé Aubert



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Purpose

To explore the Active Healthy Kids Global Alliance's evolving strategies in global physical activity surveillance and promotion for children and adolescents, emphasizing its actions for the integration of justice, equity, diversity, inclusion, and sustainability in its future endeavors.

Outline

Presentation 1 by Dr Mark Tremblay

Title: Active Healthy Kids Global Alliance Global Matrix: History, Activities, and Impact

Presentation 2 by Dr Taru Manyanga

Title: Active Healthy Kids Global Alliance's drive to promote equity, diversity, inclusion in opportunities for child physical activity: where we are and where we are going.

Presentation 3 by Dr Diego Silva

Title: Physical Activity Report Card Indicators and the United Nations Sustainable Development Goals: Insights from Global Matrix 4.0



Active Healthy Kids Global Alliance

History, Activities, and Impact

Mark Tremblay, Ph.D., D.Litt. (hons), FCSEP, FACSM, FCAHS, CSEP-CEP
Senior Scientist, Children's Hospital of Eastern Ontario Research Institute
Professor, Department of Pediatrics, University of Ottawa
President, Active Healthy Kids Global Alliance
Chair, Sedentary Behaviour Research Network
President, Outdoor Play Canada

AHKGA: Who we are? What we do?

- **Active Healthy Kids Global Alliance (AHKGA)** is a **registered not-for-profit organization** made up of researchers, health professionals, and stakeholders who work together to advance physical activity in children and adolescents around the world
- AHKGA's **vision** is a world of active healthy kids
- AHKGA's **mission** is to power the global movement to get kids moving through thought leadership, knowledge translation and mobilization, capacity building, and advocacy
- The dominant effort of the AHKGA to date has been its **Global Matrix** initiative



www.activehealthykids.org

Historical timeline



2005

Due to growing concerns of physical inactivity among kids in Canada, the **first Report Card on Physical Activity** for Children and Youth was released by the not-for-profit organization **Active Healthy Kids Canada**.

2014

Toronto, Canada - Active Healthy Kids Canada organized the **Global Summit** on the Physical Activity of Children.

At the Global Summit **15 countries** simultaneously released their respective **country-specific Report Cards** on Physical Activity for Children and Youth. Together this created the **Global Matrix 1.0**.

Due to the success of the Global Summit, the **AHKGA** was established.



2016

Bangkok, Thailand - The **Global Matrix 2.0** was released on **November 26th 2016** featuring participation from **38 countries**.



2018

May 25th, 2018 - AHKGA officially became **incorporated** as a not-for-profit organization.



Adelaide, Australia - The **Global Matrix 3.0** was released at the **Movement To Move** event on **November 27th 2018** featuring data from **49 countries**.

2022

Abu Dhabi, United Arab Emirates - The **Global Matrix 4.0** was released at the **ISPAH 2022 Congress** on **October 24th 2022** featuring data from **57 countries** from six continents.



Report Card Framework and Process

- The Report Card assigns letter grades to different indicators grouped into categories
- Grades are based on a synthesis and examination of current data against a benchmark
- Where available includes an assessment of trends over time and the presence of disparities
- Together the indicators provide a robust and comprehensive assessment of physical activity of children and youth



Country Report Card Leadership Committee

- National in scope
- Cross-sectoral representation
- Unbiased
- Transparent
- Participatory
- Consensus driven
- Harmonization with AHKGA



Common Indicators in Global Matrix 4.0

- Five behaviours
 - Overall physical activity
 - Organized sport and physical activity
 - Active play
 - Active transportation
 - Sedentary behaviour
- One personal characteristic
 - Physical Fitness
- Four settings and sources of influence
 - Family and peers
 - School
 - Community and environment
 - Government



Benchmarks

Overall Physical Activity	Any bodily movement produced by skeletal muscles that requires energy expenditure.	% of children and youth who meet the Global Recommendations on Physical Activity for Health, which recommend that children and youth accumulate at least 60 minutes of moderate- to vigorous-intensity physical activity per day on average. Or % of children and adolescents meeting the guidelines on at least 4 d/wk (when an average cannot be estimated).
Organized Sport and Physical Activity	A subset of physical activity that is structured, goal-oriented, competitive and contest-based.	% of children and youth who participate in organized sport and/or physical activity programs.



Grading Framework

Grade	Interpretation	Corresponding number for analysis
A+	94%–100%	15
A	We are succeeding with a large majority of children and youth (87%–93%)	14
A–	80%–86%	13
B+	74%–79%	12
B	We are succeeding with well over half of children and youth (67%–73%)	11
B–	60%–66%	10
C+	54%–59%	9
C	We are succeeding with about half of children and youth (47%–53%)	8
C–	40%–46%	7
D+	34%–39%	6
D	We are succeeding with less than half but some children and youth (27%–33%)	5
D–	20%–26%	4
F	We are succeeding with very few children and youth (<20%)	2
INC	Incomplete—insufficient or inadequate information to assign a grade	No grade

Form and Format

- Report Card (long and short form)
- Print and electronic
- Multiple languages in some countries
- Additional communication materials
 - Infographics
 - Social media
 - Published manuscript(s)
 - Presentations
- Housed on the AHKGA website and Active Healthy Kids _____ website



The Report Card Serves as...



- A public awareness mechanism and call to action through a nationwide media advocacy strategy
- An accountability index for all citizens
- A surveillance synthesis mechanism
- An advocacy tool for physical activity leaders and organizations
- A policy driver
- A compass for identifying strengths, weaknesses, priorities
 - Data driven policy-making
- A process for identifying research and surveillance needs
- A challenge to other jurisdictions to implement similar processes to allow comparisons and facilitate improvements

Global Matrix

- The **Global Matrix** initiative involves the production and subsequent comparison of country-specific **Physical Activity Report Cards for children and adolescents**, using a harmonized process to assess and assign letter grades to a number of common physical activity indicators
- To date, there have been **four iterations of the Global Matrix** initiative
- Registrations for the **Global Matrix 5.0** started in **January 2024** (launch in Fall 2026)



Global Matrix expansion



Global Matrix 1.0

15 Participating countries
147 Experts from around the world



Global Matrix 2.0

38 Participating countries
349 Experts from around the world



Global Matrix 3.0

49 Participating countries
512 Experts from around the world



Global Matrix 4.0

57 Participating countries
682 Experts from around the world

Global Matrix 1.0

2014



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JOURNAL OF
Physical Activity & Health

Official Journal of ISPAH
www.JPAH-Journal.com
BRIEF REPORT

Physical Activity of Children: A Global Matrix of Grades Comparing 15 Countries

Mark S. Tremblay, Casey E. Gray, Kingsley Akinroye, Dierdre M. Harrington, Peter T. Katzmarzyk, Estelle V. Lambert, Jarmo Liukkonen, Ralph Maddison, Reginald T. Ocansey, Vincent O. Onywera, Antonio Prista, John J. Reilly, María del Pilar Rodríguez Martínez, Olga L. Sarmiento Duenas, Martyn Standage, and Grant Tomkinson

The Active Healthy Kids Canada (AHKC) Report Card on Physical Activity for Children and Youth has been effective in *powering the movement to get kids moving* by influencing priorities, policies, and practice in Canada. The AHKC Report Card process was replicated in 14 additional countries from 5 continents using 9 common indicators (Overall Physical Activity, Organized Sport Participation, Active Play, Active Transportation, Sedentary Behavior, Family and Peers, School, Community and Built Environment, and Government Strategies and Investments), a harmonized process and a standardized grading framework. The 15 Report Cards were presented at the Global Summit on the Physical Activity of Children in Toronto on May 20, 2014. The consolidated findings are summarized here in the form of a global matrix of grades. There is a large spread in grades across countries for most indicators. Countries that lead in certain indicators lag in others. Overall, the grades for indicators of physical activity (PA) around the world are low/poor. Many countries have insufficient information to assign a grade, particularly for the Active Play and Family and Peers indicators. Grades for Sedentary Behaviors are, in general, better in low income countries. The Community and Built Environment indicator received high grades in high income countries and notably lower grades in low income countries. There was a pattern of higher PA and lower sedentary behavior in countries reporting poorer infrastructure, and lower PA and higher sedentary behavior in countries reporting better infrastructure, which presents an interesting paradox. Many surveillance and research gaps and weaknesses were apparent. International cooperation and cross-fertilization is encouraged to tackle existing challenges, understand underlying mechanisms, derive innovative solutions, and overcome the expanding childhood inactivity crisis.

Keywords: active transportation, comparison, international, play, policy, sedentary behavior, sport

Global Matrix 2.0

2016



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ORIGINAL RESEARCH

Global Matrix 2.0: Report Card Grades on the Physical Activity of Children and Youth Comparing 38 Countries

Mark S. Tremblay, Joel D. Barnes, Silvia A. González, Peter T. Katzmarzyk, Vincent O. Onywera, John J. Reilly, Grant R. Tomkinson, and the Global Matrix 2.0 Research Team

The Active Healthy Kids Global Alliance organized the concurrent preparation of Report Cards on the physical activity of children and youth in 38 countries from 6 continents (representing 60% of the world's population). Nine common indicators were used (Overall Physical Activity, Organized Sport Participation, Active Play, Active Transportation, Sedentary Behavior, Family and Peers, School, Community and the Built Environment, and Government Strategies and Investments), and all Report Cards were generated through a harmonized development process and a standardized grading framework (from *A* = excellent, to *F* = failing). The 38 Report Cards were presented at the *International Congress on Physical Activity and Public Health* in Bangkok, Thailand on November 16, 2016. The consolidated findings are summarized in the form of a Global Matrix demonstrating substantial variation in grades both within and across countries. Countries that lead in certain indicators often lag in others. Average grades for both Overall Physical Activity and Sedentary Behavior around the world are *D* (low/poor). In contrast, the average grade for indicators related to supports for physical activity was *C*. Lower-income countries generally had better grades on Overall Physical Activity, Active Transportation, and Sedentary Behaviors compared with higher-income countries, yet worse grades for supports from Family and Peers, Community and the Built Environment, and Government Strategies and Investments. Average grades for all indicators combined were highest (best) in Denmark, Slovenia, and the Netherlands. Many surveillance and research gaps were apparent, especially for the Active Play and Family and Peers indicators. International cooperation and cross-fertilization is encouraged to address existing challenges, understand underlying determinants, conceive innovative solutions, and mitigate the global childhood inactivity crisis. The paradox of higher physical activity and lower sedentary behavior in countries reporting poorer infrastructure, and lower physical activity and higher sedentary behavior in countries reporting better infrastructure, suggests that autonomy to play, travel, or chore requirements and/or fewer attractive sedentary pursuits, rather than infrastructure and structured activities, may facilitate higher levels of physical activity.

Keywords: international, play, policy, sedentary behavior, sport, active transportation

Global Matrix 3.0 2018



Journal of Physical Activity and Health, 2018, 15(Suppl 2), S251-S273
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Global Matrix 3.0 Physical Activity Report Card Grades for Children and Youth: Results and Analysis From 49 Countries

Salomé Aubert, Joel D. Barnes, Chalchisa Abdeta, Patrick Abi Nader, Ade F. Adeniyi, Nicolas Aguilar-Farias, Dolores S. Andrade Tenesaca, Jasmin Bhawra, Javier Brazo-Sayavera, Greet Cardon, Chen-Kang Chang, Christine Delisle Nyström, Yolanda Demetriou, Catherine E. Draper, Lowri Edwards, Arunas Emeljanovas, Aleš Gába, Karla I. Galaviz, Silvia A. González, Marianella Herrera-Cuenca, Wendy Y. Huang, Izzeldin A.E. Ibrahim, Jaak Jürimäe, Katariina Kämppi, Tarun R. Katapally, Piyawat Katewongsa, Peter T. Katzmarzyk, Asaduzzaman Khan, Agata Korcz, Yeon Soo Kim, Estelle Lambert, Eun-Young Lee, Marie Löf, Tom Loney, Juan López-Taylor, Yang Liu, Daga Makaza, Taru Manyanga, Bilyana Mileva, Shawnda A. Morrison, Jorge Mota, Vida K. Nyawornota, Reginald Ocansey, John J. Reilly, Blanca Roman-Viñas, Diego Augusto Santos Silva, Pairoj Saonuam, John Scriven, Jan Seghers, Natasha Schranz, Thomas Skovgaard, Melody Smith, Martyn Standage, Gregor Starc, Gareth Stratton, Narayan Subedi, Tim Takken, Tuija Tammelin, Chiaki Tanaka, David Thivel, Dawn Tladi, Richard Tyler, Riaz Uddin, Alun Williams, Stephen H.S. Wong, Ching-Lin Wu, Paweł Zembura, and Mark S. Tremblay

Background: Accumulating sufficient moderate to vigorous physical activity is recognized as a key determinant of physical, physiological, developmental, mental, cognitive, and social health among children and youth (aged 5–17 y). The Global Matrix 3.0 of Report Card grades on physical activity was developed to achieve a better understanding of the global variation in child and youth physical activity and associated supports. **Methods:** Work groups from 49 countries followed harmonized procedures to develop their Report Cards by grading 10 common indicators using the best available data. The participating countries were divided into 3 categories using the United Nations' human development index (HDI) classification (low or medium, high, and very high HDI). **Results:** A total of 490 grades, including 369 letter grades and 121 incomplete grades, were assigned by the 49 work groups. Overall, an average grade of "C–," "D+," and "C–" was obtained for the low and medium HDI countries, high HDI countries, and very high HDI countries, respectively. **Conclusions:** The present study provides rich new evidence showing that the situation regarding the physical activity of children and youth is a concern worldwide. Strategic public investments to implement effective interventions to increase physical activity opportunities are needed.

Keywords: global comparison, sedentary behavior, health promotion, international, sport, active transportation

Global Matrix 4.0

2022



Journal of Physical Activity and Health, 2022, 19, 700-728
<https://doi.org/10.1123/jpah.2022-0456>
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Global Matrix 4.0 Physical Activity Report Card Grades for Children and Adolescents: Results and Analyses From 57 Countries

Salomé Aubert, Joel D. Barnes, Iryna Demchenko, Myranda Hawthorne, Chalchisa Abdeta, Patrick Abi Nader, José Carmelo Adsuar Sala, Nicolas Aguilar-Farias, Susana Aznar, Peter Bakalár, Jasmin Bhawra, Javier Brazo-Sayavera, Mikel Bringas, Jonathan Y. Cagas, Angela Carlin, Chen-Kang Chang, Bozhi Chen, Lars Breum Christiansen, Candice Jo-Anne Christie, Gabriela Femanda De Roia, Christine Delisle Nyström, Yolanda Demetriou, Visnja Djordjic, Arunas Emeljanovas, Liri Findling Endy, Aleš Gába, Karla I. Galaviz, Silvia A. González, Kylie D. Hesketh, Wendy Yajun Huang, Omphile Hubona, Justin Y. Jeon, Danijel Jurakić, Jaak Jürimäe, Tarun Reddy Katapally, Piyawat Katewongsa, Peter T. Katzmarzyk, Yeon-Soo Kim, Estelle Victoria Lambert, Eun-Young Lee, Sharon Levi, Pablo Lobo, Marie Löf, Tom Loney, José Francisco López-Gil, Juan López-Taylor, Evelin Mäestu, Agus Mahendra, Daga Makaza, Marla Frances T. Mallari, Taru Manyanga, Bojan Masanovic, Shawnda A. Morrison, Jorge Mota, Falk Müller-Riemenschneider, Laura Muñoz Bermejo, Marie H. Murphy, Rowena Naidoo, Phuong Nguyen, Susan Paudel, Željko Pedišić, Jorge Pérez-Gómez, John J. Reilly, Anne Kerstin Reimers, Amie B. Richards, Diego Augusto Santos Silva, Pairoj Saonuan, Olga L. Sarmiento, Vedrana Sember, Mohd Razif Shahril, Melody Smith, Martyn Standage, Gareth Stratton, Narayan Subedi, Tuija H. Tammelin, Chiaki Tanaka, Riki Tesler, David Thivel, Dawn Mahube Tladi, Lenka Tlučáková, Leigh M. Vanderloo, Alun Williams, Stephen Heung Sang Wong, Ching-Lin Wu, Paweł Zembura, and Mark S. Tremblay

Global Matrix 4.0 Launch



October 24, 2022, Abu Dhabi, United Arab Emirates

GLOBAL MATRIX 4.0

October 23-26, 2022 in Abu Dhabi, UAE in conjunction with the [ISPAH Congress 2022](#)

THE GLOBAL MATRIX 4.0 ON PHYSICAL ACTIVITY FOR CHILDREN AND ADOLESCENTS

October 23–26, 2022 in Abu Dhabi, UAE in conjunction with the [ISPAH Congress 2022](#)

57

COUNTRIES

6

CONTINENTS

570

GRADES

 NEWS RELEASE

 THE GLOBAL MATRIX 4.0

 PARTICIPATING COUNTRIES

 SOCIAL MEDIA TOOLKIT

 Search the grades by country or continent. View the [grading rubric](#) to learn more about how grades are assigned.

Search:

Country ▲	Overall Physical Activity ▲	Organized Sport and Physical Activity ▲	Active Play ▲	Active Transportation ▲	Sedentary Behavior ▲
Argentina	D+	C-	INC	INC	D+
Australia	D-	B-	INC	D+	D-
Basque Country	INC	B-	INC	C+	B-
Botswana	D+	D+	C-	C	C-
Brazil	D	C-	F	C	D
Canada	D	C+	D-	C-	F
Chile	D+	C-	INC	D	D-
China	C	F	C-	C	D+
Chinese Taipei	F	D-	F	C-	D+
Colombia	D+	D+	INC	B	D+

THE GLOBAL MATRIX 4.0 ON PHYSICAL ACTIVITY FOR CHILDREN AND ADOLESCENTS

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COUNTRIES

6

CONTINENTS

570

GRADES

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[PARTICIPATING COUNTRIES](#)

[SOCIAL MEDIA TOOLKIT](#)

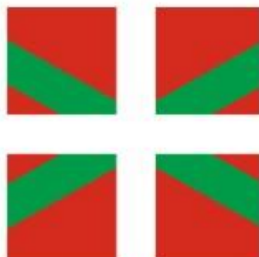
Click on a flag to view a country page.



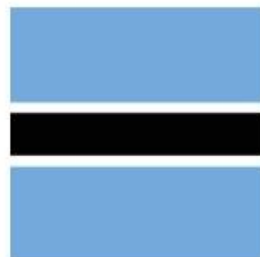
Argentina



Australia



Basque Country



Botswana



CANADA

Access physical activity grades, report cards and other related documents from all Global Matrix events in which Canada has participated.

[THE GLOBAL MATRIX 4.0](#)

[THE GLOBAL MATRIX 3.0](#)

[THE GLOBAL MATRIX 2.0](#)

[THE GLOBAL MATRIX 1.0](#)



Report Card Grades

- > Overall Physical Activity: D
- > Organized Sport and Physical Activity: C+
- > Active Play: D-
- > Active Transportation: C-
- > Sedentary Behavior: F
- > Physical Fitness: INC
- > Family and Peers: C
- > School: B-
- > Community and Environment: B
- > Government: B-

Related Links

- [Short form \(en version\)](#)
- [Short form \(fr version\)](#)
- [Long form \(en version\)](#)
- [Long form \(fr version\)](#)
- [Website](#)

57 Report Cards
570 Grades
 • 465 Letter Grades
 • 105 Incomplete Grades
682 Experts from around the world

The collage features numerous report cards from countries such as Ireland, Scotland, Nepal, Croatia, Serbia, and others. Each report card typically includes a title, a subtitle, a list of findings or recommendations, and a small image of children or adolescents engaged in physical activity. The central blue box provides a summary of the total number of report cards, grades, letter grades, incomplete grades, and experts involved in the project.



Global Matrix 4.0 on physical activity for children and adolescents

Country rankings and grades by physical activity indicators and aggregated indicators



Overall Physical Activity	Organised Sports and Physical Activity	Active Play	Active Transportation	Sedentary Behaviour	Physical Fitness	Family and Peers	School	Community and Environment	Government	Behavioral average	Sources of influence average	Overall average
1 Slovenia	A- 1 Denmark	A 1 Spain (Region of Murcia)	B+ 1 Denmark	A- 1 Indonesia	B 1 Slovenia	A 1 Nepal	A+ 1 Hungary	A+ 1 Singapore	A+ 1 New Zealand	A 1 Finland	B- 1 Malaysia	B+ 1 Denmark
1 Finland	A- 2 Spain	B+ 2 Ethiopia	B 1 Japan	A- 1 Montenegro	B 2 Japan	B 2 Montenegro	A 2 Portugal	A 1 Slovenia	A+ 1 South Korea	A 1 Japan	B- 1 Sweden	B+ 1 Finland
1 Croatia	B- 2 Sweden	B 3 Finland	B+ 3 Finland	B+ 1 Philippines	B 2 Malaysia	B 2 Spain (Extremadura)	A 2 Slovenia	A 1 Sweden	A+ 3 Finland	A- 3 Denmark	C+ 3 Denmark	B 1 Japan
3 Japan	B- 4 Spain (Region of Murcia)	B 2 Serbia	B 3 Hong Kong	B+ 4 Spain (Basque Country)	B- 4 Denmark	B- 4 Thailand	A- 2 South Korea	A 4 Australia	A- 3 Chile	A- 3 Slovenia	C+ 3 Finland	B 1 Slovenia
3 Slovakia	B- 5 Australia	B- 5 Denmark	B- 3 South Korea	B+ 5 Ethiopia	C+ 4 South Africa	B- 5 Sweden	B+ 2 Vietnam	A 4 Chinese Taipei	A- 5 Chinese Taipei	B+ 3 Spain	C+ 3 France	B 5 Czech Republic
3 South Africa	B- 5 Czech Republic	B 5 Lithuania	B- 6 Colombia	B 5 Israel	C+ 6 Botswana	C+ 5 Sweden	B 6 Chinese Taipei	A 6 Denmark	B+ 5 Denmark	B+ 3 Spain (Basque Country)	C+ 3 Portugal	B 5 Montenegro
1 Spain	B- 5 Estonia	B 5 Spain	B 6 Serbia	B 5 Portugal	B 5 Estonia	C+ 7 France	B+ 6 Ethiopia	A 6 Estonia	B+ 5 United Arab Emirates	B+ 3 Spain (Region of Murcia)	C+ 3 Singapore	B 5 Singapore
1 United States	B- 5 Germany	B 6 Mexico	C+ 6 Spain (Region of Murcia)	B 5 Slovenia	C+ 6 Montenegro	C+ 7 Jersey	B 6 Malaysia	A 6 Ireland	B+ 8 Estonia	B 3 Zimbabwe	C+ 3 Slovenia	B 5 South Korea
8 New Zealand	C+ 5 Hong Kong	B 8 Nepal	C+ 6 Nepal	B 9 Germany	C 6 Spain (Extremadura)	C+ 7 Portugal	B 6 Montenegro	A 6 Canada	B 8 France	B 3 Czech Republic	C 3 South Korea	B 5 Spain
8 Czech Republic	C+ 5 Japan	B 8 Wales	C 10 Czech Republic	B 9 Guernsey	C 4 Sweden	C+ 10 Czech Republic	B- 6 United Arab Emirates	A- 9 Czech Republic	B 8 Greenland	B 8 Guernsey	C 10 Chinese Taipei	C+ 5 Sweden
8 Estonia	C+ 5 Lithuania	B 8 Zimbabwe	C+ 10 Ethiopia	B- 9 Lebanon	C 11 France	C 11 Finland	B- 11 Czech Republic	B+ 9 Hungary	B 9 Montenegro	C 10 England	B 5 Sweden	C+ 5
8 Guernsey	C+ 5 New Zealand	B 12 Croatia	C 10 Hungary	B- 9 Malaysia	C 11 Lithuania	B- 11 Mexico	B- 11 Denmark	B+ 9 France	B 8 Serbia	C 10 Hong Kong	B 12 Estonia	C+ 5
8 Zimbabwe	C+ 5 Scotland	B- 12 Czech Republic	C 10 India	B- 9 Nepal	C 11 Poland	C 10 Spain	B- 11 England	B+ 9 Hong Kong	B 8 Japan	B 13 Colombia	C- 10 Hungary	B 12 France
14 China	C 5 Singapore	B 12 France	C 10 South Africa	B- 9 Zimbabwe	C 11 Portugal	C 14 Australia	C+ 11 Japan	B 8 Malaysia	B 8 Croatia	B 13 Croatia	C- 10 Jersey	B- 12 Guernsey
14 India	C 5 Spain (Basque Country)	B 12 Hungary	C 10 Spain	B 15 Botswana	C- 15 Finland	C- 14 Denmark	C+ 11 Jersey	B+ 9 Lithuania	B 8 Philippines	B 13 Ethiopia	C- 10 Jersey	B- 12 Hong Kong
16 England	C- 5 Zimbabwe	B 12 Slovenia	C 16 England	C+ 15 Ireland	C- 15 Spain	C- 16 Canada	C 11 Poland	B+ 9 Portugal	B 8 Portugal	B 13 Germany	C- 10 Montenegro	B 12 Lithuania
16 Montenegro	C 17 Canada	C+ 15 Botswana	C 16 Mexico	C+ 15 Japan	C- 15 United States	C- 16 Germany	C 11 Serbia	B+ 9 Spain	B 8 Singapore	B 13 Hong Kong	C- 10 Spain (Extremadura)	B 12 Lithuania
16 Singapore	C 17 Finland	C+ 15 China	C- 15 China	C+ 15 New Zealand	C- 15 Wales	C- 16 Lithuania	C 11 Uruguay	B+ 9 Spain (Extremadura)	B 8 Sweden	B 13 India	C- 10 Thailand	B 12 Malaysia
16 Ireland	C 17 Guernsey	C+ 15 Finland	C- 16 Thailand	C+ 15 Serbia	C- 19 Australia	D+ 16 Spain (Region of Murcia)	C 19 Brazil	B 19 Colombia	B- 8 Thailand	B 13 Lithuania	C- 10 Vietnam	B 12 New Zealand
20 Argentina	D+ 17 Poland	C+ 15 Germany	C- 20 Botswana	C 15 Singapore	C- 19 Brazil	D+ 16 Vietnam	C 19 Finland	B 19 Croatia	B 20 Canada	B- 13 Mexico	C- 10 Austria	C+ 10 Poland
20 Botswana	D+ 21 France	C 15 Singapore	C 20 Brazil	C 15 Slovakia	C- 19 Germany	D+ 21 Botswana	C- 19 France	B 19 Germany	B 20 Indonesia	B- 13 Nepal	C- 10 Canada	C+ 10 Portugal
20 Chile	D+ 21 Ireland	C 15 Slovakia	C 20 China	C 15 South Africa	C- 19 Slovakia	D+ 21 Brazil	C- 19 Hong Kong	B 19 Slovakia	B 20 Czech Republic	B- 13 New Zealand	C- 10 Czech Republic	C+ 12 Serbia
20 Colombia	D+ 21 Mexico	C 23 Portugal	D+ 20 Germany	C 15 Vietnam	C- 23 Hong Kong	D 21 China	C- 19 Slovakia	B 19 Slovakia	B 20 Vietnam	B- 13 Poland	C- 10 Estonia	C+ 12 Slovakia
20 Lithuania	D+ 21 Montenegro	C 24 Estonia	D 20 Nepal	C 24 Argentina	D+ 24 Spain (Region of Murcia)	D- 21 Estonia	C- 19 Sweden	B 19 South Korea	D- 24 Colombia	C+ 13 Singapore	C- 10 Germany	C+ 12 Zimbabwe
20 Nepal	D+ 21 Slovenia	C 24 Hong Kong	D 20 Singapore	C 24 China	D+ 24 Thailand	D- 21 Japan	C- 25 Canada	C+ 24 Guernsey	C+ 13 Slovakia	C- 20 Ireland	C+ 25 Australia	C- 12
20 Serbia	D+ 21 United States	C 26 Canada	D- 20 Slovakia	C 24 Chinese Taipei	D- 26 Indonesia	F 21 Poland	C- 25 Croatia	C 24 Hong Kong	C+ 13 South Africa	C- 20 Lithuania	C+ 25 Canada	C- 12
20 Sweden	D+ 21 Wales	C 27 Brazil	F 20 Slovenia	C 24 Colombia	D+ 24 Argentina	INC 21 Serbia	C- 25 Germany	B- 26 England	C 24 India	C+ 13 South Korea	C- 20 New Zealand	C+ 25 Chinese Taipei
28 Brazil	D 28 Argentina	C 27 Chinese Taipei	F 20 Sweden	C 24 Croatia	INC 21 Singapore	C- 25 Canada	C- 25 Guernsey	B- 26 Montenegro	C 24 Lithuania	C+ 13 Sweden	C- 20 Philippines	C+ 25 Colombia
28 Canada	D 28 Brazil	C 27 Indonesia	F 20 Uruguay	C 24 Denmark	INC 21 Slovakia	C- 25 Chile	C- 25 Thailand	B- 26 Nepal	C 29 Ethiopia	C 29 Argentina	D+ 20 Slovakia	C+ 25 Croatia
28 Denmark	D+ 28 Chile	C 27 Thailand	F 20 China	C 24 England	INC 21 South Africa	D+ 25 China	C- 25 Wales	B- 26 Poland	C 29 Israel	C 29 Australia	D+ 20 Spain	C+ 25 England
28 Mexico	D 28 Croatia	C 27 Argentina	INC 30 Chinese Taipei	C 24 Lithuania	INC 21 South Korea	C- 31 Australia	C+ 31 Estonia	C+ 26 United States	C 29 Jersey	C 29 Botswana	D+ 20 United Arab Emirates	C+ 25 Ethiopia
28 Spain (Region of Murcia)	D 28 Ethiopia	C 27 Australia	C 24 Spain (Region of Murcia)	D+ 30 Croatia	INC 32 Croatia	D+ 31 Estonia	C+ 26 Vietnam	C 29 Mexico	C 29 China	D+ 20 Uruguay	C+ 25 Germany	C- 25
28 Thailand	D 28 Hungary	C 27 Chile	INC 30 Guernsey	C 24 Uruguay	INC 32 Hungary	D+ 31 Israel	C+ 26 Wales	C 29 Montenegro	C 29 England	D+ 23 Brazil	C 25 India	C- 25
34 Australia	D 28 Nepal	C 34 Colombia	C 34 Israel	C- 34 Brazil	INC 32 Ireland	D+ 31 Lithuania	C- 29 Poland	C 29 Argentina	C 29 Estonia	D+ 23 Chile	C 25 Ireland	C- 25
34 France	D 28 Portugal	C 34 England	INC 30 Czech Republic	C 34 Czech Republic	INC 32 Wales	D+ 31 New Zealand	C+ 34 Ethiopia	C- 29 Scotland	C 29 France	D+ 23 Jersey	C 25 Colombia	C- 25
34 Greenland	D 28 Serbia	C 34 Greenland	INC 30 Scotland	C 34 Hong Kong	INC 36 Chile	D 31 Spain (Extremadura)	C+ 34 Israel	C- 29 South Africa	C 29 Hungary	D+ 23 Croatia	C 25 Mexico	C- 25
34 Israel	D 28 Slovakia	C 34 Guernsey	INC 30 Wales	C 34 Hungary	D 31 Greenland	C+ 34 Spain (Region of Murcia)	C+ 34 Thailand	C 29 Ireland	C 29 Spain	D+ 23 Greenland	C 25 Nepal	C- 25
34 Lebanon	D 38 Botswana	D+ 34 India	INC 38 Australia	D+ 34 Jersey	D 38 Guernsey	INC 36 New Zealand	D 38 Chile	C 34 Uruguay	C 29 Uruguay	C 29 Israel	D+ 23 Guernsey	C 25 Philippines
34 Malaysia	D 38 Colombia	D+ 34 Ireland	INC 38 Estonia	D+ 34 Poland	D 38 Hungary	INC 39 Chinese Taipei	C 34 Zimbabwe	C- 29 Wales	C 29 Lebanon	D+ 23 Nepal	C 25 South Africa	C- 25
34 South Korea	D 38 Spain (Extremadura)	D+ 34 Israel	INC 38 France	B+ 34 South Korea	D 38 India	INC 39 Israel	D- 38 Nepal	C 40 Chile	D+ 40 Australia	C- 29 Philippines	D+ 23 Poland	C 25 Spain (Extremadura)
34 Germany	D 38 Thailand	D+ 34 Japan	INC 38 Lebanon	B+ 34 Spain	D 38 Ireland	INC 39 Scotland	D- 38 Zimbabwe	C 40 Greenland	D+ 40 Spain (Extremadura)	C- 29 Portugal	D+ 23 Serbia	C 25 Spain (Region of Murcia)
34 Portugal	D 42 England	D 34 Jersey	INC 38 Montenegro	D+ 34 Spain (Extremadura)	D 38 Israel	INC 39 United Arab Emirates	D 42 Botswana	C- 40 Indonesia	D+ 42 Argentina	D+ 29 Scotland	D+ 23 Wales	C 25 Vietnam
34 Hong Kong	D 42 Greenland	D 34 Lebanon	INC 38 Vietnam	D 34 Sweden	D 38 Jersey	INC 43 Ethiopia	F 42 Brazil	C 40 Spain (Region of Murcia)	D+ 42 Ethiopia	D+ 29 United States	D+ 43 Ethiopia	C 43 Argentina
44 Chinese Taipei	F 42 Israel	D 44 Malaysia	INC 44 Chile	D 44 United States	D 44 Lebanon	INC 43 Indonesia	F 42 Philippines	C 44 India	D 42 Croatia	D+ 44 Brazil	D 43 India	C 43 Botswana
44 Ethiopia	F 45 Chinese Taipei	D- 44 New Zealand	INC 44 Ireland	D 45 Australia	D 45 Mexico	INC 43 Argentina	INC 42 Spain	C 44 Mexico	D 42 Czech Republic	D+ 44 Canada	D 43 Israel	C 43 Brazil
44 Hungary	F 45 South Africa	D- 44 Philippines	INC 44 Jersey	D 45 Chile	D 45 Nepal	INC 46 Colombia	INC 46 Serbia	D+ 44 South Africa	D 42 Serbia	D+ 44 Chile	D 43 Mexico	C 43 Chile
44 Indonesia	F 47 China	F 44 Lithuania	B 45 Estonia	D 45 Mexico	D 45 New Zealand	INC 46 England	D 47 China	D- 47 Botswana	D- 47 China	D 44 Malaysia	D 43 Scotland	C- 43 Greenland
44 Jersey	F 47 Indonesia	F 44 Scotland	INC 44 New Zealand	D 45 France	D 45 Philippines	INC 46 Greenland	INC 48 China	D 47 China	D- 47 Lebanon	D 44 Vietnam	D 43 Spain (Region of Murcia)	C- 43 Israel
44 Philippines	F 47 Uruguay	F 44 South Africa	D 45 India	D 45 India	D 45 Scotland	INC 48 Hong Kong	INC 48 Lebanon	D 47 Guernsey	INC 47 Slovenia	D 44 Wales	D 49 Argentina	D+ 43 Scotland
44 Spain (Extremadura)	F 47 India	INC 50 South Korea	INC 50 Indonesia	D- 45 Mexico	D- 45 Serbia	INC 50 South Africa	D- 47 Hungary	INC 47 Spain (Region of Murcia)	D 50 Chinese Taipei	D 49 South Africa	D+ 43 Thailand	D+ 43
44 Uruguay	F 47 Jersey	INC 50 Spain (Basque Country)	INC 50 Malaysia	D- 45 United Arab Emirates	D- 45 Singapore	INC 50 United States	D- 47 Lebanon	INC 47 United States	D- 50 Greenland	D- 49 United States	D+ 43 United Arab Emirates	D+ 43
44 Vietnam	F 47 Lebanon	INC 50 Spain (Extremadura)	INC 50 Portugal	D- 52 Canada	F 52 South Korea	INC 52 Malaysia	INC 52 Indonesia	INC 52 Lebanon	INC 52 Botswana	D- 50 Indonesia	D+ 49 Zimbabwe	D+ 43 United States
44 Wales	F 47 Malaysia	INC 50 Sweden	INC 50 United States	D- 52 Scotland	F 52 Spain (Basque Country)	INC 52 Philippines	INC 52 Nepal	INC 53 Malaysia	INC 53 Nepal	F 50 Jersey	D 43 Botswana	D 43 Uruguay
44 United Arab Emirates	F 47 Philippines	INC 54 United Arab Emirates	INC 54 United Arab Emirates	F 52 Thailand	F 52 United Arab Emirates	INC 52 United Arab Emirates	INC 52 Spain (Basque Country)	INC 52 Greenland	INC 52 New Zealand	INC 50 Spain (Extremadura)	D 53 China	D 43 Wales
Poland	INC 50 South Korea	INC 50 United States	INC 50 Argentina	INC 52 Wales	F 52 Uruguay	INC 50 United States	INC 50 Scotland	INC 50 Philippines	INC 50 Germany	INC 50 Thailand	D 53 Indonesia	D 55 China
Scotland	INC 50 United Arab Emirates	INC 50 Uruguay	INC 50 Greenland	INC 50 Finland	INC 50 Vietnam	INC 50 Uruguay	INC 50 Singapore	INC 50 Spain (Basque Country)	INC 50 Spain (Basque Country)	INC 50 Uruguay	D 53 Lebanon	D 55 Lebanon
Spain (Basque Country)	INC 50 Vietnam	INC 50 Vietnam	INC 50 Spain (Extremadura)	INC 50 Greenland	INC 50 Zimbabwe	INC 50 Zimbabwe	INC 50 Spain (Basque Country)	INC 50 United Arab Emirates	INC 50 United States	INC 57 United Arab Emirates	INC 55 Spain (Basque Country)	INC 55 Indonesia

Graded B- to A+

Graded C- to C+

Graded F to D+

Graded INC

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Active Healthy Kids Global Alliance

Infographics

Global Matrix 4.0 on physical activity for children and adolescents

What is the Global Matrix 4.0?

Purpose
To learn more about the state of physical activity of children around the world and how to improve it.

How?
For each participating country, a team of experts prepared a Report Card on physical activity for children and adolescents following a standardized development process to compile the best available evidence and grade (from A+ to F) 10 common physical activity indicators. This initiative allowed researchers to perform global comparisons.

10 Physical Activity Indicators

Overall Physical Activity	Physical Fitness
Organized Sport and Physical Activity	Family and Peers
Active Play	School
Active Transportation	Community and Environment
Sedentary Behaviours	Government

57 Participating Countries

Africa & the Middle East (n = 7)	Involving
Anglosphere (n = 10)	682
Asia-Pacific (n = 13)	physical activity
Europe (n = 21)	leaders & experts
Latin America (n = 6)	

What has the Global Matrix 4.0 shown?

- D Overall Physical Activity** is the indicator with the lowest average grade (D): only 27%–33% of children and adolescents are estimated to meet the recommended amount of physical activity globally.
- The challenges for assessing indicators highlighted the **need for the development of a physical activity measurement instrument/protocol** that would be globally accepted, harmonised, translated, utilised, and culturally adaptable.
- Inequities in terms of grades and surveillance (difference in number of incomplete grades (INC)) across geo-cultural regions were observed, highlighting the persistence of **inequities between countries** for the surveillance and promotion of physical activity in children and adolescents. There is a **general lack of representativeness of some specific populations** (i.e., children: under 10 years, living in rural areas, with a disability, not attending school, indigenous, 2SLGBTQ+, and from other equity-seeking groups).
- The **COVID-19 pandemic** adversely affected the physical activity indicator grades in most countries, their surveillance, and the research activity of physical activity experts. Sedentary Behaviour, followed by Organised Sport and Physical Activity, and Overall Physical Activity, were the indicators most frequently reported as affected negatively by the COVID-19 pandemic.
- Report Card Leaders from **14% (n = 8)** of the countries participating in the Global Matrix 4.0 reported that **war/local conflict** was potentially affecting the physical activity of children and adolescents in their country.
- Report Card Leaders from **30% (n = 17)** of the countries participating in the Global Matrix 4.0 considered that children and adolescents physical activity was currently affected by local **climate change/climate change mitigations**.
- Report Card Leaders from **about half (n = 28)** of the countries participating in the Global Matrix 4.0 estimated that the physical activity of children and adolescents in their country was currently affected by **local economic changes/challenges**.

Conclusions

The Global Matrix 4.0 represents the **largest compilation of children's and adolescents' physical activity characteristics to date**. While variation in the data informing the grades across countries was reported, this initiative highlighted that the global situation regarding the physical activity of children and adolescents remains a serious public health concern. The Global Matrix 4.0 provides an overview of the global situation in terms of surveillance, and prevalences are provided for the 10 common physical activity indicators. We offer concrete priority actions and examples from successful countries, to support the development of needed physical activity practices and policies internationally.

For more details or to read the global priorities themes reported by the Report Card Leaders (n = 83) to improve the grades in their country/jurisdiction for each indicator, consult the following open access publication: Aubert S et al. Global Matrix 4.0 Physical Activity Report Card Grades for Children and Adolescents: Results and Analyses from 57 Countries. *Journal of Physical Activity and Health*. 2022.



Global Matrix 4.0 on physical activity for children and adolescents

What can we learn from the most successful countries?

A- Overall Physical Activity

In Finland, the role of physical activity in supporting growth, development and learning of children and adolescents of different ages has been taken into consideration in documents that guide early childhood education and teaching. National physical activity promotion programs have been funded to create a more physically active operational culture in educational institutions.

A Organized Sport and Physical Activity

In Denmark, several national policies support physical activity for children and adolescents in day care, school, transport, city planning, leisure, and health policies. In regard to organised sport and physical activity, the Danish legislation obliges municipalities to make facilities available for sports clubs and other voluntary associations and to provide financial support for activities for children and young people under the age of 25 years.

A- Active Transportation

In Japan, enforcement order of the Act on National Treasury's Sharing of Expenses for Facilities of Compulsory Education Schools determines school commuting distances within around 4 km for public primary schools and around 6 km for public junior high schools. This policy, associated with high level of independent mobility in children, potentially led to the observed high percentage of Japanese children and adolescents walking or cycling to school, in particular in urban areas.

A Physical Fitness

In Slovenia, children grow up with a tradition of receiving quality physical education instruction, and this may lead to increased physical literacy so a potentially better ability to maintain their fitness. The national education regulations also dictate that every primary school and secondary school must have at least one sports hall fully equipped with all the necessary sports equipment, including additional outdoor facilities for the children, and all schools in Slovenia have written public physical activity policies (e.g., bike racks at school, traffic calming on school property, outdoor play time).

A+ Family and Peers

In Nepal, parents and schools generally expect students to participate in and win intra- and inter-school competitions. Families usually allow their children and adolescents (especially boys) to play with friends in their neighbourhood after school and on weekends. Activities such as playing, walking, cycling (in plain/Tarai regions) among adolescents are considered as ordinary activities by their family members in Nepal.

A+ School

In Hungary, a national physical education curriculum including five sessions of 45 min per week (one per weekday) and recommendations for extracurricular physical activity as well as school sports programs were gradually introduced from 2012 in all Hungarian schools. After the introduction of daily physical education in Hungarian schools, leisure time spent on sports and exercise increased significantly, regardless of gender and age group.

A+ Community and Environment

Sweden has long prioritised green space and the outdoor environment and providing the Swedish people with a usable outdoor environment that promotes physical activity and active transport. In 2012, a Swedish outdoor recreation policy was created to increase opportunities to be in nature and promote outdoor recreation.

In Singapore, public playgrounds are regarded as a basic precinct recreational facility in public housing estates. Playgrounds have evolved over the years from only functional play equipment, such as slides and swings, to thematic playgrounds with a selection of play equipment as a key feature, supporting a wider array of activities such as climbing, swinging, balancing, and jumping.

A Government

In New Zealand, significant central and local government investments in physical activity and sport initiatives have been implemented since 2018. Sport NZ, the Aotearoa, a key crown agency supporting children and adolescents through sport and PA initiatives, established a national physical activity framework, strategy, and plan, and conducted evaluations of most initiatives.

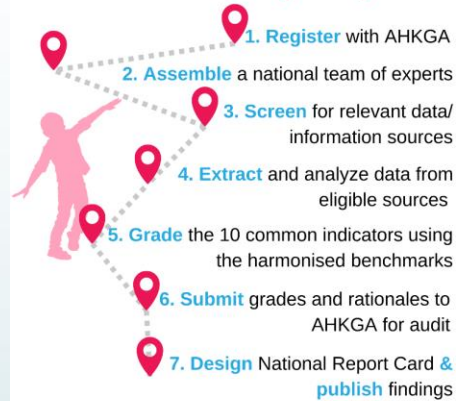
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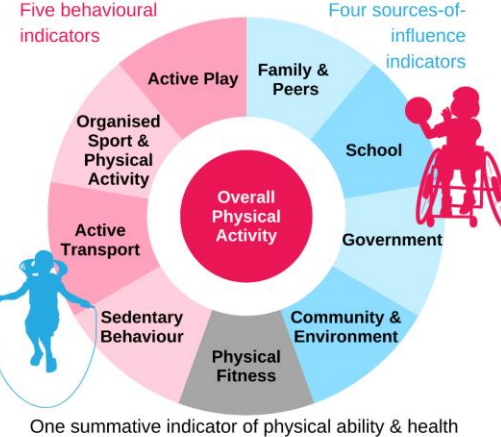


Physical activity indicators have been assessed internationally for children and adolescents using the AHKGA Report Card methodology since 2014. Country Report Cards are developed using a harmonized protocol and aggregated to create a Global Matrix of grades.

AHKGA harmonised Report Card development process



10 common physical activity indicators



Global impact

AHKGA Report Cards & Global Matrices have been shown to be very effective and influential across multiple sectors for creating awareness; developing capacity; transferring interventions, policies, and practices; improving surveillance; and advocacy purposes.

Trainees **>180**

Presentations **>370**

Publications **>230**

Citations **>7000**

AHKGA Global Matrix 4.0 Network



The Global Matrix 4.0 involved a network of:

57 Participating countries or jurisdictions

682 Experts from around the world

Partnerships

Partnership agreements with international groups have been established to synergize collaborative efforts to "power the movement to get kids moving" around the world.



