Results From Finland’s 2014 Report Card on Physical Activity for Children and Youth

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The Finnish 2014 Report Card on Physical Activity (PA) for Children and Youth is the first assessment of Finland’s efforts in promoting and facilitating PA opportunities for children and youth using the Active Healthy Kids Canada grading system. The Report Card relies primarily on research findings from 6 Research Institutes, coordinated by the University of Jyväskylä. The Research Work Group convened to evaluate the aggregated evidence and assign grades for each of the 9 PA indicators, following the Canadian Report Card protocol. Grades from A (highest) to F (lowest) varied in Finland as follows: 1) Overall physical activity—fulfillment of recommendations (D), 2) Organized sport participation (C), 3) Active play (D), 4) Active transportation (B), 5) Sedentary behaviors (D), 6) Family and peers (C), 7) School (B), 8) Community and the built environment (B), and 9) Government (B). This comprehensive summary and assessment of indicators related to PA in Finnish children and youth indicates that Finland still has many challenges to promote a physically active lifestyle for youth.

**Keywords:** advocacy, child health, health communication, knowledge translation, policy

The World Health Organization advises all children and youth to be physically active daily through play, games, sports, transportation, recreation, physical education (PE) or planned exercise in the various contexts of family, school, and community activities. According to national Recommendations for Physical Activity in Early Childhood Education in Finland, a child younger than 7 years is recommended to have at least 2 hours of brisk physical activity every day. The recommendation for school-aged children and youth 7 to 18 years suggest that they should be physically active for at least 1–2 hours daily in a variety of ways suitable for each age group.

Although the Faculty of Sport and Health Sciences at University of Jyväskylä is the central Institute for sport sciences in Finland, there are many other organizations doing research on PA from various viewpoints. The general view of the state of affairs on children’s PA in Finland assessed by the Active Healthy Kids Canada grading system has not been available in a single report until now, although reports of the information have been available in various research organizations and groups. The Finnish Report Card provides a comprehensive consolidation of the best available evidence from different sources about several indicators related to PA levels of children and youth as well as factors affecting PA at policy, environment, and social levels. The aim of the Report Card is to consolidate the available research knowledge to drive social action for policy change and advocate action aiming at increasing physical activity and decreasing physical inactivity in Finland.

**Methods**

The development of the Report Card was coordinated by the Faculty of Sport and Health Sciences at the University of Jyväskylä. An effort to gather original publications and key surveillance data from national and regional surveys was completed and results were tabulated and reviewed. A Research Work Group (RWG) of 9 established experts and stakeholders was convened to evaluate the aggregated evidence and assign grades for each PA indicator following the Active Healthy Kids Canada PA Report Card protocol. The RWG assessed the best available evidence with attentiveness and due consideration to the quality of the evidence, sample size, representativeness of the data, and reliability of the methodology.

The Finnish Report Card presents 9 indicators related to PA in Finnish children and youth: 1) Overall physical activity levels—fulfillment of recommendations; 2) Organized sport participation; 3) Active play; 4) Active transportation; 5) Sedentary behaviors; 6) Family and peers—infrastructure, support, parental/peer behaviors; 7) School—infrastructure, policies and programs; 8) Community and the built environment—infrastructure, policies, programs, safety; and 9) Government—strategies, policies, investments. Based on deliberations, the RWG achieved consensus to assigned letter grades according to the following grading scheme based on the proportion of
children achieving the benchmark for each indicator: A is 81%–100%; B is 61%–80%; C is 41%–60%, D is 21%–40%; F is 0%–20%.

The main data sources related to the 9 indicators are presented in Table 1. Several surveys for students and school staff, as well as objective PA measures for students were conducted through the Finnish Schools on the Move program in 2010–2012. The active play and leisure indicator relied on data from nationally representative statistics from the Adolescent Health and Lifestyle Survey, a multidisciplinary research program started in 1977. Self-report questionnaires are conducted every second year among 12- to 18-year-olds. Regarding levels of PA and sedentary behavior as well as participation in organized sports, data from the Health Behavior in School-aged Children (HBSC) for 2010 study was used. The HBSC was initiated in 1984 and the study currently encompasses 43 countries internationally. The data have been collected every 4 years since 1986 from 11-, 13-, and 15-year-old children.

Parents’ PA with their children as well as the degree to which parents facilitated their children’s PA was reviewed in the National Health Promoting Sports Club (HPSC) study. HPSC is a new national study that focuses on comparing several health behavior and status-related differences (including PA) between 14- to 16-year-old youth who participate in sports club activities and their nonparticipating peers. The HPSC data collected through schools in 2013 were used.

Data on school PA policies were collected from the headmasters of comprehensive schools (grades 1–9) as part of the Benchmarking System of Health Promotion Capacity Building (BSHPCB) study. BSHPCB data collected in the spring of 2012. Data were received from 230 municipalities (68% of all municipalities). Population weighted results for the whole country and results for individual municipalities are available at TEAviisari (http://www.thl.fi/en_US/web/en/research/tools/teaviisari). Medians are unpublished data, available by request from National Institute for Health and Welfare (THL).

The analysis of government level strategies, policies, and investments was based on the National Strategy for Physical Activity Promoting Health and Wellbeing report by the Ministry of Social Affairs and Health, and on the Sport Facility Services and the Equality of Population follow-up study by the Ministry of Education and Culture.

Table 2 summarizes the letter grades for the 9 indicators in the 2014 Report Card. A brief discussion of the grades for each indicator is provided below with full details available in the long form of 2014 Finnish Report Card (https://www.jyu.fi/sport/ReportCard/), the cover page of which is presented in Figure 1.

### Results

Table 2 summarizes the letter grades for the 9 indicators in the 2014 Report Card. A brief discussion of the grades for each indicator is provided below with full details available in the long form of 2014 Finnish Report Card (https://www.jyu.fi/sport/ReportCard/), the cover page of which is presented in Figure 1.

#### Table 1 Main Data Sources

<table>
<thead>
<tr>
<th>Data source</th>
<th>Methods, study population, and year of measurement</th>
<th>Variables and their contribution to PA indicators (1–9)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finnish Schools on the Move Program and Research</td>
<td>Objective measures of PA and sedentary time for students by accelerometer (ActiGraph, Pensacola, US), grade 1–6 students (n = 568) and grade 7–9 students (n = 130)</td>
<td>Objectively measured moderate-to-vigorous PA (≥ 4.0 MET, ≥ 2296 cpm) (1) and sedentary time (&lt; 1.5 MET, &lt; 100 cpm) (5)</td>
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<td></td>
<td>Surveys for students from grades 4–9 (10–15 year-olds) in 2010–2012 (n = 1677)</td>
<td>Active commuting to school (4)</td>
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<td></td>
<td>Survey for school personnel in 39 schools, spring 2013 (n = 531)</td>
<td>Physically active play during recess (7)</td>
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<td></td>
<td>Survey for 32 schools in 2012</td>
<td>School staff’s awareness of PA recommendations (7)</td>
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<tr>
<td>Adolescent Health and Lifestyle Survey</td>
<td>Survey for adolescents aged 12–18 years (n = 4566) in 2013</td>
<td>Physical activities outside school or sports clubs (3)</td>
</tr>
<tr>
<td>Health Behavior in School-aged Children (HBSC)</td>
<td>Survey for children aged 11, 13, and 15 years, Finnish data, year 2010 (n = 6682)</td>
<td>Fulfillment of recommendation related to PA (60 min of MVPA/day, 7 days per week) (1) and screen time (5)</td>
</tr>
<tr>
<td>National Health Promoting Sports Club (HPSC) study</td>
<td>Adolescents aged 14–16 years, in 2013 (n = 1,532)</td>
<td>Participation in organized sports (2)</td>
</tr>
<tr>
<td>Benchmarking System of Health Promotion Capacity Building (BSHPCB)</td>
<td>Survey for the headmasters of comprehensive schools (grades 1–9), autumn 2013 (n = 2020)</td>
<td>Parental encouragement to be physically active and transport to physical activities or sports when needed (6)</td>
</tr>
<tr>
<td></td>
<td>Surveys for the management of the sport/PA services of the municipalities, spring 2012 (n = 230)</td>
<td>Data on school PA policies (7)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Data on the PA policies of municipalities (7)</td>
</tr>
</tbody>
</table>

*Indicators: 1) Overall physical activity, 2) Organized sport participation, 3) Active play, 4) Active transportation, 5) Sedentary behaviors, 6) Family and peers, 7) School, 8) Community and the built environment, and 9) Government.
1. Overall Physical Activity Levels—Fulfillment of Recommendations

The Finnish data of 2010 HBSC study showed that 24% of Finnish 11- to 15-year-olds met the national PA guideline recommending at least 60 minutes MVPA daily. Gender differences were apparent; 30% of boys but only 18% of girls met the recommendation. Further, the difference in PA levels by age was the highest for boys and relatively high among girls compared with other participating countries in the 2010 HBSC-study.

Based on objective PA measurement, 17%–50% of children 3–15 years of age had at least 60 minutes of MVPA per day. Forty-six percent of 3-year-old preschool children (n = 47), 50% of primary school students (7–12 years), and 17% of lower secondary school students (13–15 years) had at least 1 hour of MVPA a day. The overall physical activity levels indicator was graded “D.”

2. Organized Sport Participation

Out-of-school sport is organized in Finland mainly in voluntary civil activity-based sports clubs. The review of research reports from Finnish 3- to 18-year-olds showed that 30%–55% participated in sports club activities. According to the HBSC study, 48% of 11- to 15-year-olds participated in sports club activities; the highest percentage for participation was 58% for 11-year-old boys (52% for girls) and the lowest was 35% for 15-year-old girls (36% for boys). The estimated percentages were based on cross-sectional data. Further, at least 40% of Finnish children participated at least temporarily in sports clubs. The organized sport participation indicator was graded “C.”

3. Active Play

Self-report data from the Adolescent Health and Lifestyle Survey highlighted that 34% of children and adolescents 12–18 years participated in physical activities outside of school or sports clubs at least 4 times per week and 85% at least once per week. The active play indicator was graded “D.”

4. Active Transportation

A survey of 1677 students from grades 4–9 (10–15 years) indicated that almost all children commuted actively to school when the distance was 1 km maximum. Percentages declined when the distance increased: 74% commuted actively to school when the distance was 1–3 km, 38% when the distance was 3–5 km, and 18% when the distance was over 5 km. The distance from home to school was less than 3 km for 79% of children in grades 4–6 and for 57% of children in grades 7–9. The active transportation indicator was graded “B.”

### Table 2 Grades According to Physical Activity Indicator in the 2014 Finland Report Card on Physical Activity for Children and Youth

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Overall physical activity levels (fulfillment of recommendations)</td>
<td>D</td>
</tr>
<tr>
<td>2. Organized sport participation</td>
<td>C</td>
</tr>
<tr>
<td>3. Active play</td>
<td>D</td>
</tr>
<tr>
<td>4. Active transportation</td>
<td>B</td>
</tr>
<tr>
<td>5. Sedentary behaviors</td>
<td>D</td>
</tr>
<tr>
<td>6. Family and peers—infrastructure, support, parental/peer behaviors</td>
<td>C</td>
</tr>
<tr>
<td>7. School—infrastructure, policies, and programs</td>
<td>B</td>
</tr>
<tr>
<td>8. Community and the built environment—infrastructure, policies, programs, safety</td>
<td>B</td>
</tr>
<tr>
<td>9. Government—strategies, policies, investments</td>
<td>B</td>
</tr>
</tbody>
</table>

*Note.* The grade for each indicator is based on the percentage of children and youth meeting a defined benchmark: A is 81%–100%; B is 61%–80%; C is 41%–60%, D is 21%–40%; F is 0%–20%.
5. Sedentary Behaviors

According to the HBSC 2010 data, 78% of Finnish 11- to 15-year-olds exceeded the sedentary behavior guideline of less than 2 hours per day of discretionary screen time (watching TV, video or DVD) on weekdays. The volume of sedentary screen time almost doubled on weekend days. The volume of sedentary screen time almost doubled on weekend days. Computer and console games were highly used among boys and especially on weekends. Recreational use of computers for activities other than games was more gender neutral, but still an issue of concern as 47% of 11- to 15-year-olds exceeded the recommended limit on weekdays and 59% on weekend days.

In the Finnish Schools on the Move study in 2010–2012, sedentary time was measured objectively during waking hours by accelerometry. Objectively measured sedentary time varied between 5.3 hours/day (7–8 years) and 8.5 hours/day (13–14 years). Objectively measured sedentary time during the school day varied between 35 min/hour and 45 min/hour in the same age groups, respectively. Based on these data, the sedentary behaviors indicator was graded “D.”

6. Family and Peers—Infrastructure, Support, Parental/Peer Behaviors

Based on questionnaire data collected during 2003–2008 (n = 30,000), 42% of women and 36% of men with no children were physically active. In families with 1 child, 33% of mothers and 25% of fathers were physically active, and in the case of 2-child families, only 24% of mothers and 25% of fathers were physically active. The criterion for physically active adults was MVPA for 30 minutes 4 or more times per week.

According to the HPSC study, 93% of Finnish 14- to 16-year-olds reported that at least 1 of their parents encouraged them to be physically active in a typical week, while 79% indicated that their parents transported them to physical activities or sports when necessary. In addition, 48% of 3- to 18-year-olds reported they were physically active with their peers (58% in 2001), while 37% engaged in physical activity alone; 13% were active in school sport clubs. Based on these observations, the family and peers indicator was graded “C.”

7. School—Infrastructure, Policies, and Programs

According to the national curriculum, students in elementary and secondary schools of Finland have 90 minutes of PE per week, which is obligatory for all students. In addition, some schools have extra physical activities, such as sport and PA afternoon clubs. During the academic year 2013–2014, the number of comprehensive schools that were involved in the national Finnish Schools on the Move Program was approximately 500, which represented one-fifth of all Finnish comprehensive schools.

Almost all students in elementary school but only one-fourth of students in secondary school spend recess outdoors. Participation in physically active play during recess declined from elementary to secondary school, from 32% to 4% in girls and from 45% to 25% in boys.

According to the Benchmarking Welfare and Health Promotion within the Comprehensive School System (BWHS; National Institute for Health and Welfare), 63% of schools developed the schoolyard to be a more appealing and engaging neighborhood sports facility during the 2012–2013 school year. Similarly, 55% of schools had promoted the use of indoor sporting facilities during the school day, 43% had encouraged pupils to commute to school by bicycle or walking, and 37% had trained peer sports instructors. In addition, 42% of schools had organized 1 longer recess period of about 30 minutes to promote PA during the school day. Typical length of the recess between school lessons in Finland was 15 minutes.

Existence of sport equipment and facilities at schools were evaluated in 32 schools (17 primary schools, 9 secondary schools, and 6 combined comprehensive schools), which were involved in the Finnish Schools on the Move program in 2010–2012. A gymnasium existed in 94% of schools and was available for student indoor activities during recess in 53% of the schools. Assessment of schoolyard equipment showed that 78% of the schools had climbing frames, 78% had swings, 69% had soccer goals, 84% had basketball goals, and 41% had schoolyard paintings.

Personnel from 39 comprehensive schools (n = 531) responded to a web-based inquiry in 2013 which included questions concerning their awareness of the national PA recommendation for school-aged children. Almost all of the respondents (95%) were aware of the PA recommendation. Sedentary behavior recommendations including the limitations related to continued periods of sitting (75%) and screen time with entertainment media (89%) were also known well.

Sixty-nine percent of 3-year-olds and 74% of 4- to 5-year-olds were involved in daily formal day care in kindergartens. The national early education curriculum instructed teachers to organize 2 outdoor free activity sessions daily as well as 1 indoor and 1 outdoor PE session per week. Based on this array of statistics, the school indicator was graded “B.”

8. Community and the Built Environment—Infrastructure, Policies, Programs, Safety

According to the BSHPCB data representing 230 municipalities, 47% reported that they had a strategy document for PA and 56% had a strategic plan for developing neighborhood PA facilities. All municipalities (100%) had basic infrastructure for PA (eg, sidewalks, trails, paths, bike lanes). Over 90% of municipalities had pedestrian or bicycle lanes, with an average of 6.1 m/km2/1000 inhabitants (min 0.0, max 263) as well as 9.2 sports sites/1000 inhabitants (min 1.8, max 42.4). Based on these statistics, the community and the built environment indicator was graded “B.”


The Sport Act, enacted the first time in 1980, regulates the aims of PA at governmental, regional, and local levels. The Sport Act is a progressive law which provides direction for sport policy and culture for all levels of the public sector as well as for the nongovernment third sector (eg, national sport federations and local sports clubs). In 2013, 312 of 320 municipalities followed the goals of the Sport Act in offering, maintaining and creating conditions for PA. The program of the Finnish Government states that it promotes the maintenance of active lifestyles throughout life. During 2013, the portion of budget of the Ministry of Education and Culture allocated for enhancing PA and sports was 147 MF (26.7€/inhabitant), with a focus on PA in children and the elderly. The objective is, above all, to increase the number of people practicing and participating in sports.

In addition, the Ministry of Social Affairs and Health, the Finnish National Board of Education, and Finland’s Slot Machine Association substantially finance health enhancing PA projects. The Ministries of Transport and Communication, Environment, and Agriculture and Forestry also contribute significant resources for the development of neighborhood environments, pedestrian and bicycle roads as well as recreational use of nature. Two-thirds of Finns reported that their neighborhood environment allows them to be as physically active as they wish. PA among children and adolescents is supported by...
the government through voluntary sport organizations (total support for these organizations in 2012 was 43.9 M€) and specific programs (programs for children and young people in 2012 5.5 M€).25

In 2013, the Ministry of Education and Culture and the Ministry of Social Affairs and Health published 4 guidelines to promote cross-sectorial co-operation,13 specifically for 1) reducing sitting in daily activities through the lifespan; 2) increasing PA through the lifespan; 3) highlighting PA as a vital element in enhancing health and well-being, in the prevention and treatment of diseases, and in rehabilitation; and 4) strengthening the status of PA in Finnish society. The important target groups for the guidelines were children, young people and families.13

The government indicator was graded “B.”

Discussion

Allowing for the multiple Finnish organizations and research groups involved with PA in children and youth and differences in methodology, studies available for the Report Card provided variable results, especially related to PA levels. Nevertheless, compared with the Active Healthy Kids Canada Report Card 2013,26 the grade for overall physical activity grade in Finnish children and youth is slightly more positive. In the case of most indicators, however, Finland has much to improve to promote physically active lifestyles for children and youth.

1. Overall Physical Activity Levels—Fulfillment of Recommendations

Based on self-report data, only one-fourth of Finnish adolescents met the national recommendation of at least 60 minutes of daily PA, and boys met the recommendation more often than girls. Further, the decline in PA levels with age is high in Finland. The assigned grade for overall PA levels was “D” based on the low levels of daily PA.

2. Organized Sport Participation

A unique feature of organized sport participation in Finland is that activities take place mainly in voluntary civil activity-based sports clubs. The assigned grade for organized sport participation was “C” because almost one-half of children participate in sports club activities. However, less than one-third of youngsters continue involvement in sport through late adolescent ages. The high dropout with age is alarming as Finnish longitudinal data indicate that participation in organized sport in childhood and adolescence is a good predictor of PA in adulthood.27 Organized sport is an important avenue through which the decline in PA among youth with age may be prevented.

3. Active Play

The active play indicator was graded “D” because only one-third of children and adolescents participated in PA outside of school or sports clubs at least 4 times per week and a great majority participated at least once a week. The conclusion based on these findings is limited because unstructured/free play PA has not been fully investigated in Finland.

4. Active Transportation

The active transportation indicator was graded “B” because almost all children (> 90%) actively commute to school when the distance is 1 km or less. Three-fourths of youngsters actively commute to school when the distance is 1–3 km, but only about one-third and one-fifth, respectively, actively commute to school when the distance is 3–5 km and > 5 km.

5. Sedentary Behaviors

The indicator for sedentary behavior was assigned a “D.” Based on both self-report and objective measures, the percentage of Finnish children and youth exceeding the national recommendation is high. The volume of screen time on weekends is especially high particularly among boys.

6. Family and Peers—Infrastructure, Support, Parental/Peer Behaviors

The family and peers indicator was graded “C” parents and peers play a significant role in supporting PA. Parental attitude toward PA for their children appeared to be very positive. More than 90% of adolescents reported parental encouragement to be physically active and often facilitated PA and sport opportunities. However, based on adults’ self-reported PA, the majority of parents in Finland are not ideal PA role models for their children. From the perspective of peer influence, about one-half of Finnish children and youth reported being physically active with peers.

7. School—Infrastructure, Policies, and Programs

The indicator for school—infrastructure, policies and programs was assigned a grade of “B” because both early education programs and schools place strong emphasis on enhancing PA. The data dealing with this indicator are somewhat mixed. Finnish students in comprehensive schools have only 90 minutes of compulsory PE per week, while almost all elementary school students but only one-quarter of secondary school students spend recess outdoors. Participation in physically active play during recess also declines considerably from elementary to secondary school.

On the other hand, schools play an important role in promoting PA. The majority of schools had a developed schoolyard suitable for neighborhood sports and promoted the use of indoor sporting facilities during the school day during the previous academic year. A gymnasium was available in almost all schools and was available for student use during recess in one-half of the schools. Schools were relatively well equipped for PA, and the staff was well aware of Finnish recommendations for PA and screen time, but less aware of the recommendation for restricting continuous sitting. Almost one-half of schools also encouraged pupils to commute to school by bicycle or by walking.

Finnish Schools on the Move is a national action program aiming at establishing a physically active culture in Finnish comprehensive schools. Schools and municipalities participating in the program implemented their own individual plans to increase PA during the school day. The program is funded by the Ministry of Education and Culture and is organized by the Board of Education, regional state administrative agencies and other organizations, and is part of the Government program in Finland.

The national early education curriculum instructs kindergartens to organize 2 outdoor free activity sessions daily as well as 1 indoor and 1 structured outdoor PE session per week.2 This action is an important step toward an active lifestyle because the great majority (74%) of 3- to 5-year-old children in Finland uses early education services.23
8. Community and the Built Environment—Infrastructure, Policies, Programs, Safety

The community and the built environment indicator received a grade of “B” because of the active steps taken to create favorable environments for PA. One-half of Finnish municipalities have a PA strategy document and plan for developing neighborhood PA facilities. Practically all municipalities have infrastructure for PA, especially pedestrian or bicycle lanes.


The indicator for government strategies, policies, and investments was assigned a grade of “B” because clear national policy documents and strategies as well as investments to enhance PA are in place. The Sport Act regulates the aims of PA at the governmental, regional, and municipal levels. Municipalities follow the goals of the Sport Act well, offering, maintaining, and creating conditions for PA. The state budget for enhancing PA, delivered mainly through the Ministry of Education and Culture, was almost 27 euro/inhabitant in 2013. The Ministry of Social Affairs and Health, the Finnish National Board of Education and Finland’s Slot Machine Association also significantly finance health enhancing PA projects. The Ministries of Environment, Transport and Communications, and Agriculture and Forestry also play an important role in developing neighborhood environments, pedestrian and bicycle roads, as well as recreational uses of nature.

Limitations

Although grades are based on the best available data, several research gaps remain, specifically related to PA among preschool children; the role of family and peers in the PA of children and youth; the forms and levels of PA, leisure PA and play; and neighborhood PA facilities and municipal investments. Some of the data presented were outdated and need updating for the next annual Finnish Report Card.

Conclusion

Since PA levels in children and adolescents in Finland are lower and engagement in sedentary behaviors is higher than recommended, there is a major need to promote PA and to reduce sedentary behavior. PA promotion on various levels and contexts is complex, and requires multiple and cross-sectorial actions. The central challenge is to strengthen the role of PA as part of all societal decision making. It is hoped that this first Finnish 2014 Report Card on Physical Activity for Children and Youth will raise awareness about the need to make even greater efforts to enhance the PA and to reduce the sedentary behavior of Finnish children and youth. All sectors of society have a role to play in this public health challenge.

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References


