Belgium Report Card

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Results from the 2016 Active Healthy Kids Belgium Report Card on Physical Activity for Children and Youth

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Abstract

Background: This 2016 Belgium Report Card on Physical Activity for Children and Youth is the first systematic evaluation of the level of physical activity behaviors, other health-related behaviors, and health outcomes, and influences thereon, using the Active Healthy Kids Canada grading framework.

Methods: A research working group (RWG) consisting of physical activity experts from both Flanders and Wallonia collaborated to determine the indicators to be graded, data sources to be used, and factors to be taken into account during the grading process. Grades were finalized after consensus was reached among the RWG and two stakeholder groups consisting of academic and policy experts in the fields of physical activity, sedentary behaviors, and dietary behaviors.

Results: Eleven indicators were selected and assigned the following grades: overall physical activity (F+), organized sport participation (C-), active play (C+), active transportation (C-), sedentary behaviors (D-), weight status (D), school (B-), and government strategies and investment (C+). Inconclusive grades were assigned to dietary behaviors, family and peers, and community and the built environment due to a lack of nationally representative data.

Conclusions: Despite moderately positive social and environmental influences, physical activity levels of Belgian children and youth are low while levels of sedentary behaviors are high.
Despite the many health benefits associated with physical activity throughout childhood, a large portion of children and adolescents in Belgium does not engage in sufficient levels of physical activity to meet current recommendations. Concurrently with these low estimates for overall physical activity levels, high levels of screen time have been reported for Belgian children and youth. Together, these behaviors accumulate to an unhealthy lifestyle that seems to have its origin in early childhood. In Belgium, surveillance of physical activity, other health-related behaviors, and health-related outcomes in a representative sample of Belgian children and youth is being performed at the national level by the Scientific Institute of Public Health (WIV-ISP). In contrast, surveillance of individual, social, and environmental influences on these behaviors and health outcomes is mainly performed on a regional level and by different organizations. Following the examples of other international report cards, in particular the Canadian Physical Activity Report Card, the Physical Activity Report Card is a tool that will encourage advocacy and systematic evaluation of physical activity and its influences with the ultimate aim of improving physical activity levels of Belgian children and youth.

The purpose of this manuscript is to summarize the process by which the first Belgian Report Card on Physical Activity for Children and Youth was developed and to summarize its main results. In Belgium, health policy is organized by the federal authority as well as by the different communities. While regulations concerning the practice of medical and paramedical professions are federal responsibilities, primary and preventive health care and regulations concerning sport and education are community responsibilities. As a consequence, different policies and strategies
to promote a physically active and healthy lifestyle within the framework of health promotion and disease prevention can be found in Flanders and Wallonia. Therefore, differences in health-related behaviors and health-related behaviors between regions will be highlighted throughout this manuscript. Data used for this Report Card come from national and regional surveys (2010-2014) and are synthesized and graded in a systematic manner according to benchmark criteria formulated by Active Healthy Kids Canada.¹²

**Methods**

A research working group (RWG) was established consisting of six researchers from KU Leuven, Ghent University, and the University of Liege, covering both Flanders (i.e. Northern Dutch-speaking part of Belgium) and Wallonia (i.e. Southern French-speaking part of Belgium). With the support of WIV-ISP, the first author prepared a synthesis of the data recently collected in the Food Consumption Survey (FCS), the main data source for this manuscript (see below for more information). Subsequently, the RWG was responsible for the selection of indicators, identification of additional relevant data sources, synthesis of data, and assignment of grades to each of the selected indicators. Two separate stakeholder groups were formed, one for Flanders and one for Wallonia, consisting of experts from research, education, policy, and practice in the field of physical activity, sport, sedentary behavior, and dietary behavior. Members of the RWG prepared preliminary grades which were subsequently discussed in separate meetings with the stakeholders group for Flanders and the stakeholders group for Wallonia. Grades were finalized after consensus was reached among the RWG in a joint meeting and were endorsed by both stakeholder groups.
This inaugural 2016 Active Healthy Kids Belgium Report Card on Physical Activity for Children and Youth assessed 11 indicators, including nine core indicators and two additional indicators: 1) overall physical activity, 2) organized sport participation, 3) active play, 4) active transportation, 5) sedentary behaviors, 6) dietary behaviors, 7) weight status, 8) family and peers, 9) school, 10) community and the built environment, and 11) government strategies and investments.

Available data(sources) were evaluated according to representativeness of the data (including sampling procedure and sample size), quality of the evidence (e.g. accelerometer derived physical activity levels versus self-reported or parent-reported levels of physical activity), year of data collection, age (range) of the study population, and presentation of results for specific subgroups (e.g. girls versus boys). The Belgian FCS 2014-2015 (n=1063 for children; n=964 for adolescents) conducted by WIV-ISP was selected as primary data source given its assessment of a wide range of health-related behaviors and health-related outcomes and national coverage. Furthermore, the FCS collects objectively measured data on physical activity (i.e. by accelerometry) and anthropometric characteristics. Alternative data sources were consulted in case information on selected indicators was not available in the FCS, including the 2013/2014 HBSC study (n=9566 for Flanders; n=14180 for Wallonia), the ToyBox study (n=1327), the ENERGY study (n=1003 for adolescents; n=763 for parents), the 2012 Indicator Survey (n=1006 for primary schools; n=451 for secondary schools), a regional survey on the importance given to physical activity promotion in secondary schools of French-speaking Belgium performed by the University of Liege (n=51 secondary schools), and a longitudinal study on the environment and physical activity of Flemish adolescents conducted by Ghent University (n=420 adolescents at follow-up).
Following selection of the indicators, data sources, and appropriate items within those data sources, indicators were graded using the grading framework formulated by Active Healthy Kids Canada (A = 81%–100%; B = 61%–80%; C = 41%–60%; D = 21%–40%; F = 0%–20%; INC [inconclusive]= not enough valid/representative data available for grading). For each of the overall indicators, multiple sub indicators (e.g. for different age groups) were graded according to this framework and an overall grade was established based on consensus among members of the RWG and endorsement from the stakeholder groups. In addition to an overall grade, an indicator could be assigned a plus sign (‘+’) or minus sign (‘-’) based on the presence or absence, respectively, of substantial inequalities (i.e. ≥5% difference) according to age, region (Flanders vs. Wallonia), gender, or socioeconomic status (SES) as indicated by parental educational level. In case previous research was available, a plus sign or minus sign could also be added to the grade based on the presence of a positive or negative trend.

Results

The 2016 Belgium Report Card is the first systematic assessment of physical activity for Belgian children and youth using the Active Healthy Kids Canada grading framework. Table 1 present the 11 indicators selected and graded by the RWG and validated by the stakeholders groups. The front cover of the Report Card is illustrated in Figure 1.

Discussion
The present manuscript presents the results from the first Active Healthy Kids Belgium Report Card on Physical Activity for Children and Youth. In the following sections, the grading process for each of the indicators is discussed.

1. Overall physical activity
   Accelerometer data from the FCS show that only a minority of 6- to 9-year old children (7%) and 10- to 17-year-old adolescents (2%)\(^\text{10}\) meet the international recommendation of at least 60 minutes of daily moderate to vigorous physical activity (MVPA).\(^\text{20-23}\) In contrast, the majority of 3- to 5-year-old children (96%) meet the recommendation of at least 180 minutes of total physical activity on a daily basis.\(^\text{24,25}\) It should be noted here that the recommendations for the different age groups are inherently different, with the latter referring to total physical activity, i.e. light, moderate, and vigorous physical activity, instead of MVPA. No remarkable differences in overall physical activity levels were observed according to region, gender, or SES. Based on these data, the RWG decided to assign this indicator an ‘F+', with the plus sign representing the positive observation in preschool children.

2. Organized sport participation
   Self-reported data from the FCS show that 56% of 3- to 9-year-old children are member of a sport club and that 75% of 10- to 17-year-old adolescents actively participate in one or more sports during their leisure-time.\(^\text{10}\) Furthermore, 45% of adolescents that are able to participate in extracurricular sport or physical activities report that they actually participate in these activities. Differences according to region (in favor of Flanders for preschool children and of Wallonia for
adolescents), gender (in favor of boys), and especially SES (in favor of children and adolescents of high educated parents) were also found. Based on this information, the organized sport participation indicator was assigned a ‘C-‘.

Active play

According to self-reported FCS data, around 80% of 3- to 9-year-old children engage in active play during weekdays and weekend days.\textsuperscript{10} Remarkably lower levels of active play were observed for adolescents; 26% and 29% of 10- to 17-year-olds report that they participate in sports/play as main activity during recess at school and lunch break at school, respectively. It should be noted here that differences may be due to differences in the context of active play between children (whole day) and adolescents (during recess). Small differences in levels of active play were found for region (in favor of Flanders), gender (in favor of adolescent boys), and SES (in favor of children and adolescents of mid and high educated parents). Furthermore, estimates of active play on weekdays and weekend days for children were higher for spring (88% and 87%) and summer (90% and 85%) compared with winter (69% and 75%). Because the grades for each of the sub indicators varied, the RWG assigned this indicator an average ‘C+’, with the plus sign representing the positive observation in younger children.

Active transportation

FCS data show that 49% of 3- to 5-year old children and 47% of 6- to 9-year-old children use active transportation, defined as walking or cycling, to travel to and from school.\textsuperscript{10} A somewhat lower proportion is observed for adolescents, with 40% of adolescents usually using active
transportation (i.e. walking, cycling, and rollerblading) to travel to and from school. Substantial
differences were observed for SES (in favor of children of low educated parents and of
adolescents with high educated parents) and, especially, region (in favor of Flanders). Based on
these observations, this indicator was graded a ‘C-‘.

Sedentary behaviors

According to FCS data, 65% of children aged 3-5 years meet the international recommendation
of less than 1 hour of screen time per day \(^{24,26}\) on a weekday, while only 25% of children meet
this guideline on a weekend day.\(^{10}\) With respect to older children (6-9 years old), FCS data show
that 89% and 46% meet the recommendation of less than 2 hours of screen time per day for older
children and youth \(^{20,21,27}\) on weekdays and weekend days, respectively. Results for adolescents
(10-17 years) were the least favorable with 45% and 16% meeting this recommendation on
weekdays and weekend days. Large differences are reported for gender (in favor of girls), region
(mostly in favor of Wallonia), and especially SES (in favor of children and adolescents of mid and
high educated parents). Based on these varying sub indicators, this indicator was assigned an
average ‘D-‘, with the minus sign representing large inequalities.

Dietary behaviors

Based on their public health value and previous research showing an association between a
healthy diet pattern and physical activity in children,\(^{28}\) the RWG decided to select the following
sub indicators to grade this overall indicator: consumption of fruit, consumption of sugar-
sweetened beverages (SSBs), and daily breakfast consumption. Data sources for this indicator
included the FCS 2014-2015 (breakfast consumption), the 2013/2104 HBSC study (fruit and SSBs for adolescents), and the ToyBox study (fruit and SSBs for preschool children). While most children and adolescents consume breakfast on a daily basis (85% and 65% for Belgian children and adolescents, respectively), only few children and adolescents never consumed SSBs, with estimates ranging from 3% (Flemish preschool children) to 12% (Wallonian adolescents).

Taking into account these varying percentages for different sub indicators, as well as the lack of nationally representative information for some of these, the RWG assigned this indicator an ‘INC’.

**Weight status**

Objectively measured data from the FCS show that 77% of 3- to 5-year-old children, 75% of 6- to 9-year-old children and 72% of 10- to 17-year-old adolescents have a normal weight status. The prevalence of overweight including obesity is 14% for 3- to 5-year-old children, 17% for 6- to 9-year-old children, and 18% for 10- to 17-year-old adolescents. Few differences in weight status were observed for region, age group, gender, or SES, with the exception of a substantial SES difference in adolescents (in favor of adolescents of high educated parents). Because this indicator is a health outcome rather than a health behavior, and because the prevalence of overweight among Belgian children and youth is substantial, grading with the Active Healthy Kids Canada framework is complicated. Based on consensus among RWG members and supported by the stakeholder groups, the weight status indicator was assigned a ‘D’.

**Family and peers**
For Flanders, data from the ToyBox study in preschoolers and from the ENERGY study in adolescents show that around 84% of parents and peers provide substantial encouragement to children and youth to participate in sport/physical activities. In contrast, only a minority of parents of preschoolers and adolescents meet the recommendation of at least 30 minutes of MVPA daily themselves (10% and 26%, respectively). Because similar information was missing for Wallonia and therefore no nationally representative information was available, this indicator was assigned an ‘INC’.

School

Data from the FCS show that almost all adolescents in Flanders (94%) and Wallonia (94%) receive at least 2 hours of physical education (PE) per week at school. Furthermore, initiatives to develop and enhance links between PE and other opportunities to be physically active in the wider community have received more attention during the last few years. A three-yearly survey in Flemish primary schools and secondary schools conducted in 2012 yielded scores of 57/100 and 52/100, respectively, for overall school policy and programs on physical activity. These overall scores represent school performance in three domains, including physical activity education in the regular school curriculum, physical activity regulations, and physical activity availabilities within the school. A negative trend in both overall scores was observed when compared to a previous survey in 2009. A similar survey in the French-speaking community of Belgium showed that 32% of secondary schools gave a score of ≥50/100 when they rated the importance given to physical activity promotion in the school setting. Because the grades of the sub indicators varied, the RWG agreed on an average ‘B-’ grade. The minus sign was added to the
overall grade to indicate that the majority of sub indicators, with the exception of school PE, were
graded a C or D.

Community and the built environment

In Flanders, 61% and 34% of 13- to 14-year-old adolescents report that in their neighborhood
most of the streets have pedestrian paths and cycle tracks, respectively. Furthermore, 91% and
90% of adolescents do not report that in their neighborhood there is so much traffic in nearby
streets that it is dangerous to walk or cycle. Finally, 27% of adolescents report that it is safe to
play on the street in their neighborhood. Due to a lack of information on built environmental
factors outside the direct neighborhood and lack of data for Wallonia, this indicator was graded
with an ‘INC’.

Government strategies and investment

In Flanders, the Flemish Agency for Care and Health is an internally autonomous agency within
the Flemish authorities and creates qualitative conditions for promoting, monitoring, sustaining
or restoring the welfare and health levels of the current and future Flemish population. The
Flemish Action plan for nutrition and physical activity 2009-2015 was established in 2008,
containing health targets with the aim of motivating the population in Flanders to engage in
physical activity and healthy nutrition. It also includes information on strategies, priorities and
actions to achieve the changes in health behaviors and health. One of the strategies is to provide
health care professionals with the correct information on nutrition and physical activity and
therefore a Flemish consensus text with recommendations on nutrition, physical activity and
sedentary behavior was established. Another strategy is the implementation of several projects in Flanders promoting healthy nutrition and physical activity, many of which are based in the school setting. In Wallonia, the Parliament of the French-speaking community in Belgium passed the Political Declaration of the French-speaking community for 2014-2019. This Political Declaration includes a dedicated Sports for All policy which aims to use government strategy to encourage uptake of physical activity for all, which may include coupling sports, health, education and social integration. School sport and biking to school initiatives are supported in this document. Nonetheless, this Political Declaration still needs to be translated in operational strategies and health targets. National legislation dictates that children and youth in primary and secondary education should receive a mandatory minimum of two hours PE per week. Furthermore, a soft drink tax has been established in Belgium since the beginning of 2016. Based on this information, this indicator was assigned a ‘C+’.

Strengths and Limitations

The results of this inaugural Physical Activity Report Card for Belgium should be interpreted in light of some strengths and limitations. A first important strength was that this Report Card was developed by a RWG and two stakeholder groups with national representation from both the academic and non-academic (e.g. policy) sector. Furthermore, stakeholders were carefully selected based on their expertise in different domains of physical activity and public health, including physical activity behavior in general, physical activity behavior in the school context and sport club context, nutrition experts, and other related areas. Second, our main data source, the FCS 2014-2015, provided us with nationally representative, recently collected, standardized data
Moreover, our grade on overall levels of physical activity is based on objectively measured physical activity as derived by accelerometry, generally considered the ‘gold-standard’ for free-living physical activity measurement. A limitation is that inconclusive grades were assigned to the indicators dietary behaviors, family and peers, and community and the built environment. This was mainly due to a lack of nationally representative data, indicating a need for more systematic surveillance of influences on physical activity and related behaviors in children and youth across the whole of Belgium, and Wallonia in particular.

**Conclusion**

The 2016 Active Healthy Kids Belgium Report Card on Physical Activity for Children and Youth shows that levels of overall physical activity are low and levels of sedentary behaviors (i.e. screen time) are high, despite moderately positive influences from the social, political, and built environment. Furthermore, despite moderately positive scores for specific physical activity behaviors, i.e. organized sport participation, active play, and active transportation, children and youth are not meeting current physical activity recommendations. Evidence-based strategies are needed to make full use of the policies and projects currently in place and to translate healthy behaviors into sufficient levels of health promoting physical activity.

**Institution Where Work Originated**

This work originated at the KU Leuven, Ghent University, and University of Liege.

**Acknowledgements**
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References


Table 1. Grades According to Physical Activity Indicator in the 2016 Belgium Report Card on Physical Activity for Children and Youth

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Physical Activity Levels</td>
<td>F+</td>
</tr>
<tr>
<td>Organized Sport Participation</td>
<td>C-</td>
</tr>
<tr>
<td>Active Play</td>
<td>C+</td>
</tr>
<tr>
<td>Active Transportation</td>
<td>C-</td>
</tr>
<tr>
<td>Sedentary Behaviors</td>
<td>D-</td>
</tr>
<tr>
<td>Dietary Behaviors</td>
<td>INC</td>
</tr>
<tr>
<td>Weight Status</td>
<td>D</td>
</tr>
<tr>
<td>Family and Peers</td>
<td>INC</td>
</tr>
<tr>
<td>School</td>
<td>B-</td>
</tr>
<tr>
<td>Community and the Built Environment</td>
<td>INC</td>
</tr>
<tr>
<td>Government strategies and investments</td>
<td>C+</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% to 100%; B is 61% to 80%; C is 41% to 60%, D is 21% to 40%; F is 0% to 20%; INC is incomplete data.
Figure 1: Front Cover of the 2016 Belgium Report Card on Physical Activity for Children and Youth