Physical activity, active play, and sports: A pathway to peace in Colombia
Introduction

Physical activity (PA) practice since early ages is associated with substantial benefits for health, cognitive function, and social inclusion. In addition, PA, sports, and recreation have been recognized as catalysts for social development of nations and peace building.

In this context, the Epidemiology Group at Universidad de los Andes (EpiAndes), with the guidance of the Active Healthy Kids Global Alliance, developed the Second Report Card on Physical Activity for Children and Youth, as a communication and advocacy tool for policymakers, researchers and the general community.

This report summarizes the available evidence on child and youth PA at the national level, and with the guidance of a national group of experts on PA, assesses how the nation is performing on 14 indicators related to PA in children and youth. The indicators were grouped into 3 categories:

Behaviours and conditions that contribute to PA levels, factors associated with elevated cardiometabolic risk and levels of influence.

The main sources of data for this report were the National Nutrition Survey (Encuesta Nacional de la Situación Nutricional en Colombia [ENSIN]), local studies, policy documents and programs’ annual reports.

Physical activity guidelines

PRE-SCHOOL

180 MINUTES OF DAILY PA
at any intensity

SCHOOL AGED CHILDREN AND ADOLESCENTS

60 MINUTES OF DAILY moderate to vigorous PA

≥ 3 DAYS A WEEK
of vigorous activities to strengthen muscle and bones.
According to ENSIN 2005, 24.4% of adolescents from urban areas meet PA guidelines, compared to 29.6% of their counterparts from rural areas.7

According to objective measures with accelerometry from the FRUPECOL study in Bogotá, 36.9% of children meet PA guidelines during the week. Stratifying by sex, 42% of boys meet PA guidelines, in contrast with their female counterparts with 31%.8

According to the ISCOLE study, the daily mean of moderate to vigorous PA minutes was 68 minutes and the mean of vigorous PA was 18 minutes. The mean of MVPA for boys was 76 minutes and for girls was 60 minutes a day. 9-10

A study conducted in Montería, with children between 11 to 18 years of age, 24.7% reported to be active (at least 60 daily min of MVPA, at least 5 days per week). Boys had significantly higher prevalences compared to girls (30.2% vs 19% p<0.005).11

According to the National Nutrition Survey (ENSIN) 7.8% of adolescents aged 13 to 17 years report walking for transportation.7

3.3% of adolescents aged 13 to 17 years report cycling for transportation.7

According to a study from Bucaramanga, 51.7% of pre-school children walk to their schools, and spend, on average, 10 minutes daily, per journey.12

According to the ISCOLE study, 73.3% of school-aged children from Bogotá use some mode of active transport to go to school, and 71.3 % of these children spend less than 15 minutes per journey.13

According to a study from Montería, 66.3% of children aged 11 to 18 years reported walking or cycling to school during the last week, with a higher prevalence among children from rural schools (60.6% vs. 79.4% p<0.005).11

According to the Global School-based Health Survey, 49.7% of adolescents aged 13 to 15 years, from 5 cities, reported walking or cycling to school in the last week. The prevalences of active transportation per city were 50.6% in Bogotá, 47.5% in Bucaramanga, 47.7% in Cali, 49.5% in Manizales and 56.2% in Valledupar.14
In Bucaramanga, 32.2% of pre-school children are enrolled in sports (the most frequent were soccer, swimming, roller skating and basketball), spending an average of 2 hours/day.\textsuperscript{12}

In a study of school-aged children from Bogotá, 42% of students reported participating in their schools’ sports teams and 33% reported participating in teams outside school.\textsuperscript{16}

The national program "Supérate con el Deporte", increased its coverage from 1,800,000 children aged 12 to 16 years of age in 2013, to 2,286,033 children aged 7 to 17 years of age in 2015, reaching all the geographic departments in Colombia.\textsuperscript{15}

Supérate con el Deporte has positioned itself as a leader program in social inclusion, creating opportunities and access to sport, recreation and physical activity.\textsuperscript{15}

There is insufficient data to understand the current situation of active play at the national level.

In Bucaramanga, 58.8% of children aged 3 to 12 years of age reported playing indoors and 78.6% of children in this age range reported playing outdoors.\textsuperscript{12}

Physical activity and involvement in sports from an early age may contribute to prevent drug consumption and delinquency, strengthening civic engagement, promoting youth empowerment and social cohesion, developing skills such as discipline and leadership.\textsuperscript{17}
According to the National Nutrition Survey, children aged 5 to 12 years of age in Colombia spend an average of 2.4 hours per day watching television or playing video games. Adolescents between 13-17 years of age spend an average of 2.8 hours a day in front of a screen.\(^\text{18}\)

According to a study conducted in Bucaramanga, Girón and Piedecuesta, 38.7\% of pre-school and school-aged children spend 2 hours or more watching TV on weekdays and 58.8\% on weekends.\(^\text{19}\)

In a study conducted in Medellin, high levels of HRQoL (health related quality of life) in the school environment were associated to less screen time (-0.11 p = 0.004).\(^\text{20}\)

In a study of cardiovascular risk factors among school children in Cartagena, 51.4\% of children mentioned that their favorite activities for leisure time corresponded to sedentary behaviors such as playing on a computer, watching TV or reading. Stratifying by sex, 65.5\% of girls reported a preference for sedentary behaviors compared to 37.2\% of boys (p = 0.0001).\(^\text{21}\)

According to the FUPRECOL study, 55\% of children from Bogotá were under the healthy fitness zone, with higher proportions of girls compared to boys (70\% vs. 40\%, p <0.001).\(^\text{22}\)

In Cali, 60\% of girls and 52\% of boys aged 10 to 15 years of age did not reach the maximum oxygen consumption to reach the threshold of aerobic health.\(^\text{23}\)

In Bucaramanga, 72.8\% of girls and 72\% of boys (8-14 years) did not achieve the number of 20 meters shuttles in PACER test, required to meet standards for health fitness zone.\(^\text{24}\)

According to the SER test in Bogotá, 55\% of boys and 49\% of girls showed a healthy aerobic condition measured by VO2max. For muscular strength, 55\% of boys and 47\% of girls had a healthy muscular condition.\(^\text{25}\)

\(57.9\% \) of CHILDREN and \(67\% \) of ADOLESCENTS spend \(2 \) hours or more hours watching TV or playing video games.\(^\text{18}\)

Highest prevalences of excessive time in sedentary behaviors in children and adolescents from Colombia by region

Low physical fitness

There is insufficient data to understand the current situation of fitness at national level.
**Overweight**

- According to the National Nutrition Survey, 13.7% of children between 5 and 9 years of age, and 13.2% of adolescents aged 10 to 17 years are overweight.\(^\text{18}\)

- In a study conducted in Medellin with children between 10 and 14 years of age, a prevalence of 19% of overweight was observed. Overweight children reported being active fewer days than children who were not overweight (2.6 vs. 3.3 p<0.05). At the same time, overweight and obese children had lower scores for intrinsic motivation for PA, compared to normal weight children.\(^\text{20}\)

**Obesity**

- A study conducted in Medellin reported an obesity prevalence of 4% in children aged 10 to 14 years old. Regarding quality of life scores, a significant difference on the physical well-being score was observed, in which obese children had the lowest scores (40.6 vs. 50.3 p<0.001).\(^\text{20}\)

- According to the ISCOLE study, 77% of the boys and 36% of the girls from Bogota are obese. In this study, obesity was negatively associated to sleep duration and MVPA minutes. A positive association with screen time was also observed.\(^\text{10}\)

**National prevalence of overweight in children and adolescents between 5 to 17 years of age, according to ENSIN 2010.**\(^\text{18}\)

- Departments with the highest overweight prevalences in Colombia, according ENSIN 2010.\(^\text{18}\)

**Departments with the highest obesity prevalences, according to the ENSIN 2010**\(^\text{18}\)

- 5.2% of Colombian children between 5 and 9 years of age are obese.\(^\text{18}\)

- 3.4% of adolescents are obese.\(^\text{18}\)
In a qualitative study about the sociocultural characteristics of PA in Bogotá, Antioquia and Quindío participants highlighted the importance of family involvement in PA practice, and among their perceptions they reported that PA is encouraged when one of the parents is an athlete.

According to the ISCOLE study, in Bogotá, 50% of parents reported never practicing PA or any sport with their children.

The Colombian Ministry of Education launched a full-time policy, which seeks to increase the time spent at school, increasing educational gain. Nevertheless, this strategy has focused mainly on strengthening areas such as mathematics, language, natural sciences and English. It has not included PA or sports.

Bogotá has been a model for PA promotion at the school level with strategies like the "Curriculum for academic Excellence and comprehensive education 40x40", the school active transportation program “Al colegio en Bici”, and “Muevete escolar” a district program that seeks to focus attention around knowledge and practice of PA and healthy nutrition in the school environment.

34.6% of adults aged 18 to 64 years old are overweight, and 16.5% are obese.

According to the ISCOLE study, in Bogotá, 50% of parents reported never practicing PA or any sport with their children.

53.5% of Colombian adults aged 18 to 64 years old meet PA guidelines in leisure time or transportation.
Colombia has 143 "Ciclovias Recreativas" programs, which promote PA, recreation and the healthy use of leisure time in public space.

According to the ISCOLE study:

- 44.9% of parents from Bogota reported that their children participate in the Ciclovía at least once a year.
- 94.3% of parents from Bogota perceive that their neighborhood is not safe for their children.
- 86.5% of parents from Bogota report that their children use public facilities to engage in PA at least once a week.
- The "Ciclovias Recreativas" create opportunities for people from all ages and socioeconomic status to get involved in PA. According to studies from Bogota’s “Ciclovia”, Ciclovía users have higher prevalences of meeting physical activity guidelines, better perceptions of safety, and higher health related quality of life scores.

Community and built environment

Government and non-government strategies

**National policies**

- Physical activity, sports and recreation are recognized as rights in the National Constitution of Colombia.
- The National Development Plan 2014-2018 has several policy lines that include strategies to promote physical activity in the country.
- Within the field of creating integral citizens for peaceful coexistence, the national government is committed to providing the widest access to physical activity programs, that contribute to the construction of social cohesion in the post-conflict era.
- The programs with national coverage that benefit children and adolescents are:
  - National Program of Healthy Habits and Lifestyle
  - Ciclovías or Open Streets
  - Supérate con el Deporte
- Despite the position gained on the public agenda, the national budget for PA and sports was reduced by 50% from 2014 to 2016.

**Departmental and local policies**

- 31 departments have launched their regional development Plan 2016-2019, and 30 of these include strategies and specific targets for fostering physical activity in leisure time and commuting.

**Non-government initiatives and strategies**

- Social programs use PA as a strategy to prevent risk behaviors: Programa Colombiao, El Juego de la Paz: Fútbol con corazón; Red fútbol y paz; Fifa 11 para la salud; Goles para una vida mejor; Tiempo de Juego
Prevalence of excessive screen time (≥2 hours), in children between 5 and 12 years old. 18

30.30 - 37.60
37.61 - 50.60
50.61 - 59.60
59.61 - 66.70
66.71 - 76.90

Prevalence of excessive screen time (≥2 hours), in adolescents between 13 and 17 years of age. 18

32.00 - 48.70%
48.71 - 60.60%
60.61 - 65.60%
65.61 - 70.10%
70.11 - 78.40%

Prevalence of overweight and obesity in children and adolescents between 5 and 17 years of age. 18

Sobrepeso
Obesidad

Coldeportes National Program of Healthy Habits and Lifestyle
Por su salud, muévase pues
Recreovía y muévete Bogotá

Physical activity promotion programs and number of “Ciclovias” per department

Regional data
<table>
<thead>
<tr>
<th>Indicator</th>
<th>Grade</th>
<th>Recommendations and Commentaries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall physical activity</td>
<td>D</td>
<td>Updated national evidence on children and adolescents PA levels is required.</td>
</tr>
<tr>
<td>Active transportation</td>
<td>D</td>
<td>Despite low prevalences of active transportation, multisectorial strategies that encourage active transport have increased.</td>
</tr>
<tr>
<td>Organized sport participation</td>
<td>C</td>
<td>Impact evaluation of current programs should be conducted.</td>
</tr>
<tr>
<td>Active play</td>
<td>INC</td>
<td>National data is required to assess active play status in the country.</td>
</tr>
<tr>
<td>Sedentary behaviours</td>
<td>D</td>
<td>Nationwide strategies are required to reduce screen time among children and adolescents.</td>
</tr>
<tr>
<td>Low physical fitness</td>
<td>INC</td>
<td>National data is required to assess physical condition of children and adolescents.</td>
</tr>
<tr>
<td>Overweight</td>
<td>C</td>
<td>Strategies implemented specifically to prevent overweight among children are limited.</td>
</tr>
<tr>
<td>Obesity</td>
<td>C</td>
<td>Timely interventions are required to prevent an increase of childhood obesity in Colombia.</td>
</tr>
<tr>
<td>Family and peers influence</td>
<td>INC</td>
<td>Data on PA parenting practices is desirable to inform this indicator.</td>
</tr>
<tr>
<td>school influence</td>
<td>D</td>
<td>Physical activity is a vital component for the holistic development of children and must be promoted in the school environment.</td>
</tr>
<tr>
<td>Community and built environment</td>
<td>C</td>
<td>Colombia has environments and programs that promote PA, nevertheless this initiatives require more evaluation to better understand their impact on PA among children.</td>
</tr>
<tr>
<td>National policies</td>
<td>B</td>
<td>Colombia has a broad policy framework supporting PA from multiple government sectors with public health and social cohesion focuses. Nevertheless, it is necessary to translate the new policies proposed into concrete actions</td>
</tr>
<tr>
<td>Departmental and local policies</td>
<td>B</td>
<td></td>
</tr>
<tr>
<td>Non-government strategies</td>
<td>C</td>
<td>Colombia holds several initiatives that use sport as a vehicle for preventing risky behaviours. It is important to document the impact of these strategies on the different outcomes that these are intended to improve.</td>
</tr>
</tbody>
</table>
References


This report was developed by the Epidemiology group at the Universidad de los Andes -EpiAndes- in collaboration with the National Sports, Recreation, Physical Activity and Leisure Time Administrative Department -Coldeportes-, the District Institute for Recreation and Sports -IDRD-, the Colombian Obesity Foundation -FUNCOBES-, Universidad de Santander, Universidad Industrial de Santander, Universidad del Rosario Physical Activity Measurement Study Centre -CEMA-, and Universidad Simon Bolivar. The development of this report was funded by Administrative Department of Science, Technology and Innovation -Colciencias-, the Research Office at The Universidad de los Andes and the School of Medicine at The Universidad de los Andes, with support of the Active Healthy Kids Global Alliance.

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