Results From Nigeria’s 2016 Report Card on Physical Activity for Children and Youth

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Background: The Nigerian Report card on Physical Activity (PA) in Children and Youth was first developed in 2013 to inform practice and policy on healthy living and prevention of noncommunicable diseases among Nigerian children and youth. This article summarizes the results of the 2016 report card and provides updated evidence on the current situation in Nigeria. Methods: A comprehensive review of literature was undertaken by the Report Card Working Group. Grades were assigned to 10 PA indicators based on the criteria used for the 2013 edition. Results: Grades assigned to the indicators were Overall PA, D; Active Play and Leisure, C; Active Transportation, B; Sedentary Behaviors (screen-based, F and nonscreen-based, D); Overweight and Obesity, A; PA in Schools, C; Government/Nongovernment Organizations/Private Sector/Policy, B. The following indicators were graded as Incomplete: Organized Sport and PA, Community and Built Environment, and Family and Peers. Conclusions: The overall PA levels of Nigerian children and youth seemed to be declining compared with the 2013 Report card but with slight improvement in active play and leisure, and PA in school settings. A substantial number of Nigerian children and youth still have high sedentary behaviors, overweight and obesity. Efforts are needed to promote PA among them.

Keywords: noncommunicable diseases, health promotion, policy, guidelines for physical activities

Physical inactivity and sedentary behaviors are known to predispose to noncommunicable diseases and these behaviors are also known to track from childhood into adulthood with consequent cardio-metabolic problems. In view of the important role played by physical activity (PA) in overall health promotion, and the decline in PA among children and adolescents, it becomes crucial for each society to review opportunities available to promote increased PA among their children and youth.

A report states that female children in Sub-Saharan Africa within higher socioeconomic classes and living in urban regions engaged in PA at lower levels of intensity and performed worse on aerobic fitness measures than their counterparts with lower socioeconomic status living in rural communities. Urbanization was linked to decrease in PA and increase in sedentary behaviors. With children under 15 years of age accounting for about 45% of the Nigeria’s population, there is a growing need to invest in efforts to gain support for the general health and wellbeing of Nigerian children and youth. One such effort is the development of a periodic PA report card that will provide evidence of the current PA status of Nigerian children and youth. The PA report card is recognized as a gathering of knowledge that documents the available information on PA and sedentary behaviors of children and youth; and the associated influences, strategies, investments, and policies that may influence these behaviors. It can serve as a useful tool to promote the awareness of the importance of PA, for formulating policy change and advocacy by government and civil society organizations, and for development of research proposals in scientific institutions.

The maiden edition of Nigerian Report Card on Physical Activity for Children and Youth launched in 2013 and was modeled after the Canadian and Kenyan Physical Activity Report Cards. The 2013 Nigerian report card showed that Nigerian children and youth engaged in relatively high levels of active transportation, moderate-intensity levels of PA, and high levels of sedentary behaviors. The 2013 Nigerian Report Card also revealed that urban resident Nigerian children and youth were more overweight and/ or obese compared with their rural counterparts, though the data were not representative nationally. Incomplete data were recorded for the PA indicators Organized Sports, PA with Family and Peers, PA in School Settings, the Community and Built Environment, and Government, Nongovernmental Organizations, and Private Sector (investments and strategies)/Policy. The 2016 Nigerian Report Card on Physical Activity for Children and Youth was produced as a follow-up to the 2013 Nigerian edition.

The objective of this article is to document the results of the 2016 Nigerian Report Card, compare the results with that of 2013 Nigerian Report Card, and provide updated evidence on the current situation with the indicators, programs, policy, and investments on PA in Nigeria. The report card can be used as a guide for Nigeria’s preparedness toward achieving a 10% relative reduction in prevalence of insufficient PA in line with the 2030 World Health Organization (WHO) global targets on noncommunicable diseases recommendation for member countries through promotion of PA. The report card will also serve as a reference for comparing similar documents by the international community.
Methods

A team known as the Nigerian Physical Activity Research Working Group was constituted. The 7 members of the Working Group were drawn from the University of Ibadan, University of Lagos, University of Maiduguri, Obafemi Awolowo University, Nigerian Heart Foundation, and Project HealthyKids, Nigeria. The group members were experts in the area of research in PA and public health. They were mandated to conduct a comprehensive literature search using keywords such as noncommunicable diseases, health promotion, policy, and guidelines for physical activities from major data sources (including Pubmed, Google Scholar, Embase, etc) and documents from government, nongovernmental organizations, private sectors, universities (including unpublished research works, dissertations, and theses); national sports commission, research institutes and national health surveys on data related to indicators of PA. The Working Group was also instructed to include an update on the PA of children and youth in Nigeria as well as factors related to policy, environment, and social levels that could influence PA.

After the individual literature search, results from all the members were collated into 1 document and distributed to all the members to review. The first joint working session was organized, during which the results of the literature search were discussed; a consensus was reached on the various indicators. For each indicator, research data were compared against a benchmark and the research working group assigned a grade based on the proportion of children and youth meeting the benchmark. The benchmark used to assign grades to the 10 PA indicators was identical to the 2013 Nigerian Report Card whose criteria was consistent with the methodology and model used by the Active Healthy Kids Canada Report Card. The grades ranged from A (highest) to F (lowest). Where data were inadequate to assign a grade, and/or where no recommendation exists, the indicator was described as Incomplete (INC). A description of the grades is provided in Table 1.

A second joint working session was organized to review the decisions made during the first working session following which

Table 1 Interpretation of the Grading System

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Majority of Nigerian children and youth are engaging in health enhancing activities (≥ 80%)</td>
</tr>
<tr>
<td>B</td>
<td>Over half of Nigerian children and youth are engaging in health enhancing activities (60% to 79%)</td>
</tr>
<tr>
<td>C</td>
<td>About half of Nigerian children and youth are engaging in health enhancing activities (40% to 59%)</td>
</tr>
<tr>
<td>D</td>
<td>Less than half of Nigerian children and youth are engaging in health enhancing activities (20% to 39%)</td>
</tr>
<tr>
<td>F</td>
<td>Very few of Nigerian children and youth are engaging in health enhancing activities (&lt;20%)</td>
</tr>
<tr>
<td>INC</td>
<td>Incomplete data (There is insufficient data for grading)</td>
</tr>
</tbody>
</table>

Table 2 Comparison of Grades of the 2013 and 2016 Nigerian Report Cards According to Physical Activity Indicators

<table>
<thead>
<tr>
<th>Indicator</th>
<th>2013 grades</th>
<th>2016 grades</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Physical Activity Levels</td>
<td>C</td>
<td>D</td>
</tr>
<tr>
<td>Organized Sport and Physical Activity Participation</td>
<td>INC</td>
<td>INC</td>
</tr>
<tr>
<td>Active Play and Leisure</td>
<td>C-</td>
<td>C</td>
</tr>
<tr>
<td>Active Transportation</td>
<td>B</td>
<td>B</td>
</tr>
<tr>
<td>Sedentary Behaviors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Screen-based</td>
<td>F</td>
<td>F</td>
</tr>
<tr>
<td>Nonscreen based</td>
<td>D</td>
<td>D</td>
</tr>
<tr>
<td>Overweight and Obesity</td>
<td>A</td>
<td>A</td>
</tr>
<tr>
<td>Family and Peers</td>
<td>INC</td>
<td>INC</td>
</tr>
<tr>
<td>Community and the Built Environment</td>
<td>INC</td>
<td>INC</td>
</tr>
<tr>
<td>Physical Activity in Schools</td>
<td>INC</td>
<td>C-</td>
</tr>
<tr>
<td>Government, Nongovernmental Organizations and Private Sector (Strategies and investments) / Policy</td>
<td>INC</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%; INC is incomplete data.
a consensus was reached. The sections of the manuscript were shared to members of the Working Group after consideration of their expertise. After each member had completed their write-up, the different sections of the manuscript were collated and mailed to each member of the Working Group to review, make necessary comments, and suggest and make corrections. The comments and corrections of all members of the Working group were taken into consideration in producing the final copy of the manuscript.

Results and Discussion

Grades were assigned to the indicators after consideration of the benchmarks presented in Table 1. The results of the 2016 Nigerian Report Card are placed side by side with that of the 2013 edition in Table 2.

Overall Physical Activity: D

The Overall Physical Activity level was assigned a D grade, a step lower than the C grade that was reported in the 2013 report card. The change was necessitated by new evidence that was reported for a group of Nigerian adolescents. While it was reported in earlier studies that about 30%–75% of children and youth in Nigeria continue to engage in different forms of PA, according to the current data, only 37% of a representative sample of 1006 secondary school adolescents in urban northeastern Nigeria appear to meet the international guidelines of engaging in at least 60 minutes of moderate-to-vigorous physical activity (MVPA) daily, based on self-reported PA. It was observed that gender disparities in PA, as seen in the 2013 Nigerian Report Card (58.4% of boys and 29.0% of girls), continue to exist in the 2016 Nigerian Report Card with 54.3% of boys being more physically active compared with 45.7% of the girls.

Active Play and Leisure: C

Active Play and Leisure was assigned a grade of C, which showed a slight improvement over the C- in the 2013 Nigerian Report Card. As previously observed, the proportion of active play and leisure PA among Nigerian children and youth varied between 12% and 70%. But a new study utilizing self-reported PA data indicates that secondary school adolescents in urban northeastern Nigeria, on average, spent about 1 hour daily in active play and leisure (about 11% of daily PA). The availability of this new evidence that documented the amount of time spent on active play by children earned the indicator a slight increase in grade from C- to a C. Evidence is available that among Nigerian children and youth, active play and leisure is influenced by gender and socioeconomic disparities. Boys from families with high socioeconomic status are more likely to engage in active play and leisure than their peers from low socioeconomic status.

Active Transportation: B

Active Transportation was assigned a grade of B in both 2013 and 2016. The majority (between 61% to 80%) of Nigerian children and youth engage in active transportation, especially in the context of transport to and from school. Walking is the most common mode of active transportation among Nigeria children and youth, while 37% of the children spend about 30 minutes daily walking to and from school.

Sedentary Behaviors (Screen-based and Nonscreen-based): F / D

The assessment of sedentary behavior was based on screen-based sedentary behavior or nonscreen-based sedentary behavior. For screen-based sedentary behavior both the 2016 and 2013 report cards were each assigned a grade F as 35% to 90.7% of urban and rural Nigerian school children and youth aged 6 to 19 years engage in screen time activities daily. Television viewing and video games are the most common screen-based sedentary behavior. However, international recommendations suggest that school-aged children should accumulate no more than 2 hours of recreational screen time per day. For nonscreen-based sedentary behavior both the 2016 and 2013 Nigerian report cards were each assigned a grade of D.

The most common non screen-based sedentary behavior is reading magazines and books for pleasure (45%), followed by listening to music (38%). Above 95% of 11- to 19-year-old children and youth in a capital city of a South-south state of Nigeria spent an average of 3 hours and 15 minutes on the nonscreen-based sedentary behavior.

Overweight and Obesity: A

Overweight and Obesity was assigned a grade of A in 2013 and received the same grade in 2016. New findings were not available to inform any change in grading. Studies revealed that between 1.8% to 15.5% of children and youth aged 5 to 24 in Nigeria were overweight, and between 0.2% to 4.3% were obese. In the southwest region of Nigeria, the prevalence of overweight and obesity were higher among urban resident adolescents (6.9%) than among rural resident adolescents (3.2%).

Physical Activity in School Settings: C-

Physical Activity in School Settings was assigned a grade of C- in 2016 compared with an INC grade in 2013. Evidence was available in 2016 based on a document released by the federal government of Nigeria that revealed that most schools in Nigeria offer physical education as part of the educational curriculum. Although there is no readily available literature to empirically verify this claim, anecdotal evidence suggests that some schools have occasional interhouse sports competitions and physical education periods on their respective time tables. The physical education periods offer opportunity for the children to engage in physical activities in the school settings.

Government, Nongovernmental Organizations, and Private Sector (Strategies and Investments) / Policy: B

This indicator was assigned a grade of B, an improvement from the INC grade given in 2013. There are existing policies for both the teaching of physical and health education in schools as well as the provision of an enabling environment for participation in sporting activities for children and youths in Nigeria. Although the document that revealed the policy on PA, especially physical education among children and youth, was published in 2004, the document was not readily available when the 2013 edition of the report card was written. The Lagos State Ministry of Environment, through the Lagos State Parks and Gardens Agency, established in 2012 and has maintained 327 parks and gardens that include 31 schools, 3 public
Community and the Built Environment: INC

Community and the Built Environment was assigned a grade of INC in 2016 and 2013. From 2013–2016, the literature remained sparse on studies related to this indicator. However, anecdotal evidence has shown that there is a gradual rise in the number of recreation parks and shopping malls, providing a substantial amount of walkability area for children and youth, especially in urban cities.

Family and Peers: INC

Family and Peers was assigned a grade of INC in both the 2016 and 2013 report cards. There is a paucity of data on the influence of family on the PA of children and youth. However, few studies indicate that peers play a significant role in determining adolescents’ level of PA (cycling, walking, swimming). Evidence exists that youth from families of high socioeconomic status may have more financial leverage to engage in leisure-time sporting activities and use motorized transportation to school compared with adolescents who may have fewer opportunities to participate in formal sports, but commute actively to school more out of a lack of choice compared with their privileged peers.15

Organized Sport and Physical Activity Participation: INC

This indicator was assigned a grade of INC in both 2016 and 2013. However, unpublished data suggest low to moderate levels of participation in organized sports by Nigerian children and youth.

Report Card Cover

The cover story (Figure 1) was selected to show that some schools have regular or weekly physical education sessions as part of the school curriculum. This is observed in both public and private schools. However, the cover story is that of a private school with children wearing PA dresses and shoes. This may promote the initiative of regular PA in schools; in addition, the equipping of children to wear sport outfits is an added incentive for the promotion of PA in school settings.28

Strengths and Limitations

The 2016 Nigerian Report Card on Physical Activity for Children and Youth is the second edition of the report card. An important strength of the 2016 Nigerian Report Card is that it has provided additional information on grading that was not available in the 2013 edition, especially with respect to the Government indicator. It is also important to note that some of the members of the Report Card Working Group, a majority of whom participated in the 2013 Nigerian Report Card, applied the experience and lessons learned from the maiden edition. In addition, a few other expert members from the government and nongovernmental organizations allowed the Working Group to have practical information on the practice of PA in schools that was not available in 2013.

The 2016 Nigerian Report Card has some limitations. Most of the grades were based on the available data; but in Nigeria there is no nationally representative data on all of the 10 PA indicators.

Conclusions

Generally, the overall PA levels of Nigerian children based on new evidence seems to have declined compared with what was recorded in the 2013 Nigerian Report Card. However, there seems to be a slight improvement in active play and leisure. Most Nigerian children and youth still have high sedentary behaviors and low overweight and obesity, similar to the 2013 report, but with a gradable PA in school settings which was previously graded as incomplete.
The current assessment shows that there are many challenges to be addressed to promote PA in children and youth. However, research gaps are identified in the area of collection of nationally representative data for all the PA indicators. An important gap is the area of government investment with funding of research and development of national guidelines for PA for children and youth. A coordinated, strong advocacy by all partners in this project is mandatory for inclusion of PA in all existing national surveys, including the Nigeria Demographic and Health Survey and the Federal Ministry of Health 2013–2016 strategic plan for noncommunicable diseases in Nigeria.

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