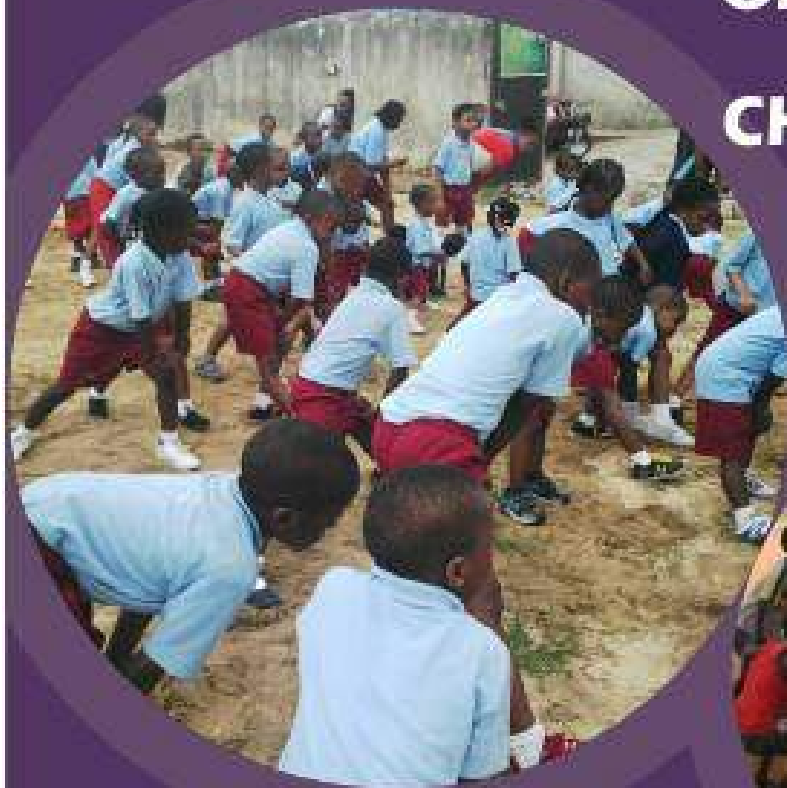


2018 **NIGERIAN REPORT CARD**

**ON PHYSICAL ACTIVITY
FOR
CHILDREN AND YOUTH**



Prepared and Produced by



**NIGERIAN HEART
FOUNDATION**

2018 Nigerian Report Card on Physical Activity for Children and Youth



© Nigerian Heart Foundation 2018

ISBN: 978-978-54135-9-5

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without the expressed written consent of the copyright owner.

The views and findings reported in this report card are those of the authors and should not be attributed to any of the institutions or affiliations.

Nigerian Heart Foundation
4 Akanbi Danmola Street
Off Ribadu Road SW Ikoyi, Lagos, Nigeria
Mobile: 234 703 0000 120
E-mail: info@nigerianheart.org
Website: www.nigerianheart.org

Published in Nigeria by Crafted and Bound Wordworks International
1436A UI-Secretariat Road, Customs Opposite former NITEL office Ibadan, Oyo
State, Nigeria
mobile: 08053381432, 08098290700
email: craftedandbound@gmail.com

Printed in Ibadan by Oluben Printers, Oke-Ado, Ibadan, Nigeria
mobile: 08055220209

Design and Layout by OmniCraft
mobile: 08099172041, 08033738551

May 2018

REPORT CARD DEVELOPMENT COMMITTEE

Dr. Kingsley Kolapo Akinroye
Nigerian Heart Foundation

Professor Ade Fatai Adeniyi
Department of Physiotherapy, College of Medicine, University of Ibadan
and University College Hospital, Ibadan

Dr. Oluwakemi Ololade Odukoya
Department of Community Health and Primary Care, College of Medicine
University of Lagos, Lagos

Professor Rufus Adesoji Adedoyin
Department of Medical Rehabilitation, College of Health Sciences
Obafemi Awolowo University, Ile-Ife

Mr. Sunday Odior
National Institute for Sports, Surulere, Lagos

Dr. Adewale Luqman Oyeyemi
Department of Physiotherapy, College of Medical Sciences
University of Maiduguri, Maiduguri

Mrs. Edirin Metseagharun
Project Healthy Kids, Lagos

Mr. Olaotan Steve Fawehinmi
Nigerian Heart Foundation

Dr. Nnenna Ezeigwe
National Coordinator, NCD Division, Federal Ministry of Health, Nigeria

Dr. Rebecca O. Ayorinde
Lagos State Ministry of Health, Alausa, Lagos

CONTENTS

Acknowledgement	5
Introduction	6
About Nigeria Health Foundation	7
The Grading System	8
Overall Physical Activity	10
Organized Sports	11
Active Play	12
Active Transportation	13
Sedentary Behaviour	15
Physical Fitness	16
Family and Peers	17
Physical Activity	18
Community and Built Environment	19
Government Policy	20
Conclusion	22
Target Audience for the Report card	23
References	24

ACKNOWLEDGMENTS

The Nigerian Heart Foundation gratefully expresses thanks to the contributing experts; Nigerian Heart Foundation Physical Activity and Cardiac Rehabilitation Expert Group and various institutions for their invaluable input to this Report Card. The Research Working Group gratefully recognizes the contributions of Professor Mark Tremblay from Health Active Living and Obesity Research Institute at the Children's Hospital of Eastern Ontario and Professor Reginald T. Ocansey, Physical Education and Sports Department, College of Education, University of Ghana, Legon.

Several people made noteworthy contributions to the production of this third edition of the Nigerian Report Card. Dr. Ade Fatai Adeniyi, Sports Physiotherapy and Health Promotion Unit, Department of Physiotherapy, College of Medicine, University of Ibadan, played an exemplary collaborative role in the compilation and production of this report; which is highly appreciated. This report card also benefitted from the active intellectual collaborative work of: Dr. Oluwakemi Ololade Odukoya, Department of Community Health and Primary Care, College of Medicine, University of Lagos, Lagos; Professor Rufus Adesoji Adedoyin, Department of Medical Rehabilitation, College of Health Sciences, Obafemi Awolowo University, Ile-Ife; Dr. Adewale Luqman Oyeyemi, Department of Physiotherapy, College of Medical Sciences, University of Maiduguri, Maiduguri; Mr. Sunday Katu Odior, National Institute for Sports; and Mrs Edirin Metseagharun of the Project Healthy Kids, Nigeria. Special thanks are also due to the following contributors for their valuable inputs: Dr Nnena Ezeigwe, NCD Division, Federal Ministry of Health, Abuja; Dr. Oluseyi Rebecca Ayorinde, NCD Unit, Lagos State Ministry of Health, Alausa, Lagos.

The Technical Working Group worked closely with the Staff of Nigerian Heart Foundation, Lagos in the production of the *2018 Nigerian Report Card on Physical Activity for Children and Youth*; and express thanks to Mr. Olaotan Steve Fawehinmi, Mrs Oluwayemisi Motunrayo Job and Mr. Abiola Awe for their administrative support. Also, the Technical Working Group gratefully acknowledges the insightful comments and suggestions received from the Federal Ministry of Health, NCD Division, Abuja; the Lagos State Ministry of Health, NCD Unit; the International Sports Academy, Ogun State, Nigeria; and Project Healthy Kids, Lagos, Nigeria.

A special note of appreciation is also due to the Nigerian Heart Foundation for the continuing financial support of the project and commitment to tackling non-communicable diseases (NCDs) in Nigeria.

Finally, the Technical Working Group wishes to express its special thanks and gratitude to Dr. Kingsley K. Akinroye, Executive Director, Nigerian Heart Foundation, for his continual guidance on this project.

INTRODUCTION

Non-communicable diseases (NCDs) are increasingly becoming leading causes of morbidity and mortality globally. Development of vaccines as well as improvement in sanitation has greatly reduced the incidence and spread of communicable diseases, but the pendulum has swung to lifestyle diseases, of which the substantial proportion are non-communicable diseases (Anyanwu and Okeke, 2016). Substantial research evidence has strongly linked notable NCDs to low physical activeness and sedentary living (Oyeyemi et al., 2013; Oyeyemi and Adeyemi, 2013). According to the World Health Organization (2009), physical inactivity is the fourth leading cause of mortality worldwide. In fact, evidence shows that increase in NCDs in sub-Saharan Africa is attributable to low physical activeness (Abegunde et al., 2007; Katzmarzyk & Mason, 2009; Tremblay, Onywera & Adamo, 2010; Lee et al., 2012) among other factors. In Nigeria, about 27% of mortalities are attributable to low level physical activity-induced NCDs (World Health Organization, 2009).

Nigerian children and youth have been observed to be highly sedentary (Akinroye et al., 2014; Anyanwu, Akinpelu and Okeke, 2018) and are thus predisposed to NCDs. Children and youth constitute an important population group in public health profiling. This is because they represent the societal hope for regeneration and advancement. Understanding the factors associated with the health behaviour of this crucial population group is important in evolving strategies to help improve their quality of life. The Nigerian Report Card on Physical Activity for Children and Youth, conceptualized in 2013, is targeted at becoming a useful tool for the promotion of physical activity among children and youth.

The Nigerian Report Card on Physical Activity for Children and Youth is modelled after the Active Healthy Kids Canada which has proven to be an effective tool in stimulating actions and strategies for improving physical activeness and reducing sedentary living and its consequences. The Nigerian Report Card is a constellation of evidence on the profile of physical activeness and sedentary living among Nigerian children and youth. It is hoped that the information and evidence contained in the document will guide and influence policies, strategies and efforts aimed at reducing sedentary living and empowering children and young people to becoming more active, thereby benefitting from the wholesome mental, physical and social benefits associated with physical activity.

The report card is also intended to mirror the status of scholarship regarding physical activity in Nigeria. This is in relation to the nature and volume of data available on various aspects of physical activity including organized sports and physical activity participation, active play and leisure, active transportation, sedentary behaviour, non-screen-based sedentary behaviour, overweight and obesity, physical activity in school settings, family and peers, community and built environment, government, non-government organizations and private sector strategies and investment policy. While data are available in some aspects, they are incomplete and totally non-existent in some. It is thus believed that the Report Card will not only serve as an advocacy tool for the improvement of physical activity but also as a tool to direct and guide research in physical activity and sedentary living in Nigeria.

NIGERIAN HEART FOUNDATION

Nigerian Heart Foundation is a national charity inaugurated in July 1992. It is an affiliate of the World Heart Federation in Geneva and a founding member of the African Heart Network. It is a member of NCD Alliance, Choices International Foundation, International Council of Cardiovascular Prevention and Rehabilitation and Active Healthy Kids Global Alliance.

The major objectives of the Nigerian Heart Foundation are: prevention of heart diseases, heart health promotion, support of medical and scientific research on heart diseases, public enlightenment on heart issues, and advocacy on heart issues.

Pursuant to its objectives, the Nigerian Heart Foundation promotes public health education on the prevention of risk factors for heart diseases, such as high blood pressure, unhealthy diet, physical inactivity, and tobacco and alcohol consumption.

The Executive Board oversees the affairs of the Foundation and its objectives are geared towards achieving the following goals:

- ♥ Prevention of heart diseases
- ♥ Promotion and support of research on heart diseases
- ♥ Public enlightenment and promotion of heart health
- ♥ Advocacy on heart issues

The functions of the Nigerian Heart Foundation are as follows:

1. Holds communal, national and societal conferences, seminars and workshops on topics related to heart issues
2. Disseminates up-to-date information on heart and other related issues
3. Collaborates with relevant national and international bodies to prevent heart diseases e.g. World Health Organization (WHO), World Heart Federation, (WHF), West African Health Organization (WAHO), African Heart Network (AHN), NCD Alliance Nigeria, Exercise is Medicine: Nigeria National Center, Nigerian Cardiac Society, Nigerian Hypertension Society, the Nigerian Institute of Medical Research (NIMR), Nigeria Center for Disease Control (NCDC) and National Agency for Food and Drugs Administration and Control (NAFDAC).
4. Establishes and administers research funds
5. Creates awareness, enlightens and educates the public behavioural modification for the prevention of heart diseases.

THE GRADING SYSTEM

The 2018 Nigerian Report Card is a buildup on the 2013 and 2016 editions, and the grading system adopted is fairly similar to the ones that were applied in the previous editions. The indicators considered were specified by the Active Healthy Kids Global Alliance (<https://www.activehealthykids.org/>). They are the ones adopted for the Global Matrix 3.0 on Physical Activity for Children and Youth with focus on children within the 5 to 17 years age bracket. Similar to the previous report cards of 2013 and 2016, the 2018 Report Card considered the usual indicators and these include Overall Physical Activity, Organized Sports, Active Play, Active Transportation, Sedentary Behaviour, Family and Peers, Schools, Community and Environment, and Government. A unique feature of the 2018 indicators is the inclusion of Physical Fitness, unlike the previous report cards that considered overweight and obesity but not physical fitness in its entirety.

According to the adopted guidelines outlined by the Active Health Kids Global Alliance, overall physical activity was taken as any bodily movement produced by skeletal muscles that requires energy expenditure, while organized sport was taken as a subset of physical activity that is structured, goal-oriented, competitive and contest-based. Active play involves symbolic activity or games with or without clearly defined rules; the activity may be unstructured/unorganized, social or solitary, but the distinguishing features are a playful context combined with activity that is significantly above resting metabolic rate. Active transportation refers to any form of human-powered transportation – walking, cycling, or using a wheelchair, while any waking behaviour characterized by an energy expenditure ≤ 1.5 metabolic equivalents, while in a sitting, reclining or lying posture was taken as sedentary behaviour. Family and peers as related to the report card was taken to mean any member within the family controlling or influencing the physical activity opportunities and participation of children and youth in the Nigerian environment.

Furthermore, school-related issues were taken as any policies, organizational factors (e.g., infrastructure, accountability for policy implementation) or student factors (e.g., physical activity options based on age, gender or ethnicity) in the school environment that can influence the physical activity opportunities and participation of children and youth in this environment. Community and environment refer to any policies or organizational factors (e.g., infrastructure, accountability for policy implementation) in the municipal environment that can influence the physical activity opportunities and participation of children and youth in this environment. Government was related to any governmental body with authority to influence physical activity opportunities or participation of children and youth through policy, legislation or regulation. The newly-introduced

indicator (physical fitness) was taken as characteristics that permit good performance of a given physical task in a specified physical, social, and psychological environment. Factors such as muscular strength, endurance and flexibility, handgrip strength, balance, VO_{2max} , balance, etc., were of interest in this particular indicator.

Following an extensive literature search, both online and physically across universities and relevant research institutions for unpublished resources, grades were allocated to each of the indicators based on the benchmark criteria approved by the Active Healthy Kids Global Alliance. The grades ranged from A to D, then F and INC (incomplete) with A representing a huge success in the indicator. The grades are interpreted as described in table 1. The grades adopted in the 2018 report card are quite different from the grades in the previous report cards. The current grade provides opportunities for detailed grading. Each of the grades now has three sub-grades to allow for close variabilities. For instance, Grade A has sub-grades A, A plus (+) and A minus (-).

Table 1: Grading Scheme

Grade	Description
A+	94% - 100% success
A	We are succeeding with a large majority of children and youth (87% - 93%)
A-	80% - 86% success
B+	74% - 79% success
B	We are succeeding with well over half of children and youth (67% - 73%)
B-	60% - 66% success
C+	54% - 59% success
C	We are succeeding with about half of children and youth (47% - 53%)
C-	40% - 46% success
D+	34% - 39% success
D	We are succeeding with less than half but some children and youth (27% - 33%)
D-	20% - 26% success
F	We are succeeding with very few children and youth (< 20%)
INC	Incomplete – insufficient or inadequate information to assign a grade

OVERALL PHYSICAL ACTIVITY



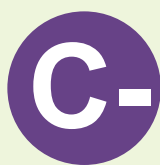
Summary

- ♦ Physical activity of children and youth in Nigeria is yet to attain stability as data has continued to witness upward and downward trends.
- ♦ Physical activity of this target population appears to have improved compared to the last two years.
- ♦ Gender disparity has remained consistent. All through the previous report cards and in the present one, boys are more physically active than girls.

The current evidence on overall physical activity of children and youth in Nigeria has witnessed a slight improvement compared to the downward trend that was observed in the 2016 report card. In the year 2013, the overall physical activity was graded C but slipped downward to D in the 2016 report card. While evidence had it that only about 37% of a representative sample of secondary school adolescents in an urban Nigerian setting appeared to meet the international guideline of engaging in at least 60 minutes of moderate-to-vigorous physical activity daily (Oyeyemi et al, 2016a), current data show that between 30% and 52% of children and youth are physically active (Ajayi et al, 2017; Adewale, 2016). The slight improvement to grade C for overall physical activity may be the consequence of more synergetic action in the call for increased engagement of children and youth in physical activity programmes (Ajayi, Elechi and Alhaji, 2015; Omotowo et al, 2017; Sadoh et al 2017).

The same gender disparity in physical activity observed in the report card of 2016, with males being more physically active than females (Senbanjo and Osikoya, 2010; Oyeyemi et al, 2016a) persisted in the current report card. According to the findings of Omotowo et al (2017), males participated more in physical activities than females. This according to the authors could be because males are more mobile and exercise with their peers more often than females.

ORGANIZED SPORT PARTICIPATION



Organized sport participation had a grading of incomplete in the last two report cards. There is now evidence, albeit anecdotal, to show that children and youth engage in physical activity, and there is improvement in organized sporting events in Nigeria. Adedoyin (2017) in his study on the level participation in physical activity and sport among the youth in Ile Ife, Osun State Nigeria reported that though the majority of public schools have adequate facilities that are better than those in private schools, only 40% used them for organized competitions such as inter-house sports. This was attributed to lack of funds. However, over 80% of the private schools have at least 1 or 2 organized competitions, such as inter-house sport or cultural dance, yearly. They pay to use the facilities at two institutions in the town: Obafemi Awolowo University and Obafemi Awolowo University Teaching Hospitals Complex. The students train for between 8 to 12 weeks in preparation for the events which include track and field games, table tennis and football competitions.

In addition, several sport academies are emerging that enrol boys and girls aged 6 to 16 for training in different games such as football, table tennis, athletics, etc. Parents register their wards to become stars rather than for the health benefit. Six sport academies were identified in Ile-Ife and environs with a minimum of 80 young people in each academy. Furthermore, major competitions have been sponsored by individuals and corporate bodies in Ile-Ife and environs in the last 2 years. Fifteen people have sponsored competitions in football and table tennis. One institution, Obafemi Awolowo University, sponsored five-a-side football games. In addition, the institution organized handball, hockey and volley ball games among secondary schools in Ile-Ife after undergraduate students had been posted to the various schools to train the students in all these events for six weeks.

ACTIVE PLAY



Very few studies have focused specifically on examining active play among Nigerian children and youth. Leisure activities are those that children and youth engage in during their free time. Free time refers to periods when the children and youth are neither involved in school or domestic work. Such activities include screen and outdoor activities. Screen activities include, but are not limited to, computer and video games, watching television programmes and movies, and using phones and computers for activities other than playing games. A study by Anyanwu, Akinpelu and Okeke (2018) shows that children spend a greater proportion of their leisure hours on screen activities. While this study did not indicate specifics, the study by Odior and Sanusi (2018) indicated moderate active play and high screen behaviour among rural and urban respondents in Sokoto. The study showed that 42.3% of urban residents and 35.5% of rural residents reported non-participation in vigorous active play seven days before a survey done using the International Physical Activity Questionnaire. When compared with a study based in Abuja suburbs, Odior and Oreweme (2018) reported 22.2% and 30.3% non-participation among male and female respondents. When compared to sedentary behaviour, none of the respondents in the studies by Odior and Sanusi (2018) and Odior and Oreweme (2018) reported non-sedentary behaviour. In fact, the results showed that 22.3% of urban respondents and 17.5% of rural respondents in Sokoto reported sedentary, including screen, behaviour during the seven days preceding the study. In the Abuja study, Odior and Oreweme (2018) reported sedentary and screen behaviour among 41.6% and 51.4% of male and female respondents respectively. The absence of national representative data and the paucity of data showing socio-demographic and socio-economic difference calls for improved research effort in this area.

ACTIVE TRANSPORTATION



Summary

- ♦ The grade B for active transportation has remained consistent in three successive reports cards from 2013 to 2018.
- ♦ While there may have been some factors militating against the general use of active transportation, the Federal Ministry of Transport in Nigeria, and the Lagos State Government seem to be making deliberate efforts to encourage this mode of transport.

Active transportation has maintained a consistent grade of B, from the report card of 2013 to that of 2016, and to the current edition in 2018. The 2016 report card indicated that the majority (61% to 80%) of Nigerian children and youth engage in some form of active transportation, mostly in the form of transport to and from school (Ahmadu et al, 2012; Adeomi et al, 2015). Walking was the most common mode of active transportation (Adeomi et al, 2015; Oyeyemi et al, 2016a), with the majority spending about 30 minutes daily walking to and from school (Oyeyemi et al, 2016a). Maintenance of the same grade as in the 2013 and 2016 report cards is based on the fact that there has been no additional data to inform a change in the grade.

Walking and cycling are the most adopted forms of active transportation, with walking being the most utilized by children and youth. These modes of travel are significant in their travels within the neighbourhood, especially to and from their respective schools. The grade of B in the last two report cards may have been sustained in the current report card because both walking and cycling are environment-friendly, relatively inexpensive and, to a large extent, accessible to all except those who are physically challenged and can neither walk nor cycle (Olojede, Yaode and Olufemi, 2017). According to Olojede, Yode and Olufemi (2017), walking is the most common form of active travel and no other travel mode is totally independent of walking as it serves as the link between modes. In addition, there have been concerted efforts to make the streets of Nigeria user friendly and this may

also have influenced the sustainability of a B grade for this indicator. According to the Fédération Internationale de l'Automobile (FIA) Foundation, the Federal Ministry of Transport (FMOT) of Nigeria, in collaboration with the Lagos Metropolitan Area Transport Authority (LAMATA), organized a street design workshop that brought together officials from the Ministry of Transport, the Ministry of Works, the Ministry of Environment, Federal Capital Territory Administration, the Federal Road Safety Corps, and civil society (FIA Foundation, 2017). The workshop was aimed at strengthening the inclusion of non-motorized transport (NMT) infrastructure in Nigeria's National Transport Policy, which is currently under review.



Stakeholder conference on the Lagos Non-motorized Transport Policy.
Credit: FIA Foundation

SEDENTARY BEHAVIOUR



In this report, sedentary behaviour was assessed based on the amount of time children spent on both screen and non-screen-based sedentary activities.

In the 2016 report card, screen-based sedentary behaviour was graded "F" while non-screen-based behaviour was graded "D" This year, both screen and non-screen-based activities have been upgraded to B-.

Though, no nationally representative data exists on this measure and no new studies have been published since the previous report, an unpublished work (Adewale, unpublished) among students in private secondary schools in Lagos State showed that more than half (52.1%) of the students spent at least one hour daily on physical activities. The majority (78.9%) of the students however spent more than two hours a day on activities that involved sitting. It was however unclear whether the sitting reported in this study was limited to that occurring during leisure time or whether it included time spent sitting during educational activities at school, as students are mostly seated during such school-related learning.

In 2010, the majority (95%) of 11-19 year olds spent an average of 3 hours and 15 minutes on sedentary activities, the most common being watching television, playing video games, reading for leisure, listening to music and playing board games (Omuemu and Omuemu 2010).



PHYSICAL FITNESS



Summary

- ♦ In order to grade the physical fitness indicator, data must be available on relevant parameters of physical fitness that cover the areas of health-related and performance-related fitness.
- ♦ The only relevant data available in respect of physical fitness are on overweight and obesity, which form part of the body composition component of fitness. The data were similar to previous ones reported in the 2013 and 2016 report cards.
- ♦ Data were not available to address most of the components of physical fitness for children and adolescents in Nigeria.

Physical fitness is a newly-introduced indicator which was not one of the indicators considered in the last two report cards. It can be largely grouped into health-related and performance/skill-related fitness and includes other components such as cardiorespiratory endurance, muscle strength, endurance, and flexibility (Ortega et al, 2008). Others include parameters such as speed, agility, balance, power, etc. (Castelli et al, 2007; Ortega et al, 2008; Haga 2008). The only parameter that is relevant to physical fitness that was considered in the previous report cards is overweight and obesity. This parameter at best represents the body composition component of physical fitness. A representative grading for physical fitness among Nigerian children and adolescents will require data on the target population that covers the majority or all of the aforementioned parameters.

The search for relevant data on physical fitness parameters did not yield sufficient results. In particular, results were unavailable for children and adolescents in the age bracket of 5 to 17 years. The scant data that met the criteria for documentation were found to be on overweight and obesity among children and adolescents, which were accorded sufficient attention in the 2013 and 2016 editions of the report card. However, data on overweight and obesity alone was found to be insufficient to allocate a grade to physical fitness, hence this indicator was graded “incomplete”.

FAMILY AND PEERS



This indicator was graded “incomplete” because of lack of data for the target population. The family and peers indicator was also graded 'incomplete' in the 2013 and 2016 editions of the Nigerian report card, suggesting a paucity of research on this topic in Nigeria. Since family and peers are integral components of the social support needed for improved physical activity and active transportation of children and adolescents in developing countries (Oyeyemi and Larouche, 2018), it is important to build evidence in this context for Nigeria.

SCHOOLS



Schools are an ideal venue for the implementation of healthy behaviours because they serve more than 30 million children in Nigeria and children and adolescents spend a large amount of the daytime in school. However, though most schools in Nigeria offer Physical Education as part of their curriculum, many have no access, personnel, equipment or space to implement physical activity programmes.

No matter how well planned, designed and documented the curriculum of any subject is, its implementation is important (Onyeachu, 2008). There is scarcely any information on the amount of time spent on physical activities as part of the Physical Education programme in schools in Nigeria.



Ongoing school physical activity session

COMMUNITY AND ENVIRONMENT



Similar to the 2013 and 2016 editions of the Nigerian report card, this indicator was assigned the grade “incomplete” due to absence of data for the target population. Given the strategic importance of community environments and 'activity friendly' urban design to the health of the population (Sallis et al, 2016), there is a clear need for more studies on how the broader levels of influence, including community-built physical environment and policies affect the physical activity behaviour of youth in Nigeria. Tools such as the Neighbourhood Environment Walkability Scale for Africa have recently been developed to facilitate this research agenda (Oyeyemi et al, 2016b; 2017).

GOVERNMENT

Summary

- ♦ Government at different levels is making progressive efforts to improve policy and infrastructural provisions that will impact positively on physical activity for children and youth in Nigeria.

Government has a major role to play in facilitating access to physical activity for children and youth (Morandi, 2009). The success of physical activity in this population depends on several factors that are linked to governmental support in the form of legislation, infrastructure and creation of a generally conducive atmosphere for physical activity entrenchment. Similar to the 2016 report card, this indicator is graded B because there is no new data to warrant a change in grade. It was observed that government in Nigeria has continued to demonstrate progress in the key stages of public policy making (i.e., policy agenda, policy formation, policy implementation, policy evaluation and decisions about the future) with respect to school physical activity programmes, especially through the physical education channel. It is also noted that approval has been given for sport academies, empowerment of non-governmental organizations in grassroot sports, establishment of government-owned public parks and recreational gardens and construction of model schools that have facilities for physical activity programmes.

In the bid to make all state-owned parks and gardens more accessible to fun seekers across Lagos State in Nigeria, the Lagos State Parks and Gardens Agency (LASPARK), declared that all parks and gardens owned by the state government are to be open to all Lagos residents 'free of charge' (*PM News Nigeria*, 2017). In addition, the existing parks were upgraded by the state to improve the experience of users. LASPARK is also dedicated and committed to providing a beautiful, safe and healthy state through the establishment of functional parks, gardens and recreational centres. With 327 parks and gardens established and maintained across Lagos State, in addition to the extensive streetscape and roadside greenery, the state government is committed to providing a physical activity-friendly environment for residents (LASPARK 2018). While the number of parks may not be as huge as seen in Lagos State, the situation appears similar for some other states in Nigeria, including the Federal Capital Territory.



A state government model school under construction with provision for sports facilities to aid physical activity.



Agodi Park and Gardens, Ibadan, Nigeria providing opportunity for physical activity of children and youth.

CONCLUSIONS & RECOMMENDATIONS FOR ACTION

Conclusions

The current report card has revealed a wide gap in research which needs to be filled by researchers and interested government agencies in respect of comprehensive analysis of physical fitness of school-age children and youth in Nigeria. At the moment, such data for the target population is lacking. Similarly, data on family and peers is lacking.

While a few states of the federation have invested enormously in provision of recreational garden and parks for their residents, there is a larger number of the states across the country that are far or left behind in this regard.

Recommendations

Based on the findings in this report card, the following recommendations are made:

1. Nigerian researchers in physical activity should focus some attention on the influence of family and peers on physical activity of children and youth as the family is an important unit in the formulation of physical activity behaviour of children and youth.
2. Priority attention is also recommended for research on how the community and environment influences the physical activity of Nigerian children and youth. This is especially so in view of the modest achievement of some state governments in the area of enhanced urban city restructuring and creation of recreational facilities.
3. An active buy-in into facilities for physical activity (such as recreational gardens and parks) in all states of the federation is recommended. In both urban and rural areas, spaces should be built for the public to use for safe practice of physical activities and sports.
4. National guidelines on physical activity and sedentary behaviour for Nigerian children and youth should be formulated.
5. The policy of physical and health education activities in the curriculum for all Nigerian schools (both private and public) should be fully implemented.
6. Partnerships should be forged between the government and Civil Society Organizations (CSOs) in Heart, Cancer, Diabetes, Nutrition, Tobacco and Alcohol; the Nigeria Centre for Disease Control, the Noncommunicable Diseases Alliance and research institutes, to prevent and control NCDs among children and youth.
7. There is a need for the establishment of a National Report Card Scientific Advisory and Implementation Panel, composed of researchers, exercise and sports specialists, nutritionists, media personalities, policy makers, medical doctors, and other key stakeholders based in the Ministry of Health.
8. There is a need for networking with African and other international institutions and experts to implement best practices for research, surveillance and public health interventions.

TARGET AUDIENCE FOR THE REPORT CARD

This document will be useful for government, public and private organizations, national and international institutions and individuals interested in the promotion of physical activity among children and youth in Nigeria. Below are a few of the institutions that will benefit from the Nigerian Report Card.

1. Government, non-state actors in health, health and education authorities and sporting organizations that are responsible for the development of policies, implementation and enforcement.
2. The federal government, state governments, local governments, urban development agencies charged with the responsibility of building an environment that is supportive of healthy active living.
3. Food manufacturers, companies and organizations that may be in a position to support or collaborate on future programmes and initiatives of the Nigerian Heart Foundation as a demonstration of corporate social responsibility.
4. Research institutions with interest in childhood physical activity, overweight/obesity, and nutrition.

OPPORTUNITIES FOR SPONSORSHIP AND COLLABORATION

The Nigerian Heart Foundation welcomes collaborators, sponsors and partners interested in its efforts to promote a healthy lifestyle among children and youths in Nigeria. Support may include:

- ◆ Donations to support research on physical activity and body weight status of children and youth in Nigeria.
- ◆ Support for the development and dissemination of an annual Nigerian report card on physical activity and body weight of children.
- ◆ Support for lobbying activities to influence the development of a National Strategy/ Policy against overweight and obesity and a complimentary functional policy to enhance physical activity among children and youth in Nigeria.
- ◆ Donations for equipment acquisition.

REFERENCES

- Abegunde DO, Mathers CD, Adam T, Ortegon M, Strong K. (2007). The burden and costs of chronic diseases in low-income and middle-income countries. *Lancet*, 370: 1929-1938.
- Adedoyin RA. (2017). A survey level participation in physical activity and sport among the youth in Ile Ife, Osun State Nigeria. Paper presented at the final match of the Professor Rufus Adedoyin Peace Football competition at the Obafemi Awolowo University Sports Complex.
- Adeomi AA, Adeoye AO, Bamidele JO, Abodurin OA, Odu OO, Adeomi OA (2015): Pattern and determinants of the weight status of school-age children from rural and urban communities of Osun State, Nigeria: A comparative study. *Journal of Medical Nutrition and Nutraceuticals*, 4:107-114.
- Adewale MS. (2016). Knowledge, attitude and practice of physical activity among private secondary school students of Ikorodu Local Government Area of Lagos State. A dissertation presented at the College of Medicine, University of Lagos.
- Ahmadu BU, Usiju NM, Ibrahim A, Adiel AA, Tumba D, Rimamchika M, Solomon JD (2012). Lingering hunger among primary school pupils residing in rural areas of Borno State, North Eastern Nigeria: Implication for education and food supplementation programs. *Global Advanced Research Journal of Food Science and Technology*, 1 (7): 93-97.
- Ajayi EO, Elechi HA, Alhaji MA. (2015). Prevalence of overweight/obesity among primary school pupils in an urban centre, Nigeria. *Saudi Journal of Obesity*, 3: 59-65.
- Ajayi IO, Soyannwo MAO, Asinobi AO, Afolabi NB, Ayede AI, Bamgboye EA. (2017). Blood pressure pattern and hypertension related risk factors in an urban community in Southwest Nigeria: The Mokola Hypertension Initiative Project, Ibadan, Nigeria. *Journal of Public Health Epidemiology*, 9(4): 51-64.
- Akinroye KK, Oyeyemi AL, Odukoya OO, Adeniyi AF, Adedoyin RA, Ojo OS, Alawode DA, Ozomata EA, Awotidebe TO. (2014). Results from Nigeria's 2013 Report Card on Physical Activity for Children and Youth. *Journal of Physical Activity and Health*, 11(Supp 1): S88-S92.

- Anyanwu FC, Okeke SR. (2016). Retooling Assessment Procedures for Skill-based Health Education for Young People in Nigeria: Implications for 21st Century Educational Assessment. *Universal Journal of Educational Research* 4(1): 58-64.
- Anyanwu FC, Akinpelu G, Okeke SR. (2018). Obesogenic environment as predisposing factor to obesity among school-age children from high socio-economic families in a Nigerian city. *Journal of School Health* (in progress).
- Castelli DM, Hillman CH, Buck SM, Erwin HE. (2007). Physical fitness and academic achievement in third- and fifth-grade students. *Journal of Sport and Exercise Psychology*, 29(2): 239-252.
- FIA Foundation. (2017). <https://www.fiafoundation.org/blog/2017/november/walking-the-talk-supporting-nigeria-to-adopt-policies-for-active-mobility>
- Haga M. (2008). The relationship between physical fitness and motor competence in children. *Child: Care, health and development*, 34(3): 329-334.
- <https://www.pmnews.com/2017/10/11/laspark-declares-recreational-parksgardens-free-families-friends/>
- Katzmarzyk PT, Mason C. (2009). The physical activity transition. *Journal of Physical Activity and Health*, 6: 269-280.
- Lagos State Parks and Gardens Agency (LASPARK). (2018). <https://laspark.ng/>
- Lee IM, Shiroma EJ, Lobelo F, Puska P, Blair SN, Katzmarzyk PI. (2012). Effect of physical inactivity on major non-communicable diseases worldwide: An analysis of burden of diseases and life expectancy. *Lancet*, 380: 219-229.
- Morandi L. (2009). The role of state policy in promoting physical activity. *Preventive Medicine*, 49(4): 299-300.
- Odior SK, Oreweme FT. (2018). Prevalence of Physical Inactivity and Sedentary Living among in-School Adolescents in Abuja Suburbs: A cross-sectional survey. Publication in progress).
- Odior SK, Sanusi M. (2018). Psychological, Physical Environment and Socio-cultural Variables as Predictors of Physical Activity Behaviour among School-aged Children in Rural and Urban Settlements in Sokoto State, Nigeria. (Publication in

progress).

- Olojede O, Yoade A, Olufemi B. (2017). Determinants of walking as an active travel mode in a Nigerian city. *Journal of Transport and Health* 6: 327–334.
- Omotowo BI, Ndu AC, Agwu-Umahi OR, Ezeoke UE, Idoko CA, Umeobieri AK. (2017). Assessment of health risk behaviours among secondary school students in Enugu, South-East Nigeria. *Global Journal of Health Science*, 9(7): 57-66.
- Omuemu VO, Omuemu CE. (2010). The prevalence of overweight and its risk factors among adolescents in an urban city in Edo State. *Nigerian Journal of Clinical Practice*, 13(2).
- Onyeachu JAE. (2008). Curriculum implementation at the primary education level: Challenges for the 21st century. *Multidisciplinary Journal of Research Development*, 3: 30-33.
- Ortega FB, Ruiz JR, Castillo MJ, Sjöström M. (2008). Physical fitness in childhood and adolescence: A powerful marker of health. *International Journal of Obesity*, 32(1): 1.
- Oyeyemi AL, Adeyemi O. (2013). Relationship of physical activity to cardiovascular risk factors in an urban population of Nigerian adults. *Archives of Public Health*, 71: 6.
- Oyeyemi AL, Conway TL, Adedoyin RA, Akinroye KK, Aryeetey R, Assah F, et al. (2017). Construct validity of the Neighbourhood Environment Walkability Scale for Africa. *Medicine and Science in Sports and Exercise* 49(3): 482-91.
- Oyeyemi AL, Ishaku CM, Oyekola J, Wakawa HD, Lawan A, Yakubu S, Oyeyemi AY. (2016a). Patterns and associated factors of physical activity among adolescents in Nigeria. *PLoS ONE*, 11 (2): e0150142. doi:10.1371/journal.pone.0150142
- Oyeyemi AL, Kasoma SS, Onywera VO, Assah F, Adedoyin RA, Conway TL, et al. (2016b). NEWS for Africa: Adaptation and reliability of a built environment questionnaire for physical activity in seven African countries. *International Journal of Behavioural Nutrition and Physical Activity*, 13: 33.
- Oyeyemi AL, Larouche R. (2018). Prevalence and correlates of active transportation in developing countries. In: Larouche R, editor. *Children's Active Transportation*. Elsevier, Oxford, United Kingdom (In Press).
- Oyeyemi AL, Oyeyemi AY, Jidda ZA, Babagana F. (2013). Prevalence of physical activity

among adults in a metropolitan Nigerian city: A cross-sectional study. *J Epidemiol*, 23: 169-177.

Sadoh WE, Israel-Aina YT, Sadoh AE, Uduebor JE, Shaibu M, Ogonor E, et al. (2017). Comparison of obesity, overweight and elevated blood pressure in children attending public and private primary schools in Benin City, Nigeria. *Nigerian Journal of Clinical Practice*, 20: 839-846.

Sallis JF, Bull F, Burdett R, Frank LD, Griffiths P, Giles-Corti B, et al. (2016). Use of science to guide city planning policy and practice: How to achieve healthy and sustainable future cities. *Lancet*, 388(10062): 2936-47.

Senbanjo IO, Osikoya KA. (2010). Physical activities and body mass index of school children and adolescents in Abeokuta, southwest Nigeria. *World Journal of Pediatrics*, 6(3): 217-222.

Tremblay MS, Onywera V, Adamo KB. (2010). A child's right to healthy, active living – Building capacity in sub-Saharan Africa to curb the impending physical activity transition: The KIDS-CAN Research Alliance. In: *20th Anniversary of the Convention on the Rights of the Child*; Bennett S, Pare M, eds. University of Ottawa Press, Ottawa, ON, Canada; pp. 97-110.

World Health Organization (WHO). (2009). *Global Health Risks: Mortality and Burden of Disease Attributable to Selected Major Risks*. WHO, Geneva, Switzerland.