ACTIVE HEALTHY KIDS ZIMBABWE

2018 REPORT Card

Physical Activity and Nutritional Status of school aged children in Zimbabwe: current research evidence and policy implications

The 2018 Zimbabwe Report Card on the Physical Activity for Children and Youth

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Introduction

The World Health Organization (WHO) estimates that non-communicable diseases (NCDs) kill approximately 41 million people, accounting for 71% of all global deaths [1]. Nearly 85% of the NCD-related deaths occur in low-to-middle income countries such as Zimbabwe [1]. Lifestyle behaviours such as, physical inactivity, sedentary behaviours and the consumption of energy dense diets [2], are known major risk factors for childhood obesity, cardiovascular disease, diabetes and certain cancers [1,3,4]. Research evidence showing that physical inactivity and sedentary behaviours [5,6,7], the consumption of energy-dense diets [8] among children and youth are increasing globally, and the concurrent rise in childhood obesity [5] is concerning. A study about adolescent leisure time, physical activity, sedentary behaviours, and substance abuse in eight African countries that included Zimbabwe, reported that only 35% of the youth engaged in sufficient physical activity [9]. Evidence from surveys conducted in 105 countries; show that over 80% of 13-15-year olds do not meet the WHO recommendations of 60 minutes of moderate to vigorous physical activity per day [6]. Zimbabwean children are not immune from this physical inactivity epidemic, as demonstrated by the 2016 Zimbabwe Report Card [10], which showed that overall physical activity and sedentary behaviours among children were lower and higher (respectively) than desired.

In addition to physical activity, nutritional status is also a key indicator of health for children and youth. According to the Zimbabwe National Nutrition Strategy 2014-2018 [11], poor nutrition and physical inactivity, increases the likelihood of non-communicable diseases such as cancer, diabetes and cardiovascular diseases in later life. Furthermore, poor nutrition affects the performance of children in school and their general physical activity levels [12,13]. In Zimbabwe, obesity among chil-

dren and youth now coexists with undernutrition [14], and both have implications for participation in physical activity. This demonstrates the presence of multiple burdens of malnutrition among Zimbabwean school aged children and calls for evidence based interventions. In the Zimbabwean context, malnutrition is worsened by severe droughts and the negative effects of recent socio-economic crises. Therefore, systematic nutrition surveillance systems are required in schools to establish the determinants of, and monitor the nutritional status and physical activity levels for children and youth.

Indicators of health, which include, but are not limited to poor nutritional status, physical inactivity and sedentary behaviours among children and youth may be more impactful in countries such as Zimbabwe, that are experiencing rapid urbanization [15], the double burden of malnutrition [16], a shift from active to motorized transportation [17], and transitions from traditional/native, to more energy dense 'western' diets [18,19]. These challenges are compounded by the accompanying behavioral shift from traditionally active to more industrialized and sedentary lifestyles (also known as physical activity transition) [20]. At present, there are limited reliable prevalence estimates on levels of key physical activity indicators [10], as well as a lack of accurate assessments of the nutritional status of Zimbabwean children and youth. Lack of such data or information mean that the evidence needed to inform the development of effective strategies to combat these public health challenges, and the capacity to appropriately assess and evaluate future interventions, are limited. The 2018 Report Card builds on the insights from the 2016 Zimbabwe Report Card [10] and is a comprehensive assessment of nutritional status and physical activity levels of Zimbabwean children and youth. The Report Card borrows from similar initiatives in Canada and elsewhere in Africa [21, 22]. The development and authorship of this report card was partly inspired by the commitment made by various stakeholders after

the successful launch of the first report card, and results from the first and second Global Summits on the Physical Activity of children and Active Health Kids Global Alliance (www.activehealthykids.org), a global network of researchers and stakeholders with interests in the promotion of healthy and active lifestyles for children and youth.

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What is the Report Card?

The Report Card is a comprehensive summary of best available and current evidence regarding key indicators of physical activity such as participation in Overall Physical Activity, Organized Sports and Physical Activity, Active Play, Nutritional Status, Physical Fitness, School environment, Family and Peers, Community and Environment, Government Policy etc. among children and youth. The Report Card was first developed in 2005 by the then Active Healthy Kids Canada, which is now known as ParticipACTION (www.participactionreportcard.com) to translate research knowledge into practice [21]. Over the past 10 years, it has been used as an "annual state of the nation" on how Canada is doing as a nation in encouraging physical activity opportunities for children and youth [21]. In addition, the Report Card describes benefits and outcomes of regular physical activity for children [21]. Furthermore, the report card also identifies areas needing improvement, research and policy gaps and drives social action for behavior change regarding physical activity among children and youth [22]. The Report Card has now been exported and adapted for local/specific contexts in other jurisdictions including six African countries. In 2018, forty-nine (49) countries including Zimbabwe, prepared their own country-specific Report Cards, and will participate in Active Healthy Kids Global Alliance's 3rd Global Summit (described in detail below) on the Physical Activity of children from around the world.

Target audience for the 2018 Zimbabwe Report Card

This report is targeted towards a wide audience, including those with interest in active healthy living among children and youth in Zimbabwe. Specifically, the report card is geared towards:

- Parents, children and youth
- General Public
- Teachers, College/University Instructors/lecturers
- Students
- Policy makers
- Relevant government Ministries
- Non-governmental organizations
- Corporations with interest in active healthy living
- Local collaborating partners
- International collaborating partners
- Researchers and Academics

The Indicators and Grading criteria

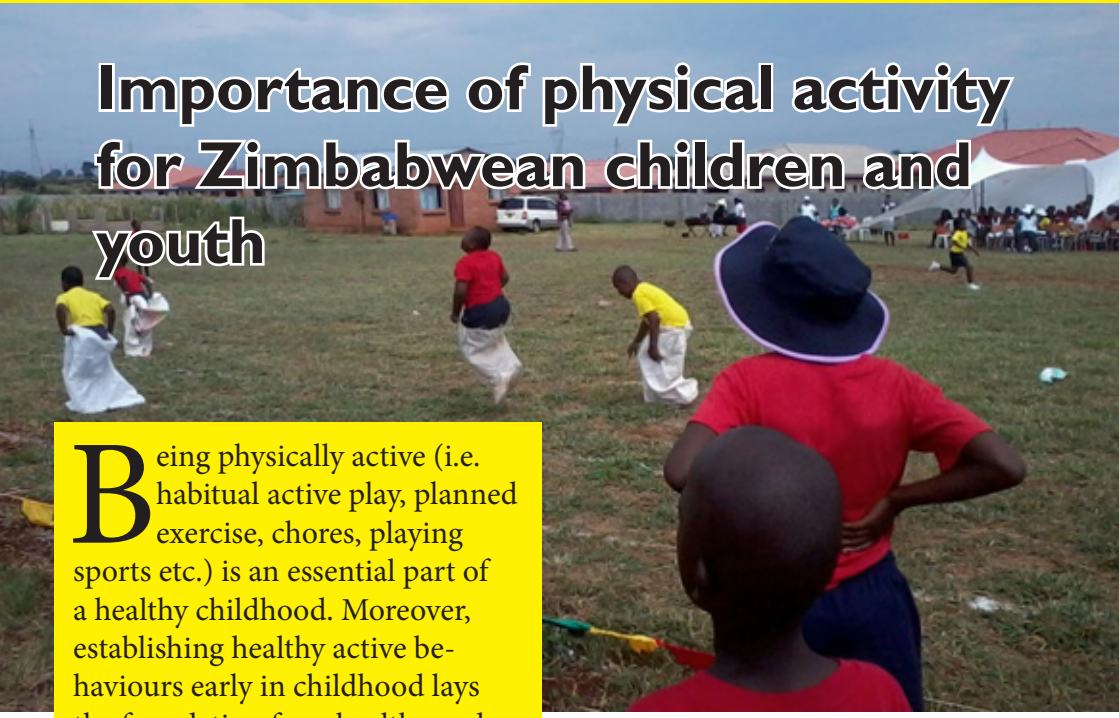
The 2018 Zimbabwe Report Card assigns letter grades 'A+ to F' or 'incomplete' to twelve key indicators of physical activity and nutritional status among children and youth. Physical Fitness and Nutritional Status (not part of the 2016 Zimbabwe Report Card), are included in the present Report Card due to their contextual (Nutritional Status) and global (Physical Fitness) importance. As was the case for the 2016 report card, only a handful of studies were available for use in developing the 2018 Report Card due to limited information and research evidence. The twelve indicators included in the present Report Card are for: overall physical activity, organized sport and physical activity, active play, active transportation, sedentary behaviours, physical fitness, nutritional status, school environment, family and peers, community and environment, non-governmental strategies and investments, and governmental policies, strategies and investments. A grading rubric (Table 1) and standard benchmarks (Table 2) originally developed for the Canadian Report Card, and now adopted by other countries including all 49 that are participating in the Global Matrix 3.0 were used to determine the letter grade that was assigned for each indicator based on the best available research data and information. Published and unpublished research articles (without restrictions on

when they were conducted or published), policy documents and materials from non-governmental organizations were used to inform the allocation of grades. Collectively, the graded indicators provide a summary of how Zimbabwe is doing to promote the consumption of healthy diets and physical activity participation among children and youth. The letter grades (A+ to F) are deliberately intended to resemble an actual student's school report card (Table 3) and hopefully make it easier for all readers to understand or interpret.

Active Healthy Kids Global Alliance

Active Healthy Kids Global Alliance (www.activehealthykids.org) "is a network of researchers, health professionals and stakeholders who are working together to advance physical activity in children and youth from around the world" [23]. It was established in 2014, following the success of the world's first Global Summit on the physical activity of children held in Toronto, Canada [22]. At the summit, 15 countries presented Report Cards which were developed using harmonized procedures, awarding letter grades to key indicators of physical activity among children and youth. Using harmonized procedures allowed for the grades to be compiled into a global matrix of nine (9) common indicators of physical activity [21]. Due mostly to the success of the first summit, the number of countries participating has steadily increased and the Report Card has since been replicated in many countries around the world. At the time of drafting this document, the Active Healthy Kids Global Alliance is in the final stages of organizing a third summit dubbed "Global Matrix 3.0" to be held under the theme "The Movement to Move: Global insights to get our kids moving" in Adelaide, Australia. The fact that the number of countries that participated in the first summit grew from 15 to 38 for the second summit in Bangkok, Thailand, in 2016, and is expected to be more in Adelaide, confirms the great success of Active Healthy Kids Global Alliance in powering the movement to get kids moving. Specifically, 49 countries including Zimbabwe will present grades on 10 common indicators from their countries' Report cards, and these will be compiled into the second global matrix of key indicators of physical activity of school-aged-children and youth aged between 5 and 17 years from around the world.

Importance of physical activity for Zimbabwean children and youth



Being physically active (i.e. habitual active play, planned exercise, chores, playing sports etc.) is an essential part of a healthy childhood. Moreover, establishing healthy active behaviours early in childhood lays the foundation for a healthy and active adulthood [24]. Physical activity helps children and youth to grow, do well in school, thrive, feel good and be overall happy. Regular structured and unstructured physical activity in childhood and adolescence improves strength and endurance, helps build healthy bones and muscles, helps to manage weight, reduces anxiety/stress and increases self-esteem [1]. Furthermore, physical inactivity and sedentary behaviours are known independent risk factors for chronic non-communicable diseases such as high blood pressure, diabetes and heart disease [3]. The World Health Organization recommends that for health benefits, children and youth aged 5-17 should accumulate at least 60 minutes of moderate-to-vigorous-intensity physical activity per day [1]. Simply put, regular participation in physical activity among children and youth can minimize the risks of non-communicable disease. This may be helpful in many ways including, but not limited to reducing costs to the health care system, improving health

related quality of life, increasing lifespans etc. Specifically, regular participation in moderate-to-vigorous-intensity physical activity can have a direct and positive impact on:

Physical health (increased physical fitness (both cardiorespiratory fitness and muscular strength), reduced adiposity, favourable cardiovascular and metabolic disease risk profiles, and enhanced bone health)) [1].

Mental health and wellbeing (reduced symptoms of anxiety and depression [25,26], and increased self-reported happiness) [27].

Academic achievement (improved attention/concentration, improved standardized test scores, and better classroom conduct) [28,29].

Brain health and development (more active brains [30], better cognitive development in early (0-5years) childhood)) [31].

Importance of nutrition and healthy eating for Zimbabwean children and youth

Like the benefits of adequate physical activity, good nutrition and healthy eating is important for child growth and development as well as long term health. It enables children to learn well in school, with boundless energy to allow them to engage in physical activity.

Without proper nutrition, children may be prone to obesity, underweight/stunting and may fail to thrive, thus consuming a healthy diet reduces the risk of malnutrition in all its forms. Poor nutrition can also affect children's sleep patterns, social development, and their ability to focus and understand what's expected of them.

Addressing nutritional status among children may lead to considerable economic and social benefits as it reduces morbidity and mortality, as well resource savings in health, and enhances productivity. The World Health Organization's Strategy on Diet, Physical Activity and Health [32] outlines the following benefits for promoting healthy nutrition in childhood:

- *Strengthening the learning potential and well-being of children and adolescents.*
- *Contributing to decreasing the risk of today's leading health problems in children and adolescents (including obesity, cardiovascular diseases, cancer and eating disorders).*

- *Healthy nutrition in early life enables healthy adulthood and ageing.*

In summary, balanced nutritious diets and active lifestyles complement each other to promote optimum health. Therefore, in schools, physical education should be supported with nutrition education for the targeting the teachers and the leaners and the community at large.

Indicators

Overall Physical Activity (C+)

Due to non-availability of new relevant data, this indicator was graded based on the same evidence as was used for the 2016 Report Card. The main study was a 2015 survey done by Makaza and others [33], which included over 4000 school children (8-16 years old) from all provinces in Zimbabwe. The survey collected self-reported data on diet, key indicators of physical activity, and objectively measured the participants' body composition.

A smaller study conducted by Mushonga and others [34] involving 320 preschoolers all recruited in Harare also contributed data used to grade this indicator. The grade was awarded based on the proportion of the preschoolers, children and youth who self-reported or were observed to engage in moderate- to vigorous-intensity physical activity for at least 60 minutes the previous or on a regular day.

Key findings

- A little over half (59%) of 8-16 year-old Zimbabwean children and youth met the recommended 60 minutes of moderate to vigorous physical activity per day.
- The study also showed that boys spent more time engaged in moderate to vigorous activity than girls.
- More (63%) children attending rural schools were meeting the recommended 60 minutes per day of physical activity compared to 55% of those attending school in urban areas.
- The study of 3-5 years old children recruited from 24 preschools in Harare by Mushonga and others[34] reported that 67% participated in average to high physical activity.

Research gaps

- There is limited and only self-reported research data to accurately report on levels of physical activity among Zimbabwean children and youth.
- The current data are based on studies of less than robust design with samples that are not representative of most Zimbabwean children and youth.
- There are inconsistencies in the amount of time recommended to be spent by children and youth engaging in moderate to vigorous physical activity per day.

Recommendations

- There is need for more research data, collected using objective methods (e.g. pedometers or accelerometers).
- There is need for studies with stronger design and including samples that are representative of most Zimbabwean children and youth.
- Research should also focus on understanding physical activity levels of all child age groups.
- It is also important to understand the variation in physical activity levels based on different characteristics (e.g. district/province of residence, gender, age etc.).
- Parents, teachers and others should encourage or provide opportunities for preschoolers, children and youth to participate in physical activity.
- Policy and decision makers need to prioritize physical activity among children and youth, to promote lifelong active healthy behaviours and minimize the risks associated with long-term inactivity.

Organized Sport and Physical Activity (B)

Like overall physical activity, the grade for this indicator was informed by the same studies (Makaza and colleagues [33]; Djarova and others [35]) as was the case for the 2016 Report Card. Djarova and others mainly compared key indicators of physical activity between youth with type 1 diabetes mellitus and a group of healthy controls. Data for the control group was used to partly inform the grade for this indicator.

Key findings

- Close to seven in ten (67%) of children and youth surveyed by Makaza and others [33] participated in sporting activities such as foot ball, tennis or swimming the previous day.
- Djarova and colleagues [35] reported that on average, a group of healthy 6-14-year old children and youth recruited from Magwegwe and Mpopoma suburbs of Bulawayo spent about 2.5 hours playing organized sports per day compared to only 0.8 hours by those diagnosed with type 1 diabetes mellitus.
- A greater proportion of boys (75%) han girls (59%) reported to have participated in an organized sporting activity the previous day.
- Age did not seem to matter as 70% of those older than 13 years and 67% of the 13 or younger age group reported to have engaged in a sporting activity the previous day.

Research gaps

- There is limited data mostly from children in urban areas to accurately evaluate the levels and types of organized sport participation around the country.

Recommendations

- There is a need for research to document the different types of organized sports available to children and
  youth and then assess/evaluate how many children are participating and \ for how long each day.

Active Play (D+)

Data to grade this indicator was obtained from the 2015 study by Makaza and others [33]. The results of this survey showed a surprisingly low proportion of Zimbabwean children and youth to be engaging in active play before or after school.

Key findings

- Almost half (49%) of Zimbabwean children and youth who were surveyed by Makaza and others [33] reported spending less than 1 hour playing outside before or after school. Another 13% said they did not play outside at all the previous day.
- About a third (35%) of children and youth reported spending at least an hour playing outside.
- The proportion of girls (29%) who reported spending at least an hour playing outside was far less than that of boys (41%).
- There was an almost even split between younger and older children with 48% of those older than 13 years and 46% of those 13 years or younger, reporting spending at least an hour engaging in active play.

Research gaps

- With only one survey, there was not enough evidence to provide confident estimates for grading this indicator.
- Data are needed to explore why so few children are playing outside and evaluate the reason for the big difference between boys and girls.
- No research evidence on the cor relates of active play.

Recommendations

- There is need to encourage the conduct of research studies focusing on examining different aspects of before or after school active play.
- Evaluation neighbourhood safety and encourage parental support for active play among children and youth.
- Promotion of after school programming that may encourage children to play in the safe and secure school environment.
- Strategies to encourage more habitual out-of- school play should include deliberate efforts and messaging to remind parents and children that play is not only an important part of childhood, but that it also has health benefits.

Active Transportation (A-)

Three studies [33,34,36] provided the data that were used to grade this indicator. As expected, a greater proportion of preschoolers living in Harare used motorized transport whereas older (> 8 years) children and youth relied more on active and non-motorized transport to and from school. Results from the three studies were based on self-report of the children and youth's use of active or motorized transport.

Key findings

- On average, over 80% of 8-16-year-old children and youth used active (walking, bicycle etc.) transport.
- There was variation in active transport use based on province, rural vs. urban residence and age group.
- A greater (57%) proportion of 3-5-year-old preschoolers living in Harare were driven to preschool compared to 43% who walked.
- Comparatively, active transportation by province was lowest in Harare (77%) and highest in Manicaland (83%).
- A lower proportion (77%) of urban dwelling school-children used active transport compared to 88% among rural school-children.
- A surprisingly high (41%) and (32%) proportion of girls and boys respectively preferred to be driven to and from school if they had a choice.

Research gaps

- There is no research evidence for transportation of preschoolers in rural areas, and the only study [34] to report on children younger than 5 years old was conducted in Harare which is not representative of all urban areas in Zimbabwe.
- There is no data reporting the time it takes and distance to and from school.
- Results from one of the studies [36] conducted in 2003 and included to grade this indicator are outdated.
- There are no research data on the correlates of active transportation

Recommendations

- There is need for research among preschoolers in rural areas; examining correlates of active transportation; and assessing the time and distance it takes to and from schools.
- Need for more current data.
- Public health messages to highlight the benefits of active transportation and reduce the prestige/status symbol associated with motorized transportation.
- Policies that encourage and provide safe and walkable neighborhoods and bike lanes etc.

Sedentary Behaviours (B)

Two studies [33,34] provided data that were used to grade this indicator. Generally, it is recommended that preschoolers (2-5 years old) spend no more than 1 hour per day in sedentary behaviours except when sleeping [37] whereas children and youth should not spend more than 2 hours per day engaging in sedentary behaviours [37,38].

Research gaps

- There are no objectively measured data on sedentary times.
- There are very limited data on sedentary behaviours of all child age group.

Recommendations

- There is need for objectively measured sedentary times for children and youth.
- There is need for messages to reinforce and encourage that more children spend less time in sedentary behaviours

Key findings

- About three quarters (75%) of Zimbabwean children and youth spent the recommended 2 or fewer hours per day in sedentary behaviours.
- Nearly a quarter (24%) of 3-5 year-old preschoolers watched between 2-3 hours of television the previous day.
- Only 15% of 8-16-year-old children reported having watched television for 5 or more hours the previous day.
- The most commonly reported sedentary behaviours were electronic video games (23%) and watching television (26%).
- A slightly greater proportion of girls (27%) compared to boys (24%) reported not having watched television the previous day.
- As expected, more children attending rural schools (45%) compared to 17% in urban schools reported that they did not watch television the previous day.

Physical Fitness (Incomplete)

This indicator was not graded for the 2016 Report Card because it had not yet been part of the Global Matrix. After the Bangkok, Thailand, Global Matrix 2.0, Physical fitness was added as the 10th core indicator because of its close relationship with physical activity. The RCWG unanimously agreed that the only available data of the physical fitness of Zimbabwean children and youth from two studies [33,39], were insufficient to accurately inform the grading of this indicator. There is potential however, for more relevant data that may enable accurate grade assignment for this indicator in the future, given that the Government of Zimbabwe, through the Ministry of Primary and Secondary Education has introduced an updated Curriculum Framework [40] and related syllabi [41-44], deliberately focusing on, among other things, targeted increases for children and youth to participate in organized sport and physical activity.

Research gaps

- There are no data using simple and standard measures such as shuttle run test for cardiorespiratory fitness
- Data from the study by Makaza and others [33], did not measure VO2Max which is the gold standard for cardiorespiratory fitness
- The data from the study by Masocha [39], are from a small sample of elite athletes that could not be generalized to the rest of the population
- There are no mechanisms for systematic surveillance of physical fitness

Recommendations

- Advocate for systematic surveillance of physical fitness using standard and inter nationally recognized measures
- Obtain data from representative samples

Key findings

- Makaza and associates [33] found that on average, 8-16-year-old Zimbabwean school children and youth achieved 131.1 cm broad jump, 10.4 cm sit and reach flexibility, 15.0 sec on a 1x 5-meter shuttle run and an average of approximately 13 sit ups.
- Masocha [39] reported an average sit and reach flexibility of 10.1 cm, 1581 meters on the HOFF test, and VO2Max of 61.8 ml/kg/min among 16-year-old elite soccer players.

Nutritional Status (B)

This indicator was mainly informed by data from two national surveys [45,46] and three studies [47,48,49]. Additionally, it was also informed by a combination expert opinion and consensus. The RCWG agreed that although not among core indicators for global matrix 3.0, nutritional status (an important indicator in the Zimbabwean context as described above), must be continuously monitored, and thus needed to be included in the present Report Card. The co-existence of underweight and obesity among Zimbabwean children makes it critical to report on this indicator. Data from the nationally representative Demographic and Health Survey showed close to one third (27%) of Zimbabwean children under the age of five were stunted while 6% were overweight. Muderedzwa and Matsungo [47] found evidence of the double burden of malnutrition and reported that more girls (2.5%) than boys (1.4%) were stunted.

Key findings

- The 2018 national nutrition survey report revealed that26.2%, 2.55%, 2.65% and 8.8% of the children under 5 years old were stunted, wasted, underweight and overweight respectively [46].
- Data from the 2015/16 Demographic Health Survey [45] showed that 27% of children under the age of 5 were stunted, 3% wasted, 8% are underweight, and 6% are overweight.
- The 2018 study by Muderedzwa and Matsungo [47], reported approximately 4%, 6% and 7% of stunting, wasting and overweight respectively among 9-14-year-old children in Harare, Zimbabwe.
- Sibanda and colleagues [48] found 5% stunting, 5% wasting, 3.3% underweight and 1.7% overweight among 5-11-year old children in Gwanda, Zimbabwe.
- Kabondo, Sartorius and Mhlanga [49], found that the overall prevalence of over-fatness and obesity among primary school children in Mashonaland West was 8% and 10% respectively.

Research gaps

- There are no research data documenting the types and serviceability of school infrastructure which encourages PE.
- The proposed systematic surveillance and enforcement mechanisms for adherence to the PE syllabi as well as examination structures are yet to be evaluated.
- There are no consolidated data on the PE teachers to student ratios per school, or formal assessments of the school environments to en sure compliance with adequate PE.

Recommendations

- There is need for nationally representative data about the nutritional status of children that are older than 5 years and for the youth in Zimbabwe.
- Research documenting the nutritional status and how it is related to physical activity among children and youth is needed to better inform policy and future grade assignment for this indicator.
- Studies that evaluate the impact of existing programs on nutritional outcomes are required

Family and Peers (Incomplete)

There was insufficient research evidence to accurately grade this indicator. Although anecdotally, there seemed to be indications of peer and family influence on children's key physical activity indicators, it was not enough for the Report Card Working Group to confidently award a grade.

Research gaps

- There is lack of data about what and how peers and families influence children's physical activity.
- There is a lack of research data on the percentages of parents who are active with their children encour age/facilitate opportunities for their children to be physically active.

Recommendations

- Research documenting, those and what influences children and youth, and how much they do so, is needed to better inform future grade assignment for this indicator.

Community and Environment (D)

Although there were no research data to inform the grading of this indicator, the Ministry of Sport and Recreation policy [51], and expert opinion consensus led to the awarding of a D. The experts agreed that indeed there were recreational facilities and public parks, mostly in major urban areas, however it was noted that the majority were in derelict conditions, unsafe and without proper upkeep.

Research gaps

- There are no data to estimate the numbers, serviceability conditions, location and distribution of recreational facilities, public parks and other infrastructure.
- There are no policies or systematic municipal or community procedures to deal with the state of disrepair to ensure safety for most of the public spaces.
- There are no data to accurately estimate the numbers of children and youth who would want to access these spaces and the reasons they may not have used the existing ones.

Recommendations

- Research is required to provide accurate estimates of available infrastructures, their location and distribution, serviceable conditions, number of children and youth accessing and using them, and what policies and procedures exist for upkeep and maintenance.

School Environment (C)

The school environment was graded based on expert opinion, policy documents [40,50], and the national physical education (PE) syllabi for infants and early childhood [41], primary [42] and secondary education [35,44]. Through the Ministry of Primary and Secondary education, the government promotes and mandates the teaching and examination of PE. The implementation of the new curricula and additional policy measures was viewed as a positive development in the government's efforts to promote active healthy lives for school children and thus a grade C was awarded.

Key findings

- The Zimbabwe Government implemented new education curricula (2015-2022), that prioritizes PE from elementary, primary, through to secondary schools [40]
- The Infant School Physical Education Syllabus allocates at least five x 30-minute sessions per week and covers broad topics on basics of PE [41]
- The Junior (Grade 3-7) Syllabus aims to "develop social values, attitudes and skills through participation in Physical Education, Sport and Mass Displays; display and improve level of health and skill related fitness", and allocates ten x 30-minute sessions of PE per week [42]
- The Syllabus for Secondary School learners (Forms 1 to 4), allocates eight x 35-minute sessions of PE per week [43]
- The Syllabus for Secondary School learners (Forms 5 and 6), allocates a minimum of ten x 40-minute sessions of PE per week [44]

Research gaps

- There are no research data documenting the types and serviceability of school infrastructure which encourages PE.
- The proposed systematic surveillance and enforcement mechanisms for adherence to the PE syllabi as well as examination structures are yet to be evaluated.
- There are no consolidated data on the PE teachers to student ratios per school, or formal assessments of the school environments to en sure compliance with adequate PE.

Recommendations

- Accessible physical activity school policies are needed.
- There is need for a systematic school infrastructure and environmental audit.
- There needs to be mechanisms of surveillance and enforcement to ensure compliance with PE syllabi requirements.
- Research is needed to consolidate data on Teacher to student ratios, and the resources available for PE teachers to effectively perform their roles.
- There is need to evaluate the basic competencies of PE teachers for to ensure that PE teaching and instruction is standardized.
- Evaluation of the examination structures is needed

Government Strategies and Investments (C-)

This indicator was graded based on the Zimbabwe School Health Policy [50], the Ministry of Sports and Recreation's national policy [51], Ministry of Health and Child Welfare Strategic policy [52], and the priorities set by the Sports and Recreation Commission Act [53]. All policy documents provide guidelines on recreation, physical activity and sport participation in Zimbabwe.

Key findings

- The main goals of the Zimbabwe School Health Policy [50] include to: improve access to and use of health and nutrition services at school; and provide opportunities for physical education and recreation to enable access of young people to constructive activities and strengthen school programmes for counselling, social support and mental health promotion.
- The Ministry of Sports and Recreation's policy [51] calls for inter-ministerial collaboration in promoting physical activity and has a well delineated five-year implementation plan.
- The Sports and Recreation Commission Act's roles include to: ensure that recreational facilities are established; oversee training programmes for sports persons; ensure that opportunities for sport and recreation are made available to all persons throughout Zimbabwe [53].

Research gaps

- There is no evidence of stakeholder (business and NGOs) engagement for their support in making child physical activity a priority
- There is little evidence of resource allocation for the national policies or robust inter-ministerial collaboration.

Recommendations

- Systematic surveillance and enforcement mechanisms are needed to ensure that physical activity is prioritized among children.
- There should be efforts to implement the inter-ministerial collaboration which is mandated by the draft national policy.
- There is need for direct financial and human resources allocation for promoting physical activity, sports and recreation.
- There is need for ongoing engagement and collaboration between government, the corporate sector and not-for-profit organizations.

Non-Governmental Strategies and Investments (Incomplete)

There were neither research data nor sufficient anecdotal evidence to inform expert opinion to confidently award a grade for this indicator. Furthermore, at present, there is no independent not-for-profit organization which can advocate and engage policy makers on matters pertaining to healthy active lifestyles among Zimbabwean children and youth. Only one corporation, Nestle Zimbabwe [54], partners with the National Association of Primary School Headmasters in the Nestle Kids Athletics Physical Activity to promote active healthy living among primary school-children. In 2016, Nestle unveiled the Healthy Kids Athletics and Physical Education competitions in Zimbabwe Program which have directly impacted close to 190 000 children. Another organization, the Zimbabwe Physical Education and Sport Teachers Association (ZIPESTA), "a professional board for Physical Education, Sport and Mass Display teachers employed as teachers in Zimbabwean schools and other persons who share an interest in the field of Physical Education, Sport and Mass Displays" (www.zipesta.org.zw/about), brings together teachers, students, and other Zimbabwean stakeholders with an interest in PE. Given the foregoing, this indicator was graded incomplete.

Recommendations

- There is need for strengthening of stakeholder networks by forming a national organization which will gather evidence and advocate for policies and interventions that promote active healthy living among children and youth.

Key findings

- There is currently no independent not-for-profit organization to coordinate, engage and advocate for active healthy living among children and youth in Zimbabwe.

Overall Recommendations for Research, Policy and Practice

- There is need for accurate estimates of physical inactivity to be addressed as the emerging and serious public health challenges that they are among children and youth in Zimbabwe.
- There is need for context-specific and culturally relevant physical activity and sedentary behaviour guidelines in Zimbabwe.
- There is need for an effective physical activity promotion strategy, which includes national physical activity guidelines making it a public health priority in Zimbabwe.
- Research capacity building, targeted training, and ongoing engagement of all stakeholders must be prioritized.
- There is need for earnest and ongoing efforts to establish mutually beneficial partnerships with potential funders and collaboration networks.
- There is need for structural changes and policy initiatives to address the potential unintended consequences of 'development' such as urbanization and an over-reliance on motorized transportation which may be negatively impacting habitual physical activity among children and youth.
- Public health messages must have a dual focus to be effective in addressing the emerging and challenging consequences of the double burden of malnutrition in which undernutrition among Zimbabwean children and youth, now coexist with over-nutrition and obesity.
- Researchers and policy makers alike should capitalize on the momentum created by the new school curricula and help make childhood physical activity and nutrition a priority.
- Studies that explore the nutritional status and assess the impact of policies and programmes targeting school age children and adolescents are required

Conclusions

The results of the 2018 Zimbabwe Report Card show that there is a lack of, and demands the need for reliable information and research evidence on key indicators of physical activity and the nutritional status of children and youth. However, evidence from the limited data gathered for this Report Card demonstrate that although most Zimbabwean children and youth use active transport (e.g. walking or cycling), engaged in organized sports, and did not spend too much time in sedentary behaviours; have relatively healthy nutritional status, their levels of physical activity are generally lower than desired. Furthermore, rates of under and over nutrition are concerning. Due to lack of opportunities, safe areas, programs, and investments, as well poor diets, Zimbabwean children may be at risk of becoming increasingly physically inactive, more sedentary, with unhealthy nutritional status, thereby putting them at a higher risk for non-communicable diseases early in their adulthood. Overall, the results suggest a need for robust research, strong advocacy and stakeholder engagement, as well as policies that prioritize healthy active living among Zimbabwean children and youth.

Lessons From The 2016 Report Card

Table 3 below presents the grades from 2016 and 2018 and makes comparisons with regards to the grades for individual indicators and any progress made. Grades for behavioral indicators did not change because of lack of new data. We still relied on mostly unpublished data. Our participation in the Global Matrix 2.0 put Zimbabwe on an international platform, and the official launch of our Report Card in-country was a highlight for the movement to get our kids active. Involving institutions of higher learning and other stakeholders is important to move the child physical activity agenda forward.

Where do we go from here?

This second Report Card provides important synthesis of data intended to build on the momentum, interest and conversations related to physical activity and nutritional status among children and youth in Zimbabwe, generated at, and after the successful launch of the first Zimbabwe Report Card in 2016. It builds a strong case for research and policy initiatives that will promote physical activity among children. Specifically, this document provides evidence supporting the need for:

- *The continued need to establish Active Health Kids Zimbabwe, an independent not-for-profit organization whose role will be to advocate for policies and research that will promote healthy active living among children and youth in Zimbabwe.*
- *Cultivating and establishing enduring links and relationships between Active Healthy Kids Zimbabwe and reliable local or international partners.*
- *Firm commitment to biennial development and authorship of the Report Card and ongoing participation in the Active Healthy Kids Global Alliance's global matrix.*
- *Devoting time, financial and human resources to research and advocacy work promoting healthy active lifestyles among children and youth in Zimbabwe.*
- *Prioritizing areas identified in this document as needing urgent attention and which can be addressed with few resources.*

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Table 1. Grading Rubric: Global Matrix 3.0 with Interval variables[a]	
Grade	**Interpretation**
A+	94% - 100%
A	We are succeeding with a large majority of children and youth (87% - 93%)
A-	80% - 86%
B+	74% - 79%
B	We are succeeding with well over half of children and youth (67% - 73%)
B-	60% - 66%
C+	54% - 59%
C	We are succeeding with about half of children and youth (47% - 53%)
C-	40% - 46
D+	34% - 39%
D	We are succeeding with less than half but some children and youth (27% - 33%)
D-	20% - 26%
F	We are succeeding with very few children and youth (<20%)
INC	Incomplete - insufficient or inadequate information to assign a grade

Table 2. Indicators and benchmarks used for grade assignment: Global Matrix 3.0	
Indicator	**Benchmark**
Overall Physical Activity	% of children and youth who meet the Global Recommendations on Physical Activity for Health, which recommends that children and youth accumulate at least 60 minutes of moderate- to vigorous-intensity physical activity per day on average. Or percentage of children and youth meeting the guidelines on at least 4 days a week (when an average cannot be estimated).
Organized Sport and Physical Activity	% of children and youth who participate in organized sport and/or physical activity programs.
Active Play	% of children and youth who engage in unstructured/unorganized active play at any intensity for more than 2hours a day. % of children and youth who report being outdoors for more than 2 hours a day.
Active Transportation	% of children and youth who use active transportation to get to and from places (e.g., school, park, mall, friend's house).
Sedentary Behaviors	% of children and youth who meet the Canadian Sedentary Behavior Guidelines (5- to 17-year-olds: no more than two hours of recreational screen time per day). Note: the Guidelines currently provide a time limit recommendation for screen-related pursuits, but not for non-screen-related pursuits.
Physical Fitness	Average percentile achieved on certain physical fitness indicators based on the normative values published by Tomkinson et al.

Table 1 Cont'd

Family and Peers	% of family members (e.g., parents, guardians) who facilitate physical activity and sport opportunities for their children (e.g., volunteering, coaching, driving, paying for membership fees and equipment). % of parents who meet the Global Recommendations on Physical Activity for Health, which recommends that adults accumulate at least 150 minutes of moderate-intensity aerobic physical activity throughout the week or do at least 75 minutes of vigorous-intensity aerobic physical activity throughout the week or an equivalent combination of moderate- and vigorous-intensity activity. % of family members (e.g., parents, guardians) who are physically active with their kids. % of children and youth with friends and peers who encourage and support them to be physically active. % of children and youth who encourage and support their friends and peers to be physically active.
School	% of schools with active school policies (e.g., daily PE, daily physical activity, recess, "everyone plays" approach, bike racks at school, traffic calming on school property, outdoor time). % of schools where the majority (≥ 80%) of students are taught by a PE specialist. % of schools where the majority (≥ 80%) of students are offered the mandated amount of PE (for the given state/territory/region/country). % of schools that offer physical activity opportunities (excluding PE) to the majority (> 80%) of their students. % of parents who report their children and youth have access to physical activity opportunities at school in addition to PE classes. % of schools with students who have regular access to facilities and equipment that support physical activity (e.g., gymnasium, outdoor playgrounds, sporting fields, multi-purpose space for physical activity, equipment in good condition).

Community and Environment	% of children or parents who perceive their community/ municipality is doing a good job of promoting physical activity (e.g., variety, location, cost, quality). % of communities/municipalities that report they have policies promoting physical activity. % of communities/municipalities that report they have the infrastructure (e.g., sidewalks, trails, paths, bike lanes) specifically geared toward promoting physical activity. % of children or parents who report having facilities, programs, parks and playgrounds available to them in their community. % of children or parents who report living in a safe neighborhood where they can be physically active. % of children or parents who report having well-maintained facilities, parks and playgrounds in their community that are safe to use.
Government	Evidence of leadership and commitment in providing physical activity opportunities for all children and youth. Allocated funds and resources for the implementation of physical activity promotion strategies and initiatives for all children and youth. Demonstrated progress through the key stages of public policy making (i.e., policy agenda, policy formation, policy implementation, policy evaluation and decisions about the future).

Table 3: Grades for the 2016 and 2018 Zimbabwe Report Cards		
Indicator	**Year(s)**	
	2016	**2018**
Overall Physical Activity	C+	C+
Organized Sport and Physical Activity	B	B
Active Play	D+	D+
Active Transportation	A-	A-
Sedentary Behaviours	B	B
Nutritional Status	Not graded	B
Physical Fitness	Not graded	Incomplete
Family and Peers	Incomplete	Incomplete
School	D	C
Community and Environment	F	D
Government Strategies and investments	D	C-
Non-Governmental Strategies and Investments	Incomplete	Incomplete

ACTIVE HEALTHY KIDS
ZIMBABWE

ACTIVE HEALTHY KIDS ZIMBABWE

Active, healthy lifestyles for children and youth