



Contents lists available at ScienceDirect

Journal of Exercise Science & Fitness

journal homepage: www.elsevier.com/locate/jesf

Results from the Philippines' 2022 report card on physical activity for children and adolescents

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ARTICLE INFO

Article history:

Received 8 July 2022

Received in revised form

19 September 2022

Accepted 1 October 2022

Available online 7 October 2022

Keywords:

Active living

Low-to-middle income countries

Physical activity promotion

Physical fitness

Public health

Sedentary behavior

ABSTRACT

Background/Objective: The 2022 Philippine Report Card on Physical Activity for Children and Adolescents provides a comprehensive assessment of physical activity and other related behaviors, including the various factors and settings that influence these behaviors. It serves as an advocacy tool to increase awareness of the physical activity situation among children and young people in the country. This article describes the development and results of the first Philippine Report Card on Physical Activity for Children and Adolescents.

Methods: Following a systematic process provided by the Active Healthy Kids Global Alliance, a team consisting of 25 sports and physical activity specialists identified and reviewed the best available nationally representative data related to physical activity indicators. These data were then used to inform the grades of the ten (10) physical activity indicators.

Results: Sufficient data were identified to assign grades to five (5) indicators: Overall Physical Activity (F), Active Transportation (D), Sedentary Behavior (B), School (C-), and Government (B). Insufficient data existed to assign grades to the remaining five (5) indicators: Organized Sport and Physical Activity, Active Play, Physical Fitness, Family and Peers, and Community and Environment.

Conclusion: Despite government policies related to physical activity in the country, the majority of children and adolescents in the Philippines do not meet the recommended amount of physical activity for health. More work is needed to improve the translation of these policies into measurable programs, highlighting the need to create better physical activity opportunities and develop national surveillance mechanisms.

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Abbreviations: AHKGA, Active Healthy Kids Global Alliance; PA, physical activity; SB, sedentary behavior; YAFS4, Young Adult Fertility and Sexuality Survey 4; FNRI ENNS, Food and Nutrition Research Institute Enhanced National Nutrition Survey.

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<https://doi.org/10.1016/j.jesf.2022.10.001>

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1. Introduction

The Philippines is an archipelagic country with more than 108 million people, about 30% percent composed of children and youth.^{1–3} Surveillance data show an alarmingly high prevalence of insufficient physical activity (PA) among young Filipinos.^{4,5} In particular, the 2019 Philippine Food and Nutrition Research Institute (FNRI) reported that 84.6% of Filipino adolescents aged 10–17 years are not meeting the recommended amount of PA for health.^{6,7} The high prevalence of physical inactivity among young Filipinos raises a public health issue that deserves much attention from local public health authorities and stakeholders.

Despite the Philippine government's efforts to promote PA through sports, physical education (PE), and healthy lifestyles,^{8–11} available data suggest that the country has not successfully addressed the issue of physical inactivity, especially among Filipino children and adolescents. For instance, data from the Global School-based Health Surveys (GSHS) show that the percentage of Filipino adolescents meeting the global PA recommendation has remained significantly low since 2003, and there is an increasing trend in sedentary behaviors (SB).^{12–16} It is still unclear whether this discrepancy is due to ineffective PA policies or a lack of technical capacity to implement existing policies. A more comprehensive evaluation of PA, including its sources of influence and settings, is needed to have a broader understanding of the PA status of children and adolescents in the Philippines.

The Global Matrix 4.0 project is an initiative of the Active Healthy Kids Global Alliance (AHKGA) to evaluate the extent to which countries are successful in promoting PA participation among young people, including providing opportunities for them to be more physically active.¹⁷ Each country develops its own report card following a standard procedure.^{18,19} The main output is the PA Report Card, a communication tool used to increase awareness of the PA situation among young people in the country. In addition, it aims to advance knowledge and influence stakeholders and advocacy leaders to create more PA opportunities for young people.

The AHKGA provides the definitions and benchmarks of the indicators, which the country workgroup uses as reference. Acknowledging that not all countries have the same set of data, AHKGA provides multiple benchmarks for several indicators (e.g., School, Family and Peers). After gathering and assessing the available data, each indicator is assigned a grade based on standard criteria. The ten indicators include behaviors or traits (Overall PA, Physical Fitness, Organized Sport and PA, Active Play, Active Transportation, Sedentary Behaviors), and influences and settings (Family and Peers, School, Community and Environment, Government).^{19,20}

The Philippines' participation in the Global Matrix 4.0 project aims to increase awareness of the need to provide more PA opportunities for children and young people. This paper describes the development of the first Philippine Physical Activity Report Card for Children and Adolescents, and reports the grades for the ten (10) PA indicators common to all participating countries in the Global Matrix 4.0 project. The purpose of the Philippine Report Card is to provide a comprehensive summary of the best available evidence on PA and other related indicators in the country, and to advocate PA promotion among children and adolescents.

2. Methods

Guided by the standardized methodology provided by the AHKGA,²⁰ a research workgroup (RWG) consisting of 25 academics and practitioners in the fields of physical activity, sports science, PE, psychology, and physical therapy was formed in May 2021 to develop and produce the 2022 Philippine Physical Activity Report

Card. Published scientific papers on PA of Filipino children and adolescents (5–17 years old) were identified through systematic database searching (Scopus, ERIC, Web of Science, PsycINFO, SportDiscus, and PubMed) using the keywords “Philippines OR Filipino,” “physical activity OR sports OR exercise OR fitness OR play OR sedentary behavior OR screen time OR leisure activities OR walking,” and “children OR adolescents OR teens OR pediatric OR youth.” Additionally, national surveys, government reports, policies, unpublished data, and additional relevant data sources were identified via manual searching or requested via the Philippine Freedom of Information (FOI) website.²¹ The language used for the search was English. Current evidence on the benefits and outcomes of regular PA for children and adolescents were also assessed and described within the Report Card to provide context, background, and justification for the importance of PA in public health.

Five national surveys were identified to contain potentially relevant information that could be used to inform the grade assigned for each indicator: (1) the 2013 Young Adult Fertility and Sexuality Study: Philippines (YAFS4),²² (2) the 2015 Global School-based Student Health Survey (GSHS): Philippines,²³ (3) the 2017 Philippine National Demographic and Health Survey (PNDHS),²⁴ (4) the 2018 Philippine Health Statistics (PHS),²⁵ and (5) the 2019 FNRI Enhanced National Nutrition Survey (ENNS).^{6,7} In addition, 40 papers with potentially relevant data were identified via systematic database and manual searches. Furthermore, national policies related to sports and PA were identified via an online search of government databases.

Using the information extracted from the identified sources, the RWG prepared preliminary grades for each of the ten indicators: Overall PA, Organized Sport and PA, Active Play, Active Transportation, Sedentary Behaviors, Physical Fitness, Family and Peers, School, Community and Environment, Government.^{19,20} Indicators were evaluated and graded using the standardized benchmarks and grading scheme provided by the AHKGA.^{20,26} The evidence was considered sufficient to inform the grading process if the data was derived from a national representative sample. The grading scheme follows a letter grade scale typical of a school report card. For example, a grade of “A” is assigned to an indicator if the country is succeeding with 80% or more of the children and adolescents meeting the benchmark. If no sufficient data is available, the indicator is assigned a grade of INC. The grade for Overall Physical Activity was informed by 2019 FNRI ENNS ($n = 10,175$; 13–17 years),^{6,7} while grades for Active Transportation, Sedentary Behaviors, and School were informed by the 2015 GSHS Philippines ($n = 8761$; 13–17 years).²³ The grade for Government was based on the 10 policies identified through the online search of government databases, evaluated following the scoring rubric suggested by Ward et al.²⁶ This scoring rubric was based on the Policy Audit Tool Version 2 (PAT v2) developed by the Health-Enhancing Physical Activity (HEPA) Europe,²⁶ which includes six (6) criteria with different score weights totaling to 100%: number and breadth of relevant policies (10%), identified supporting actions (20%), identified accountable organization (25%), identified reporting structures (15%), identified funding (20%), and monitoring and evaluation plan (10%).

The RWG invited sports and PA leaders, advocacy groups, health and education experts, and other stakeholders from around the country to an online meeting on November 8, 2021 to present and discuss the group's preliminary findings. Suggestions from the stakeholders to investigate further and request data from appropriate government agencies were considered. No additional data were identified; hence, the preliminary grades were retained, except for the Government indicator as additional policies were located. Follow-up consultations with selected stakeholders were then held in January 2022 to collect additional comments. These

comments and recommendations were incorporated into the final version of the report.

3. Results

Data used to inform the grading process were derived mainly from two national surveys^{6,15} and national sports and PA policies. Sufficient data were identified to assign grades to five indicators: Overall PA (F), Active Transportation (D), Sedentary Behaviors (B), School (C-), and Government (B). Grades of incomplete (INC) were assigned to the other five indicators due to a lack of available nationally representative data. Table 1 shows the ten indicators and the corresponding grades, and Fig. 1 shows the front cover of the Report Card.

3.1. Overall PA: F

Two national surveys^{7,22} and three empirical studies^{27–29} were considered to have potentially useful data to grade Overall PA. In the 2013 YAFS4, 47.3% of Filipino adolescents (15–19 years) reported doing physical exercise at least twice a week.²² However, the duration and intensity of exercise were not reported. The three empirical studies used pedometers or accelerometers to measure PA of Filipino children and adolescents, but they had small sample sizes^{27,28} or were limited only to one province.²⁹ Data from YAFS4 and the three empirical studies were ruled out for not meeting the AHKGA benchmark. The 2019 FNRI ENNS reported that 84.5% of Filipino adolescents were insufficiently active (i.e., doing less than 60 min of moderate-to vigorous- PA per day).⁷ The proportion of insufficient PA among males (80.5%), females (88.8%), and those living in rural (84.9%) and urban areas (84.3%) were also reported. The 2019 FNRI ENNS data implies that 15.4% of Filipino adolescents (19.5% males, 11.2 females; 15.1% rural, 15.7% urban) were sufficiently active (i.e., doing 60 min or more of moderate-to vigorous-intensity PA per day). Hence, a grade of F was assigned for Overall PA based on this information.

3.2. Organized Sport and PA: INC

Data from YAFS4²² and one peer-reviewed study³⁰ were considered for this indicator. In YAFS4, participants were asked to list down all activities they do in their leisure time, and 24.6% of adolescents reported playing sports as one of their leisure

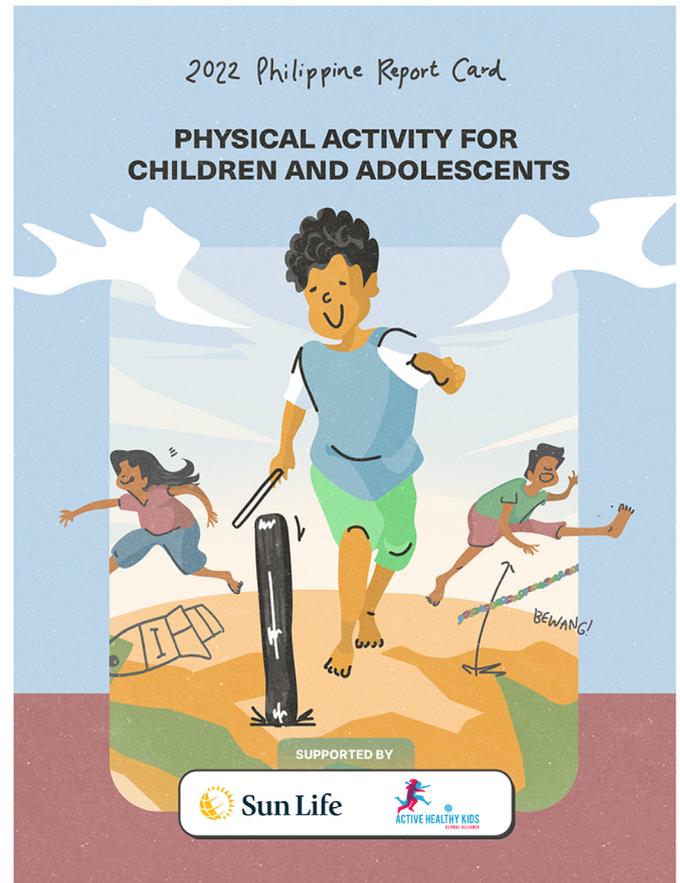


Fig. 1. Front cover of the 2022 philippine physical activity report card.

activities.²² However, it was unclear whether sports were played in structured, organized, and contest-based contexts as defined by AHKGA. In one peer-reviewed paper involving 408 students (11–19 years) from two public high schools in Metro Manila, 137 (33.6%) reported to participate in afterschool sports.³⁰ Of these 137, 75 (54.70%) were boys, and 62 (45.30%) were girls. Data from this study, however, was limited only to two public schools in Metro Manila. No other nationally represented data were identified to inform the grade. Hence, this indicator was assigned a grade of INC.

3.3. Active Play: INC

Two studies were identified to potentially contain data related to active play. In a study involving 380 schoolchildren,³¹ 29.0% of 12-year-old boys to 40.8% of 11-year-old girls reported free play in the form of traditional Philippine games (e.g., *patintero*, *tumbang preso*) as one of the most common activities they take part in. In another study ($n = 437$), Bernardo³² investigated the activities Filipino children play at home and in school, and found that 32% of girls and 40.5% of boys reported playing outdoor/motor games at home. Both studies had small sample sizes and were deemed insufficient to grade the indicator. The RWG could not find any other data on Active Play and was, therefore, assigned a grade of INC.

3.4. Active Transportation: D

Three potential sources of data were considered for Active Transportation. In one study involving 2043 adolescents (14–16

Table 1

Grades assigned to indicators in the 2022 philippine report card on physical activity for children and adolescents.

Indicator	Grades
Overall Physical Activity	F
Organized Sport and Physical Activity	INC
Active Play	INC
Active Transportation	D
Sedentary Behaviors	B
Physical Fitness	INC
Family and Peers	INC
School	C-
Community and Environment	INC
Government	B

Note. The grade for each indicator is based on the percentage of children and adolescents meeting a defined benchmark: A + is 94%–100%; A is 87%–93%; A– is 80%–86%; B + is 74%–79%; B is 67%–73%; B– is 60%–66%; C + is 54%–59%; C is 47%–53%; C– is 40%–46%; D + is 34%–39%; D is 27%–33%; D– is 20%–26%; F is <20%; INC is Incomplete data. (if applicable) a “*” is added to the grade if it is based on mixed data: device-measured and self-reported; and a “***” is added to the grade if it is based on device-measured data exclusively.

years: 1053 males, 990 females) in Cebu, it was reported that 40% walked to school, and less than 1% rode a bike.²⁹ In another study involving 1208 schoolchildren, 8–10 years, from public ($n = 642$) and private ($n = 566$) schools in Metro Manila, it was reported that 49.5% of children from public schools versus 9.0% of children from private schools walked to school.³³ Data from both studies, however, were almost two decades old and focused only on one locality. One item in the 2015 GSHS asked respondents to report on the number of days they walk or ride a bicycle to or from school.³⁴ Based on the 2015 GSHS data, we found that 29.5% of Filipino schoolchildren (27.2% males; 31.5% females) walked or biked to school at least five days a week. A grade of D was then assigned to this indicator using the information from the GSHS.

3.5. Sedentary Behaviors: B

One national survey and one empirical paper were considered for this indicator. In a study describing the PA and inactivity levels of Filipino adolescents aged 14–16 years in Cebu, the authors reported that 48% of Filipino adolescents watched TV two or more hours per day (i.e., 52% watched TV for less than 2 h per day).²⁹ Data from this study, however, is almost two decades old and taken only from one province. Again, the data from the GSHS was used because it was based on a national sample and the most recent data identified by the RWG at the time of data collection. In the 2015 GSHS,^{15,23} it was reported that 31.9% of Filipino adolescents spent three or more hours per day sitting and watching TV, playing computer games, or talking with friends, indicating that 68.1% (68.4% males; 67.8% females) spent 2 h or less per day on those activities. Hence, a grade of B was assigned to this indicator.

3.6. Physical Fitness: INC

Four studies that included physical fitness as a variable were identified via systematic database searches.^{35–38} However, these studies were not based on nationally representative samples and, therefore, not sufficient to inform the grade. In addition, consultation meetings with stakeholders involved in school sports and PE revealed that public schools conducted regular physical fitness testing,¹¹ but no publicly available reports had been produced. Physical fitness was therefore assigned a grade of INC.

3.7. Family and Peers: INC

Two studies were identified to potentially contain data relevant to the family and peer indicator. Florentino et al.³³ reported that about 80% of Filipino parents “consider PA very important to child’s health” and more than 50% “always encourages their child to take part in PA.” Data, however, limited to 1208 children 8–10 years of age from urban Manila only. In the study of Khan et al. examining the relationship between parental or peer support and adolescents’ PA,³⁹ they found that Southeast Asia, including the Philippines, had the highest association between peer support and adolescents’ PA. This report used the 2015 GSHS data that measured parental and peer support using the following items: “During the past 30 days, how often did your parents or guardians understand your problems and worries?” and “During the past 30 days, how often were most of the students in your school kind and helpful?” These items did not meet the AHKGA benchmarks and were deemed insufficient. The RWG did not identify any other relevant data on this indicator and was therefore assigned a grade of INC.

3.8. School: C-

Data from the 2015 GSHS^{15,23} showed that 46.5% of Filipino

students (44.6% males, 48.4% females) attended PE classes on three or more days each week. We requested data from the Department of Education through the government FOI portal, but the request returned negative (i.e., no available data). No other data were available except for the GSHS. Therefore, this indicator was graded C-.

3.9. Community and Environment: INC

A grade of INC was assigned to this indicator due to a lack of data. While there are local government policies pertaining to the establishment of facilities for use in sports and recreation and the creation of barangay sports councils, the RWG was not able to identify any data illustrating the percentages of children or parents who report having access to these local sports and recreation facilities and programs.

3.10. Government: B

Ten (10) national policies (Table 2) were identified to promote active lifestyles among Filipino children and adolescents, including those with disabilities. Following the suggested scoring tool,²⁶ these policies were evaluated as follows: number and breadth of relevant policies (5/10), identified supporting actions, (13/20) identified accountable organizations, (22/25) identified reporting structures (6/15), identified funding (16/20), and monitoring and evaluation plans (5/10), totaling to 67. Hence, a grade of B was assigned to this indicator. Details of the evaluation are provided in the Report Card.

3.11. The 2022 Philippine Report Card front cover

The 2022 Philippine Report Card front cover illustrates Filipino children playing traditional Filipino games such as *Karera ng Gulong* (wheel race), *Piko* (hopscotch), and *Luksong Lubid* (jumping rope). Studies suggest that, despite the prevalence of online games, traditional Filipino games are still played by Filipino children, especially those from rural areas.^{40,41} This cover was chosen to promote not only PA but also Philippine culture.⁴²

4. Discussion

The 2022 Philippine Report Card on Physical Activity for Children and Adolescents is the first-ever comprehensive report on the PA situation among children and adolescents in the Philippines. Out of the ten indicators, only five were assigned grades due to a lack of data to grade the other indicators.

4.1. Overall PA: F

Despite the government’s efforts to promote PA through policies, the vast majority of Filipino adolescents do not meet the global PA recommendations,^{4,5} which have not changed since 2003.^{12–15,43} There are an equally high prevalence of insufficient PA in male and female adolescents, and adolescents living in rural and urban areas. Nevertheless, the gender difference remains notable; more females were insufficiently active compared to males. These results highlight the need for local authorities and stakeholders to take action and create more PA opportunities for all Filipino children and adolescents, especially among females. Given the many potential benefits of PA in children and adolescents,^{44–46} and the influence of childhood PA on future PA and health,^{47,48} PA promotion for children and adolescents in the Philippines should be a public health priority.

Table 2
Philippine policies promoting Filipino children and adolescents' active lifestyle.

Policy Title	Year Enacted	Scope or Purpose
Republic Act 10588 “Palarong Pambansa Act of 2013” (National Games)	2013	<ul style="list-style-type: none"> • Institutionalization of the <i>Palarong Pambansa</i> as the premier national sporting event of the country under the Department of Education (DepED) as a venue for talent identification, selection and recruitment of student athletes [3] • Improvement of the DepED’s national school sports program and giving more prestige to the annual sports event by encouraging better participation of schools through incentives and rewards [3] • Encouragement of the local government units (LGUs) to take a proactive role in the promotion of the <i>Palarong Pambansa</i> locally and nationally by providing incentives and rewards [3]
Republic Act 5708 “The Schools Physical Education and Sports Development Act of 1969”	1969	<ul style="list-style-type: none"> • Integration of PE and sports development program in all schools in the Philippines through: <ul style="list-style-type: none"> • A program of general physical fitness for all pupils in elementary and secondary schools through an observance of a daily routine of calisthenics exercises and a separate daily period in the school program for PE including folk dancing and gymnastics [4] • A program of competitive athletics in all schools starting in the intermediate grades to identify promising athletes to be further encouraged, developed and supervised more intensively in the secondary schools [4] • A program of intramural and inter-unit athletic competition within schools, district and provinces [4] • An annual program of athletic competition within and among regions and in interscholastic or national meets [4]
Republic Act 11470 “The National Academy of Sports”	2019	<ul style="list-style-type: none"> • Establishment of National Academy of Sports (NAS) System to develop the athletic skills and talents of students in world class sports facilities which are at par with international standards [5]
Department of Education Order 25, s.2015 “Implementing Guidelines on the Special Program in Sports”	2015	<ul style="list-style-type: none"> • Creation of Special Program in Sports (SPS) to: <ul style="list-style-type: none"> • Enhance athletic potential of talented students in different sports disciplines [6] • Prepare learners for work or higher learning [6] • Achieve school-sport balance [6]
Republic Act 7277 “Magna Carta for Disabled Persons”	1991	<ul style="list-style-type: none"> • Grants of the rights and privileges for disabled persons by: <ul style="list-style-type: none"> • Adopting policies to ensure the rehabilitation, self-development and self-reliance of disabled persons [7] • Developing their skills and potentials to enable them to compete favorably for available opportunities [7] • Includes stipulation on providing training programs on sports and physical fitness and developing and implementing sports and physical fitness programs specifically designed for persons with disabilities [7]
Republic Act 11214 “Philippine Sports Training Center Act”	2018	<ul style="list-style-type: none"> • Establishment of Philippine Sports Training Center (PSTC) to: <ul style="list-style-type: none"> • Promote and develop sports in the country [8] • Achieve excellence in international sports competitions [8] • Ensure success in the country’s quest to achieve competitiveness in the Olympic Games [8]
Republic Act 10699 “National Athletes and Coaches Benefits and Incentives Act”	2015	<ul style="list-style-type: none"> • Promotion of excellence in sports by looking after the welfare of national athletes and coaches competing for the country and by providing benefits and incentives for national athletes and other athletes who win international sports competitions and bring honor and recognition to the country [9]
Republic Act 6847 “The Philippine Sports Commission Act”	1990	<ul style="list-style-type: none"> • Creation of Philippine Sports Commission to: <ul style="list-style-type: none"> • Promote PE [10] • Encourage and sustain the development of sports in the country to foster physical fitness, self-discipline, teamwork and excellence for the development of a healthy and alert citizenry through a unified national sports promotion and development program [10]
Presidential Decree No. 1216	1977	<ul style="list-style-type: none"> • Provision of open spaces, roads, alleys, and sidewalks to create and maintain a healthy environment in human settlements to enhance the quality of life of the residents [11]
Batas Pambansa Bilang 334 or the Accessibility Law	1982	<ul style="list-style-type: none"> • Setting of minimum requirements and standards to make buildings, facilities, and utilities for public use accessible to persons with disabilities [12]

4.2. Organized Sport and PA: INC

Participation in sports during childhood and adolescence is often promoted for its potential to foster positive youth development and influence PA during adulthood.^{49,50} In the Philippines, opportunities for children and young people to engage in sports are often offered through the community or schools, local governments, private sports clubs, and summer recreation programs or sports clinics.^{51–54} However, despite the existence of school-based sports events⁵⁴ and afterschool sports programs,⁵¹ no nationally represented data were identified to inform the grade. National surveillance data is needed to monitor participation prevalence in organized sports and other structured PA.

4.3. Active Play: INC

Active play represents fun, sporadic, and unstructured/

unorganized games or activities played indoors or outdoors.⁵⁵ We identified two potential data sources for Active Play,^{31,32} but the data were insufficient in terms of sample size, age range, and locality. Experts note that measuring active play is difficult and still requires further research.²⁰ Nevertheless, including a measure of active play in national surveys will help monitor this behavior. One strategy to encourage active play is to allow children to play freely during recess.⁵⁶ Recess periods in Philippine schools are typically short, which could hinder active play among children.³² School PA policies, therefore, need to have provisions allowing children and adolescents to move and play during free time.

4.4. Active Transportation: D

Active transportation, or active commuting, provides another opportunity for children and adolescents to be physically active. Our results indicate that one in three Filipino adolescents walked or

biked to school regularly. This is probably because children and adolescents in the Philippines typically take motorized vehicles to go to school. Other possible reasons include distance from school, traffic safety, and weather.^{57,58} We also found that more female adolescents engage in active transportation compared to male adolescents. Gender differences in active commuting among adolescents vary across Asia-Pacific countries, calling for further research.⁵⁹ The establishment of bicycle lanes and walking paths across the country to promote active transport during the COVID-19 pandemic⁶⁰ is an encouraging move from the government. However, the extent to which this effort encouraged active transportation among Filipino children and adolescents is still to be determined.

4.5. Sedentary Behaviors: B

None of the identified policies specifically addressed SB. Even in the GSHS 2015 Philippine Report,²³ no recommendation on minimizing SB was mentioned. Therefore, it is unlikely that this relatively high grade is due to successful SB policy implementations. One possible reason is the lack of access to screen-based devices among young Filipinos. For instance, UNICEF Philippines reported that very few children have access to desktop computers, laptop, tablets or games console.⁶¹ The majority of GSHS respondents were from public schools, which are more likely to have children and adolescents from low-to middle-income families with limited or no access to screen-based devices. Another possible reason is the way SB was measured. The GSHS SB item about the time spent on a typical day doing SB (e.g., sitting and watching TV), excluding the time spent sitting in school or when doing homework.⁶² It does not capture the time spent using newer devices such as smartphones, which are more likely to be owned and used by Filipino adolescents,⁶¹ and other SB like sitting in motorized transport. The grade could potentially be lower if useful data other than the GSHS is available. Together with insufficient PA, SB are risk factors for many non-communicable diseases. Therefore, strategies to decrease SB at home and in school are needed to improve health of Filipino children and young people.

4.6. Physical Fitness: INC

Physical fitness is an important marker of health for children and adolescents,^{44,63} used for screening, monitoring, and surveillance.⁶⁴ Physical fitness test is an essential component of PE and school sports programs in the Philippines, conducted regularly in most public schools.¹¹ However, data from previous test administrations seems to have remained unconsolidated as no publicly released national report is available. This possibly reflects a lack of available resources, including funds and technical expertise, or competing priorities, common in low-to middle-income countries (LMICs).⁶⁵

4.7. School: C-

Schools represent an important setting in creating better PA opportunities for children and adolescents beyond PE.⁶⁶ However, due to the unavailability of data, this indicator was graded solely based on PE attendance. We found that, in 2015, almost half of Filipino students attended PE classes three or more days a week, which is a remarkable improvement from 2011, when only 1 in 5 students attended PE classes.^{14,15,23} This increasing trend in PE attendance is encouraging, but there are still opportunities for improvement. For instance, schools in the Philippines offer intramural sports and other PA programs in addition to PE. However, there is no available data on the actual percentage of schools

offering these programs. Such data could provide a better picture of PA participation in this setting.

Strategies identified to improve PA opportunities for young people in schools include: increasing the number of PE lessons, improving the quality of PE lessons, providing teacher training and capacity building, integrating more PA into the curriculum (e.g., activity breaks), providing more after-school sports and PA programs, changing the school environment (e.g., provision of equipment for games and playgrounds, involving parents and families in school-based interventions, involving peers and the entire school community, and promoting active transport to school.⁶⁷ While there is an increased effort from the Department of Education to promote PA among schoolchildren,⁶⁸ robust monitoring and surveillance mechanisms are needed to evaluate these initiatives.

4.8. Family and Peers: INC

Family and peers are important sources of influence in forming young people's PA experience by providing not only opportunities but also establishing norms concerning PA.⁶⁹ Strategies to support family and peers in promoting PA in children and adolescents are, therefore, crucial to help address the public health issue of insufficient PA among Filipino children and adolescents.

Correlates and determinants of PA, like parental support, have not been well documented in LMICs like the Philippines.⁷⁰ The available evidence on family and peer support are mostly from high-income countries and may not be applicable in the Philippines and other LMICs due to differences in social and cultural norms.⁷¹ Therefore, local sports and PA research on this topic can generate useful information to inform local interventions and policies.

4.9. Community and Environment: INC

There was insufficient evidence to assign a grade to this indicator. Improving the grade entails the enhanced identification and coordination of individual and aggregated data on the status of implementation of PA-promoting policies at the municipal level. This includes examining the uptake of municipalities of relevant national PA-related policies as well as the design and evaluation of their own ordinances, guidelines, or services to support the PA engagement of Filipino children and adolescents. Research suggests that built environments that support active commuting (e.g., walking or biking) is associated with active transportation to school among school-aged children and adolescents.⁷² Future work needs to determine whether the establishment of bicycle lanes and walking paths across the country encouraged active transportation among children and adolescents.⁶⁰

4.10. Government: B

Many of identified policies focus on the promotion of sports participation, while only three laws promote other forms of PA like physical fitness, active transport, and active play. Two (2) other programs/actions (i.e., *Batang Pinoy* (Philippine Youth Games) and *Laro't Saya sa Parke* (park-based and family-oriented sports-for-all program) were identified to support enforcement of these policies. A policy specific to promoting the rights and privileges of persons with disabilities (PWDs) was also considered for this indicator as it mandates inclusive promotion of PA and health among this population. The main implementing agencies of these policies are the Department of Education (DepEd), Philippine Sports Commission (PSC), and National Council on Disability Affairs (NCDA) (particularly for PWDs). These policies, including those for PWDs, are not specific to children and adolescents, except for sports-promoting and PE policies implemented by the DepEd. Although funds are

allotted for their implementation, it is difficult to ascertain the extent to which Filipino children and adolescents benefit from these policies and resultant programs due to the lack of accessible reports. Although some of the policies include reporting, monitoring, and evaluation plans, no data was found to inform of the status of the implementation of some of these policies and the resulting benefits to Filipino children and adolescents.

Most of the identified policies promote sports and PE for Filipino children and adolescents in general, with their implementation usually occurring in the school setting. This implies that out-of-school children and adolescents are not able to participate in these programs. As most of the identified policies are on sports participation, it could also be inferred that student-athletes could be the ones primarily benefiting from these policies. There is a need for policies that 1) explicitly advance other forms of PA among Filipino children and adolescents (e.g., minimizing SB, active play, active transport); 2) are more inclusive considering different demographics and health development status; and 3) promote their active healthy lifestyle not only in schools but in other settings as well (e.g., communities, families). More publicly available nationally representative data could provide better evidence of the country's efforts and could inform improvements in implementation and policies for better promotion of active and healthy lifestyles among Filipino children and adolescents.

5. Strengths and limitations

The 2022 Philippine Report Card provides a broad picture of the status of PA among children and adolescents in the country. A prominent strength of this report card is the collaborative efforts of the RWG, composed of academics from various fields related to PA. This collaboration, including the stakeholders' meetings, provided opportunity to discuss the situation of PA research and promotion efforts in the country, identifying gaps, challenges, and possible future directions. The use of a scoring rubric²⁶ to analyze government policies was also a strength of the report card as it allowed for a more objective evaluation of the potential of these policies to influence PA in children and adolescents.

Nevertheless, several limitations need to be noted. First, while efforts were made to identify all possible sources of nationally representative data to grade all ten indicators, five indicators were not graded. The RWG requested data from relevant government agencies through the FOI portal,²¹ but all returned negative (i.e., no available data). This apparent lack of information highlights the need for a comprehensive national PA surveillance system for school-aged children and adolescents. Subgroup analyses comparing young people in the Philippines by age, gender, location, indigenous groups, or ability levels would be possible with national surveillance data, which can also serve as a strategy for evaluating the government's efforts in implementing PA-related policies.⁷³

Second, grades of three indicators (Active Transportation, Sedentary Behaviors, School) relied heavily on the 2015 GSHS data, which was relatively dated, while the grade of Overall PA was derived from 2019 GSHS but reported in the 2019 FNRI ENNS. GSHS were conducted primarily among school-going adolescents (13–17 years), did not include younger children (5–12 years), was self-reported, and lacked context. Children below 10 years are under-represented in the GSHS and need to be included in future national surveillance surveys.⁷⁴

At the time of identifying potential data sources, the RWG was able to locate the 2019 GSHS Philippine Fact Sheet⁷⁵ only after the report card was finalized. If the 2019 data were used, the grade of School indicator would improve slightly from C- (46.5%) to C (53.6%), while Sedentary Behavior would drop from B (68.1%) to B- (63.6%). Data for Active Transportation was not reported in the 2019

Fact Sheet.

Third, the grades do not reflect the situation during the COVID-19 pandemic. The lockdown would have resulted in a significant decrease in PA among young people in the Philippines. For instance, one study published in 2022 reported that total PA of Filipino university students decreased significantly during the first wave of the covid-19 community quarantine in the Philippines.⁷⁶ The impact of the pandemic on PA of children and adolescents in the Philippines requires attention.

Finally, the Philippines is vulnerable to typhoons and other natural disasters. School classes in some areas are often suspended due to heavy rains and flooding, which could potentially impact young people's PA. No data is available to indicate how these interruptions brought about by natural disasters and, possibly, climate change affect PA of children and adolescents in the country. The national PA surveillance system should include assessing year-round variations in PA to account for these changes.

6. Conclusion

Despite the Philippine government's effort to promote sports and physical activity among its citizenry, most children and adolescents in the country fail to meet the recommended amount of physical activity for health. The results highlight the need to improve efforts in translating existing policies into measurable programs, create better physical activity opportunities for young people, and develop national physical activity surveillance mechanisms that capture not only overall physical activity but also other physical activity-related characteristics, behaviors, and sources of influence. Such surveillance data would provide a better reflection of the overall status of physical activity among children and adolescents in the Philippines. The 2022 Philippine Physical Activity Report Card is the first comprehensive evaluation of the status of physical activity of young people in the country, providing a baseline for monitoring trends for this population.

Author statement

Jonathan Y. Cagas and Marla Frances T. Mallari: Conceptualization, Project administration, Funding acquisition. Jonathan Y. Cagas: Writing – Original Draft. Yves Y. Palad, Mary-Grace D.P. Kang, Roselle M. Guisihan: Writing – Review & Editing. All other authors: Contributed to Formal analysis, Writing – reviewing, and editing (specific sections of the manuscript)

Acknowledgements

Jonathan Y. Cagas received funding from the UP System Enhanced Creative Work and Research Grant (ECWRG-2021-2-11R) for the authorship and publication of this article. The Philippine physical activity report card was produced in partnership with the Active Healthy Kids Global Alliance and the University of the Philippines Diliman College of Human Kinetics with support from Sun Life Philippines as part of its purpose to help individuals live healthier lives.

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