

Ethiopia's 2022 Report Card

on physical Activity for Children and Adolescent



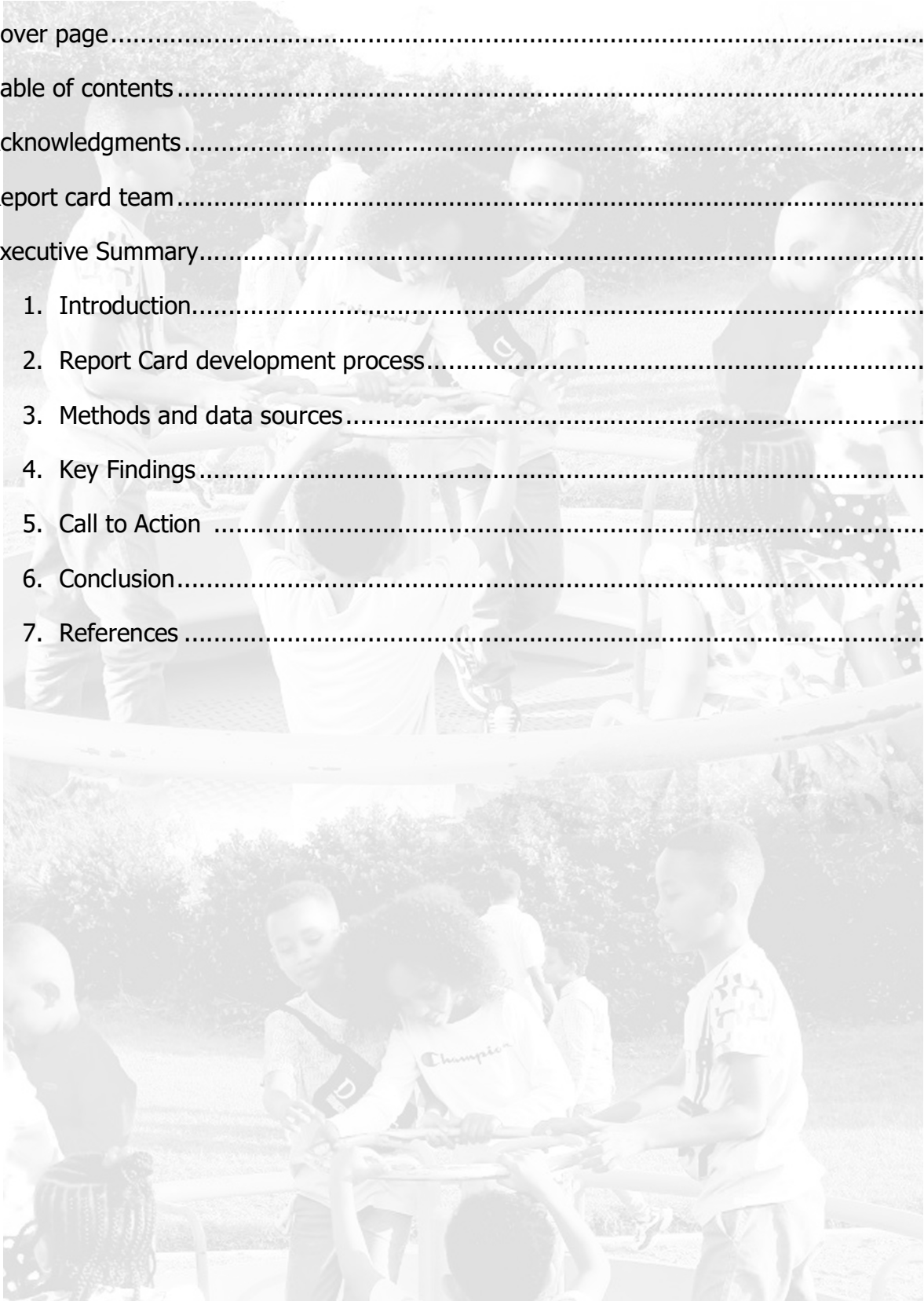
Healthy kids Matter!

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Addis Ababa, Ethiopia

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Ethiopia's 2022 Report Card Team



Chalchisa Abdeta

Report Card Leader

PhD candidate, University of Wollongong, Australia

Email: chali4pa@gmail.com



Alem Deksisa

Team member

Assistant Professor, Adama Hospital Medical College, Ethiopia

Email: alexdujna@gmail.com



Debrework Tesfaye

Team member

Assistant Professor, Wolaita Soddo University, Ethiopia

Email: debrework19@gmail.com



Mesfin Hailu

Team member

Senior Physiotherapist, Adama Hospital Medical College, Ethiopia

Email: ptmesfin@gmail.com



Executive Summary

Physical activity in children is getting less attention in low-income countries. According to Ethiopia 2018 Report Card, there was visible policy, practice and research gaps in physical activity among children and adolescents. The team suggested that government, policymakers, researchers and organizations working on children should take collaborative actions to reverse the situation. The Ethiopia 2022 Report Card highlighted physical activity profiles for Children and adolescents. The overall physical activity indicator reduced from the 1st country Report Card. Specifically, majority of the indicators showed an improvement with the introduced sleep indicator. The average data used to grade was due to a lack of nationally representative data.

Sadly, no significant change in children's physical activity indicators in Ethiopia. Hence, we are **Calling to Action** to fill the gap in physical activity policy, research and surveillance for children and adolescents in Ethiopia. Together, we can create a more active and healthier generation.



Chalchisa Abdeta, PhD candidate

Ethiopia's Report Card Leader

University of Wollongong, Australia

Introduction

Why is physical activity so crucial?

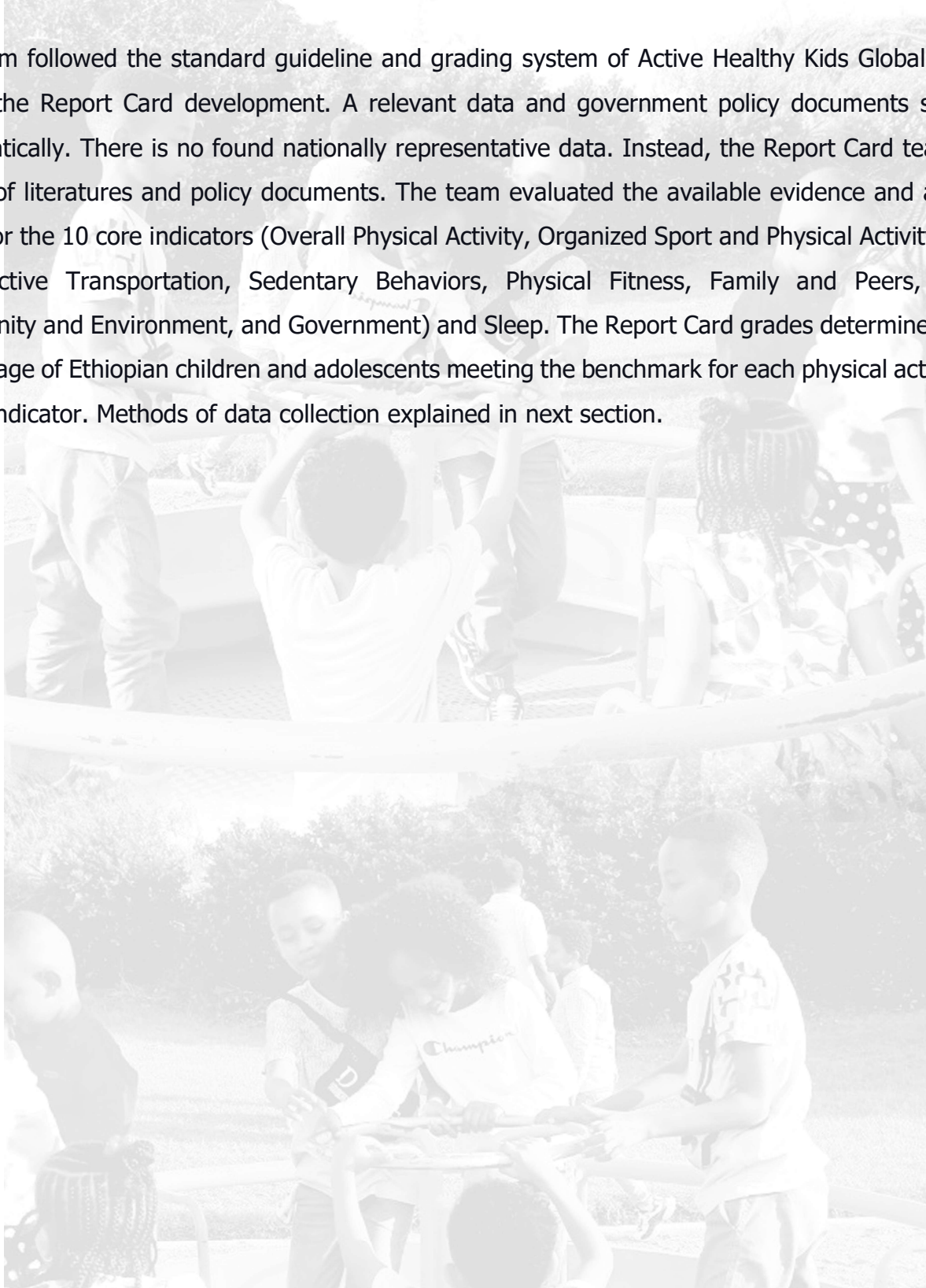
Evidence indicated that physical activity helps children and adolescents to get fit, attain academic success and grow healthier. Children and adolescents should be active during active play, walking or bicycling, exercising, participating in school-related and leisure activities. The World Health Organization recommends that children and adolescents aged from 5-17 years old are encouraged to participate in at least 60 minutes of moderate to vigorous intensity aerobic activities daily. Nowadays, technologies such as smartphones, play stations and TVs are discouraging children & adolescents for getting active. Instead, it encourages to stay in sitting and viewing screen for prolonged period in a day.¹⁻²

Globally, childhood obesity is on raises which might endanger school children's development and health.³ These effects push children and adolescents to a greater risk of non-communicable diseases later in life.⁴ The [Active Healthy Kids Global Alliance](#) established the '**Global Matrix initiative**' in which [Ethiopia](#) is participating since 2016 to reverse this global burden and aware the country to take evidence-based actions. However, evidence is scant in low-and middle-income countries.⁵

Active Healthy Kids Ethiopia is a member of Active Healthy Kids Global Alliance that focuses on advocacy and research for physical activity among children and adolescents to develop the country Report Card. Ethiopia produced the first country Report Card by the end of 2018. Our Report Card serves as physical activity archive for the policymakers, researchers, and local community. The main aim of the Report Card is to show the current state and determinants of physical activity and health in Ethiopian children and adolescents aged from 5 to 17 years old. Our teams strongly believe in exploring opportunities for our children and adolescents so that they can move more. This year's Ethiopia's Report Card provides slightly improved physical activity grades. This help to put a ground basis for physical activity among children and adolescents in Ethiopia.

Report Card development process

Our team followed the standard guideline and grading system of Active Healthy Kids Global Alliance during the Report Card development. A relevant data and government policy documents searched systematically. There is no found nationally representative data. Instead, the Report Card team used review of literatures and policy documents. The team evaluated the available evidence and assigned grade for the 10 core indicators (Overall Physical Activity, Organized Sport and Physical Activity, Active Play, Active Transportation, Sedentary Behaviors, Physical Fitness, Family and Peers, School, Community and Environment, and Government) and Sleep. The Report Card grades determined by the percentage of Ethiopian children and adolescents meeting the benchmark for each physical activity and health indicator. Methods of data collection explained in next section.



Methods and data sources

Data were collected using digital searches such as PubMed, Scopus, Web of Science, WHO Hinari and Google Scholar from January to August 2021. Government official website and Google search engine used to obtain the government policy document. Evidence from children and adolescents aged 5-17 years included in the country Report Card. Then, data were synthesized and summarized using appropriate procedures of the Active Healthy Kids Global Alliance guidelines and indicators (A = $\geq 80\%$, B = 60%–79%, C = 40%–59%, D = 20%–39%, F = $< 20\%$, INC = incomplete data). Each grade reveals how well Ethiopia succeed by creating physical activity opportunities for children and adolescents as shown in Table 1 below. Grades for the Report Card indicators were informed using studies conducted on similar areas from 2016 to 2022.

Table 1: Report Card grading rubric*

Grade	Benchmarks	Explanation
A	A ⁺ =94% - 100% A = 87% - 93% A ⁻ = 80% - 86%	We are succeeding with a large majority of children and adolescents ($\geq 80\%$)
B	B ⁺ =74% - 79% B = 67% - 73% B ⁻ = 60% - 66%	We are succeeding with well over half of children and adolescents (60% - 79%)
C	C ⁺ =54% - 59% C = 47% - 53% C ⁻ = 40% - 46%	We are succeeding with about half of children and adolescents (40% - 59%)
D	D ⁺ =34% - 39% D = 27% - 33% D ⁻ = 20% - 26%	We are succeeding with less than half with some children and adolescents (20% - 39%)
F	F = 0% -19%	We are succeeding with very few of children and adolescents ($<20\%$)
INC	INC = Incomplete	Inadequate information to assign a grade

*Taken from Active Healthy Kids Global All

Table 2: data sources for Ethiopia’s 2022 Report Card development

Indicator	Study characteristics					Nature of study	Reference
	Findings	Average taken	Sample (n)	Age (years)	Study period		
Overall Physical Activity	14.3%	15.8%	n=632	5-18	July 2017	Self-report	Biadgilign et al., 2022
	17.2%		n=580	13-19	May 2019	Self-report	Mohammed et al.,2020a
Organized Sport and Physical Activity	62.7%	44.1%	n=504	10-19	June 2021	Self-report	Belay et al., 2021
	25.5%		n=634	6-12	April 2016	Self-report	Mekonnen et al., 2018
Active Play	77.0%	67.7%)	n=482	10-18	June 2019	Self-report	Fitsum et al., 2021
	58.4%		n=580	13-19	May 2019	Self-report	Mohammed et al.,2020a
Active Transportation	32.3%	64.0%	n=504	10-19	June 2021	Self-report	Belay et al., 2021
	75.5%		n=482	10-18	June 2019	Self-report	Fitsum et al., 2021
	66.1%		n=551	10-19	Nov 2018	Self-report	Worku et al., 2021
	82.1%		n=634	6-12	April 2016	Self-report	Mekonnen et al., 2018
Sedentary behaviour	43.8%	54.5%	n= 482	10-18	June 2019	Self-report	Fitsum et al., 2021
	65.2%		n=580	13-19	May 2019	Self-report	Mohammed et al., 2020b
Physical Fitness	-	-	-	-	-	-	No evidence
Family and Peers	Panel estimation on 2018 Report Card		-	5-17	April 2018	Panel estimation	Abdeta et al., 2019
School	81.5%	-	n=632	5-18	July 2017	Self-report	Biadgilign et al., 2022
Community and Environment	58.4%	43%	n= 580	13-19	May 2019	Self-report	Mohammed et al.,2020a
	27.6%						
Government	1) Car Free Day initiative		-	-	November 2018	Monthly event	Cities100, 2019
	2) Mass Sports campaign		-	-	September 2020	Monthly event	Tulu et al., 2019
	3) Non-Motorised Transport Strategy 2020-2029		-	-	June 2020	10 years strategy	Addis Ababa City Administration, 2020
	4) National Adolescent and Youth Health Strategy (2016-2020)		-	-	October 2016	5 years strategy	Federal Ministry of Health, 2016
Sleep	6.0%	-	n= 632	5-18	July 2017	Self-report	Biadgilign et al., 2022

Key Findings

The team made efforts to develop the Ethiopia's 2nd Report Card on Physical Activity for Children and adolescents. The overall physical activity indicator reduced from the 1st country Report Card with majority of them showed an improvement and one indicator introduced in this Report Card. The grade reported using available average data. School indicator scored the highest grade among the ten core indicators. Sadly, physical fitness obtained inadequate information and the sleep indicator introduced for the first time. Ethiopia's 2022 Report Card details explained below.

Overall Physical Activity

A yellow square with a white letter 'F' inside, representing the overall physical activity grade.

Metrics used to assign a grade:

- Proportion of Ethiopian children and adolescents who meet the [Global recommendations on physical activity for health](#).

Grades with comparison with RC 2018:

- The overall physical activity indicator grade was reduced from D to F as we compared to the Ethiopia's 2018 Report Card.

Rationales:

- Recent evidence indicated that about 15.8% of Ethiopian children and adolescents met the global guidelines on physical activity for health.

Study characteristics:

- Only two self-report studies examined the proportion of Ethiopian children and adolescents who satisfied the worldwide Physical Activity (PA) guideline found to be eligible. Accordingly, Mohammed and colleagues (2020a) reported that 17.2% of children (boys: 24.5%, girls: 11.5%) met at least 60 minutes of moderate to vigorous-intensity PA for about three days per week.⁶ Similar findings reported by Biadgilign and colleagues in 2022, who found that 14.3% of children (boys: 17.0, girls: 11.7) met the recommended guideline. There is no nationally representative data. The

Report Card (RC) team took the average proportion of the available evidence (15.8%) to assign the grade for this indicator.

How to improve it?

- There is no evidence on the national prevalence of physical activity among children and adolescents aged 5-17 years yet in Ethiopia.
- So, we strongly encourage responsible key stakeholders to conduct national representative surveillance on physical activity in children and adolescents. Integrate physical activity surveillance into an existing national survey such as the Ethiopia Health and Demographic Survey (EDHS).
- Develop the national physical activity guideline and policy for children and adolescents.

Organized Sport and Physical Activity



Metrics used to assign a grade:

- Proportion of Ethiopian children and adolescents participating in organized sport and physical activity at least once per week.

Grades with comparison with RC 2018:

- The organized sport and physical activity grade was improved from C to C- as we compared to the Ethiopia's 2018 Report Card.

Rationales:

- According to recent evidence, 44.1% of Ethiopian children and adolescents were participating in organized Sport activities at School environment.

Study characteristics:

- After eligible studies were identified and only two self-report studies were reported. According to Mekonnen et al., 2018, about 25.5% of children and adolescents in Ethiopia engaged in School Sports events. Another study reported that 62.7% of children participated in organized Sports activities.⁹ The RC team used average evidence of 44.1% to give the grade for this indicator.

How to improve it?

- Increase access to infrastructures and programs for the organized Sport and physical activity programs in schools, recreational places, etc at all settings in Ethiopia.
- Conduct studies on organized Sport and physical activity participation in Ethiopia.

Active Play

B

Metrics used to assign a grade:

- Proportion of children and adolescents who engaged in unstructured physical activity active play at any intensity for more than two hours a day in Ethiopia.

Grades with comparison with RC 2018:

- The Active Play grade was the same with the Ethiopia's 2018 Report Card.

Rationales:

- About 67.7% of children and adolescents in Ethiopia were involved in outdoor active play at different intensity for more than 2 hour per day.

Study characteristics:

- After eligible studies identified and only two self-report studies were reported. Study indicated that 58.4% of children and adolescents in Ethiopian had access to playground at their home environment.⁶ Similarly, Fitsum et al., 2021 reported that 77.0% of children had access to playground. The RC team took the average (67.7%) to assign the grade for this indicator.

How to improve it?

- Promote the active play at home, school and recreational places to increase active participation of children and adolescents in Ethiopia.
- Conduct studies on active play among children and adolescents in Ethiopia.

Active Transportation

B⁻

Metrics used to assign a grade:

- Proportion of Ethiopian children and adolescents who use active transportation to get to and from places in the form of walking and biking to go to school or friend's home, etc.

Grades with comparison with RC 2018:

- The Active Transportation grade was improved from C to B⁻ as we compared to the Ethiopia's 2018 Report Card.

Rationales:

- For this indicator, 64.0% of Ethiopian children and adolescents were using active form of transportation (walking/biking) to and from school.

Study characteristics:

- Four eligible self-report studies were reported from 32.3% to 82.1% of Ethiopian children and adolescents walk/bike to School as a means of active transportation. According to Belay et al., 2022, about 32.3% walk/bike to and from school. Fitsum and colleagues (2021) reported that 75.5% of children walk/bike to and from school. Another study reported that 82.1 % of children walk to and from school.⁸ Worku et al., 2021 reported that 66.1% of children walk to and from school. The RC team agreed to use an average of 64.0% to grade this indicator.

How to improve it?

- Promote the active transportation to and from school and recreational places to increase active participation of children and adolescents in Ethiopia.
- Conduct studies on active transportation among children and adolescents in Ethiopia.
- Built sidewalks to encourage active transportation all cities in Ethiopia.

Sedentary behaviour



Metrics used to assign a grade:

- Proportion of children and adolescents who engage in 2 hours or less of screen-time or sitting a day in Ethiopia.

Grades with comparison with RC 2018:

- The sedentary behaviour grade was improved from F to C+ as we compared to the Ethiopia's 2018 Report Card.

Rationales:

- On average, the proportion of Ethiopian children and adolescents met the sedentary behaviour screen guidelines was 54.5% for this indicator.

Study characteristics:

- Two self-report studies have identified the proportion of children and adolescents met the screen time guidelines in Ethiopia. Mohammed and colleagues (2020b) reported that 65.2% of children (boys: 28.4%, girls: 37.0%) were met ≥ 2 hours per day. Fitsum et al., 2021 reported that 43.8% of children were met > 2 hours a day. The RC team was used an average of 54.5% to grade this indicator.

How to improve it?

- Support children and adolescents to limit their sitting or screen viewing time through effective local advocacy materials.
- Develop a national guideline for sedentary behaviour for children and adolescents in Ethiopia.
- Conduct studies on sedentary behaviour among children and adolescents in Ethiopia.

Physical Fitness

Metrics used to assign a grade:

- Proportion of children and adolescents who meet criterion-referenced standards for cardiorespiratory fitness, muscular strength and endurance in Ethiopia.

Grades with comparison with RC 2018:

- The physical fitness grade was the same with the Ethiopia's 2018 Report Card.

Rationales:

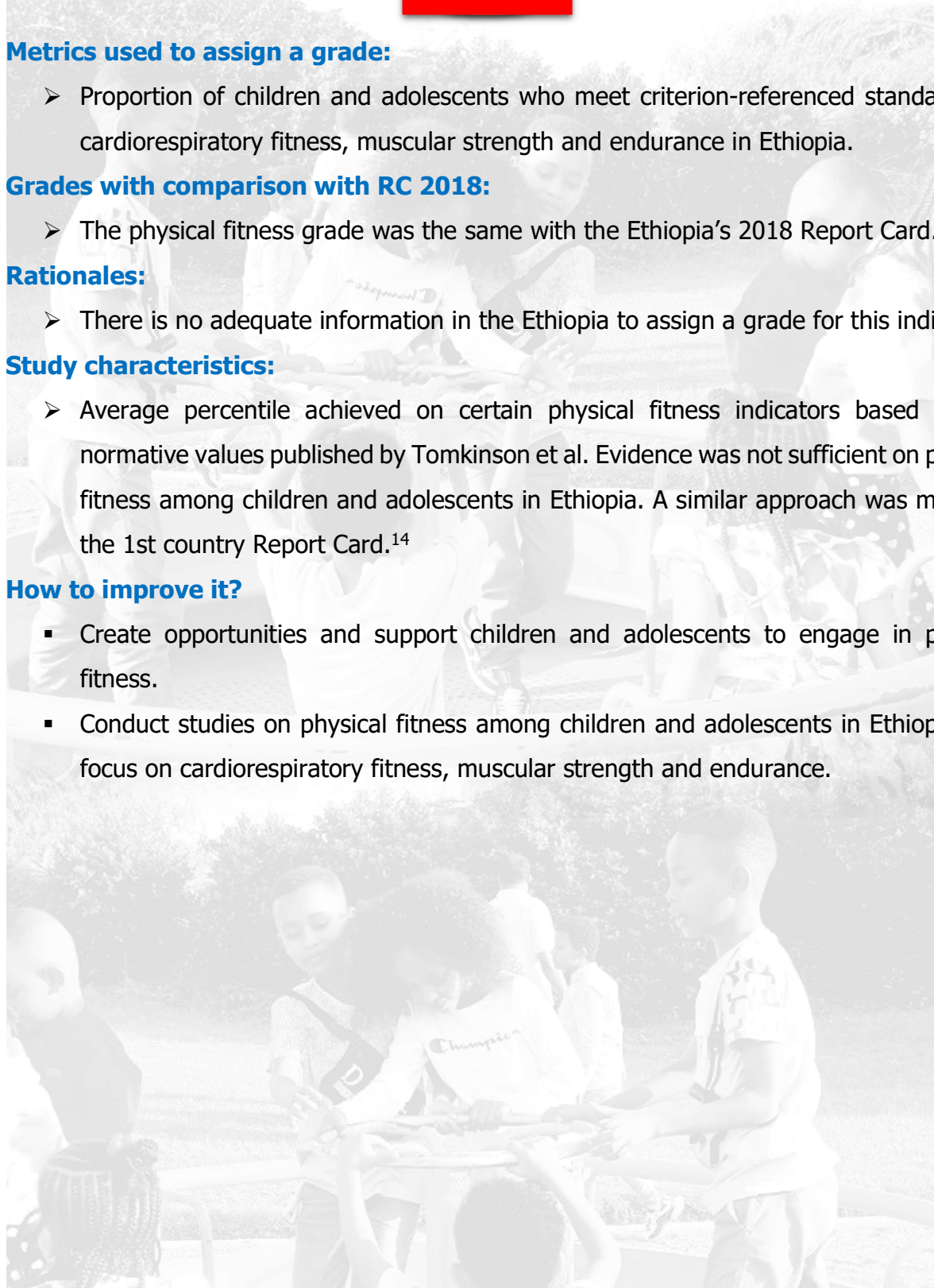
- There is no adequate information in the Ethiopia to assign a grade for this indicator.

Study characteristics:

- Average percentile achieved on certain physical fitness indicators based on the normative values published by Tomkinson et al. Evidence was not sufficient on physical fitness among children and adolescents in Ethiopia. A similar approach was made on the 1st country Report Card.¹⁴

How to improve it?

- Create opportunities and support children and adolescents to engage in physical fitness.
- Conduct studies on physical fitness among children and adolescents in Ethiopia with focus on cardiorespiratory fitness, muscular strength and endurance.



Family and Peers

Metrics used to assign a grade:

- Proportion of children and adolescents who get support from their friends, peers and families to get physically active in Ethiopia.

Grades with comparison with RC 2018:

- The family and peer grade were the same with the Ethiopia's 2018 Report Card.

Rationales:

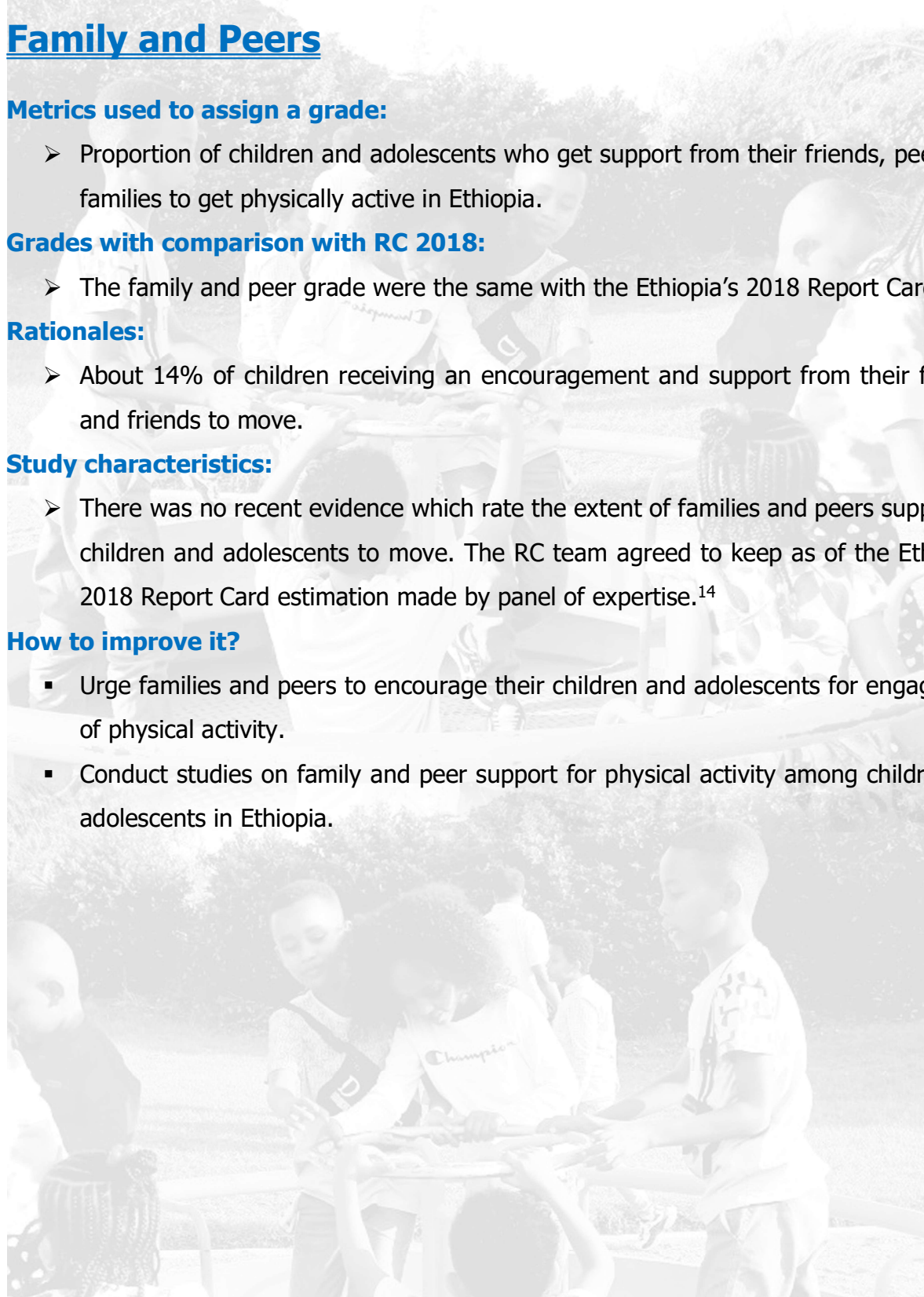
- About 14% of children receiving an encouragement and support from their families and friends to move.

Study characteristics:

- There was no recent evidence which rate the extent of families and peers support for children and adolescents to move. The RC team agreed to keep as of the Ethiopia's 2018 Report Card estimation made by panel of expertise.¹⁴

How to improve it?

- Urge families and peers to encourage their children and adolescents for engagement of physical activity.
- Conduct studies on family and peer support for physical activity among children and adolescents in Ethiopia.



Schools

Metrics used to assign a grade:

- Proportion of schools with active policies and infrastructures that support physical activity participation of Ethiopia's children and adolescents with trained physical education specialists in the school.

Grades with comparison with RC 2018:

- The school grade was improved from D to A- as we compared to the Ethiopia's 2018 Report Card.

Rationales:

- About 81.5% of children and adolescents in Ethiopia were participating in Physical education at School.

Study characteristics:

- One study indicated that about 81.5% of children (boy: 82.4%, girl: 80.7%) were engaged in Physical Education at School.⁷ The RC team agreed to use this evidence for grading this indicator.

How to improve it?

- Empower children and adolescents to participate in school physical activity in Ethiopia.
- Develop policies and infrastructures such gymnasium, outdoor playground, Sport fields, etc that support school physical activity for children and adolescents in Ethiopia.
- Conduct studies on school physical activity among children and adolescents in Ethiopia.

Community and Environment

Metrics used to assign a grade:

- Percentage of communities/municipalities that create opportunities for physical activity among children and adolescents in Ethiopia.

Grades with comparison with RC 2018:

- The community and environment grade were improved from F to C- as we compared to the Ethiopia's 2018 Report Card.

Rationales:

- In Ethiopia, about 43% had access to physical activity infrastructures such as playground and gymnasium.

Study characteristics:

- Study reported that about 58.4% of children and adolescents in Ethiopia had playground facilities in school. Besides, about 27.6% had regular access to physical activity infra-structure such as gymnasium.⁶ The RC team agreed to take an average of 43% to assign a grade for this indicator.

How to improve it?

- Empower communities to create physical activity opportunities for children and adolescents in Ethiopia.
- Develop policies and infrastructures that support physical activity participation for children and adolescents in Ethiopia.
- Conduct studies on community and environment accessibility for physical activity of children and adolescents in Ethiopia.



F

Sleep

Metrics used to assign a grade:

- Proportion of Ethiopia's children and adolescents in meeting the Canadian Sleep guidelines for children aged from 5-17 years old.

Grades with comparison with RC 2018:

- The Sleep grade was introduced for the first time on Ethiopia's 2022 Report Card.

Rationales:

- Only about 6% of Ethiopian children and adolescents were attained sleeping time of ≥ 10 hours a day.

Study characteristics:

- There is no nationally representative data for the proportion of children and adolescents in Ethiopia who met the [Canadian Sleep guidelines](#) for this age group.¹⁵ According to Biadgilign et al., 2022, about 6.0% of children (boys: 6.1%, girls: 5.8%) attained sleeping time of ≥ 10 hours a day in Ethiopia. We assigned the grade for this indicator based on the latest available information.

How to improve it?

- Advocate the importance of sleep time for children and adolescents in Ethiopia.
- Conduct studies on sleep time among children and adolescents in Ethiopia.



Government

Metrics used to assign a grade:

- Evidence of government policy and strategies that allocate resources to support and implement physical activity initiatives for children and adolescents in Ethiopia

Grades with comparison with RC 2018:

- The government grade was improved from D to C as we compared to the Ethiopia's 2018 Report Card.

Rationales:

- Considering changes made on physical activity strategies and campaign in Ethiopia, the RC team assign grade 'C' for this indicator.

Study characteristics:

- Some of the government sectors have initiated different physical activity campaigns with allocated budgets including 'Car Free Day' and 'Mass sports campaign' in collaboration with the Ministry of Health, Sports commission and Transport Authority.^{16,17} The country launched 10 years strategy document with budget allocation for the Ethiopia Non-Motorized Transport Strategy 2020-2029.¹⁸
- Besides, Ethiopia developed the National Adolescent and Youth Health Strategy (2016-2020) that aimed to improve the overall health status of children and adolescents.¹⁹ These will help children and adolescents to get physical activity opportunities to move more. There is some improvement observed from the previous Report Card grade for this indicator. As a result, the RC team assign a grade 'C' for this indicator.

How to improve it?

- Implement the [WHO Global Action Plan for Physical Activity 2018-2030](#) in Ethiopia.²
- Develop a national physical activity plan and guideline for children and adolescents in Ethiopia.
- Establish regular physical activity surveillance and research capacity among children and adolescents in Ethiopia.

Call to Action



This is the second version of the Ethiopian Report Card on Physical Activity for children and adolescents. This year's Ethiopia's Report Card provides slightly improved physical activity grades but still a large visible gap in policy, research, surveillance and practice of physical activity among children and adolescents in Ethiopia.

Thus, further work should be done with the following top three priorities to improve Ethiopia's 2022 Report Card: -

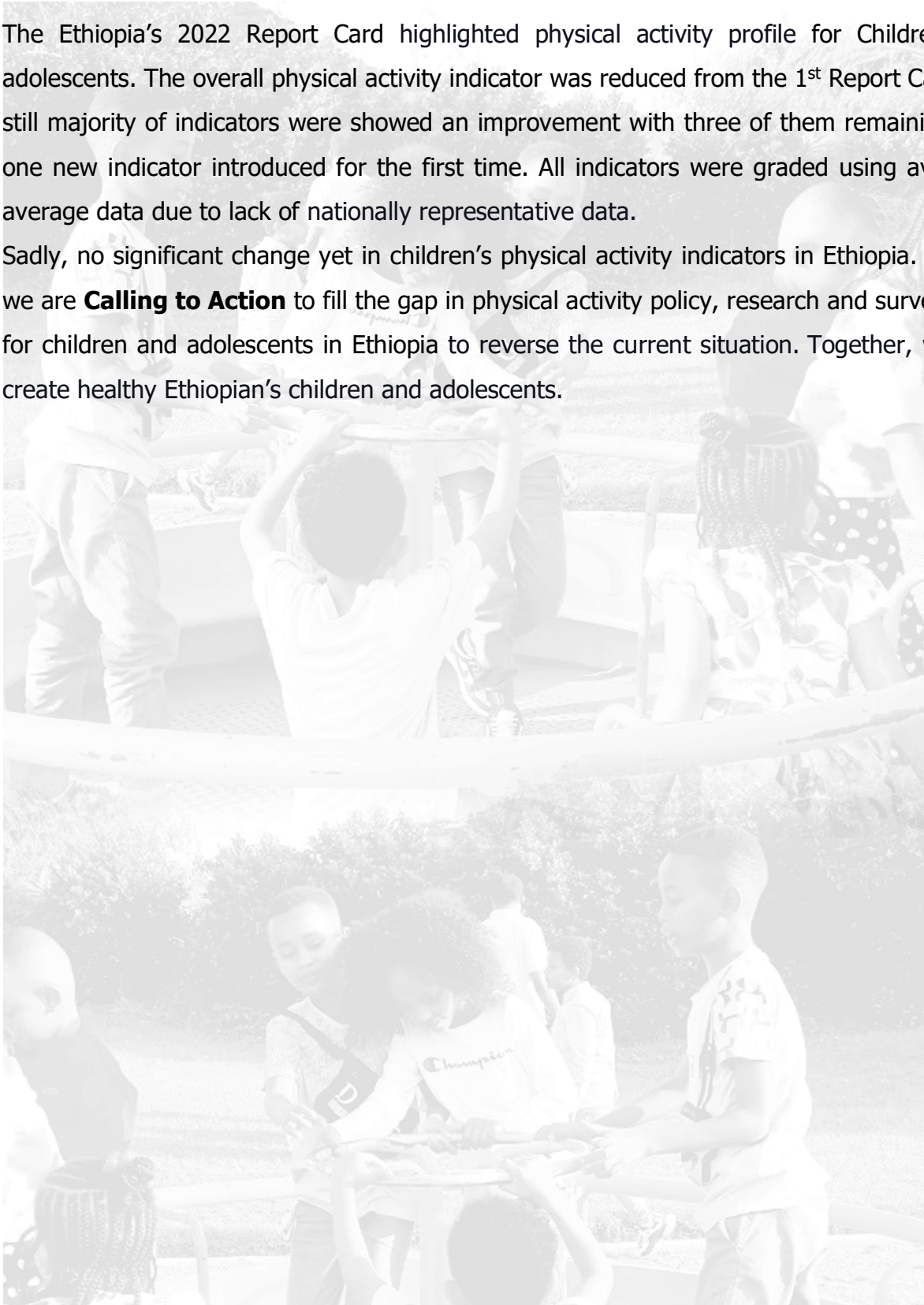
- 1) Strengthening the research capacity of local researchers on physical activity for children and adolescents in Ethiopia.
- 2) Implement the WHO Global Action Plan for Physical Activity 2018-2030 in Ethiopia.
- 3) Develop a national physical activity plan and allocate resources for physical activity interventions for children and adolescents in Ethiopia.

This study indicated that there is a visible evidence gap in physical activity, sedentary behaviour and sleep among children and adolescents in Ethiopia. Hereinafter, objectively measured studies should be conducted to realize the problem. Finally, we are **Calling to Action** to fill the gap in physical activity policy, research and surveillance for children and adolescents in Ethiopia to reverse the current situation.

Conclusion

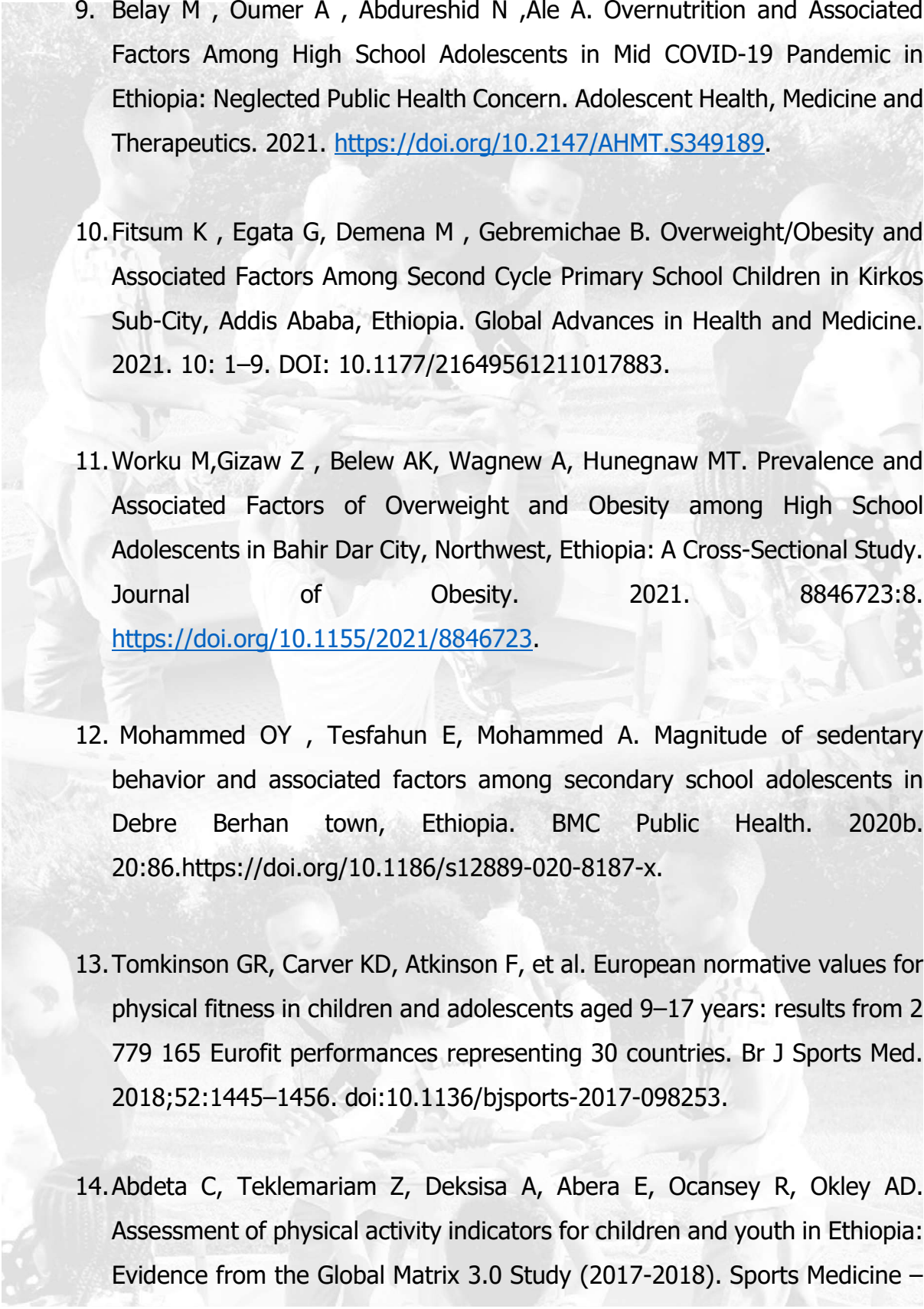
The Ethiopia's 2022 Report Card highlighted physical activity profile for Children and adolescents. The overall physical activity indicator was reduced from the 1st Report Card but still majority of indicators were showed an improvement with three of them remaining and one new indicator introduced for the first time. All indicators were graded using available average data due to lack of nationally representative data.

Sadly, no significant change yet in children's physical activity indicators in Ethiopia. Hence, we are **Calling to Action** to fill the gap in physical activity policy, research and surveillance for children and adolescents in Ethiopia to reverse the current situation. Together, we can create healthy Ethiopian's children and adolescents.



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