Results from Nepal's 2018 Report Card on Physical Activity for Children and Youth

Narayan Subedi, Susan Paudel, Sudip Nepal, Ashmita Karki,
 Mahendra Magar, and Suresh Mehata

Introduction

The increase in non-communicable diseases (NCDs) in Nepal can be attributed to changes in lifestyle, food habits, aging and unplanned urbanization.¹⁻³ Physical activity (PA) is a modifiable risk factor that can reduce the risk of NCDs.⁴ Though national level surveys have indicated relatively good prevalence of PA among adults,⁵ consolidated evidence on PA among children is lacking across different domains. This report card summarizes the available PA data of children and youth, and identifies research gaps in Nepal.

Methods

A team of researchers reviewed and synthesized the available PA data of children and youth in Nepal. The Nepal Report Card comprises 10 core PA indicators of the Global Matrix 3.0 (Overall PA, Organized Sport and PA, Active Play, Active Transportation, Sedentary Behavior, Family and Peers, School, Community and the built Environment, and Government Strategies). The team systematically searched papers published between 2000 and February 2018 using different databases (Medline, EMBASE, PsycINFO, and CENTRAL), which identified 857 records. A manual search of national NCDs survey reports was also carried out. Only six papers contained relevant PA data among which papers by Paudel et al⁶, Piryani et al⁷ and Adhikari et al⁸ were the main source. Global Matrix 3.0 grading scheme was used to assign grades to the indicators.

Results and Discussion

The 2018 Report Card for Nepal is the first attempt to consolidate data on PA among children and youth. Following the systematic search, 5 of the 10 core indicators did not receive a grade due to unavailable data. Data on overall PA and other indicators were also obtained from small-scale studies limited to certain geography or population groups. All the eligible studies used questionnaires for assessing self-reported PA data.

This review found that Nepalese children have low level of PA, however, this finding contradicts with NCDs risk factors STEPS Survey.⁵ STEPS is the primary source of data related to chronic diseases and their risk factors in Nepal. It reports 98.8% of

individuals 15-29 years of age are engaged in 150 minutes of moderate intensity PA per week or equivalent.⁵ Another study carried out in western Nepal has found that 95% of 15-20 year aged population accumulated 600 METs/week.⁶ However, we could not include these studies in our review as the former combined children and youths into a single age category while the later reported energy expenditure as metabolic equivalents. Data gap applies to other indicators as well. The results are summarized in Table 1 and Figure 1 displays the front cover of the 2018 Nepal Report Card.

The primary issues identified in this review were the lack of available data on 5 of the 10 core indicators; the lack of representative samples; and overall poor quality of data. Further, the difference in how the outcome variables are reported has also limited the number of studies being eligible for this review.

Figure 1 — Nepal's 2018 Report Card cover.

Table 1 Grades and rationale for Nepal's 2018 Report Card

Indicator	Grade	Rationale
Overall PA	D+	This grading is done based on the data of a study conducted in central terai (plain) of Nepal. This study with 241 sample size found that 39.8% of children and youth accumulated at least 60 minutes of moderate- to vigorous-intensity PA per day. ⁸ (Not a nationally representative study) NCD Risk Factors STEPS Survey Nepal 2013 found that 97.7% of 15-29 years children and youth accumulated at least 600 METs/week. ⁵ Likewise, another study found that 95% of children and youth aged 15-20 years accumulated 600 METs/week. ⁶ A third study reported that 67.7% children and youth of age group 15-24 yrs had 600 or more METs/week. ⁹
Organized Sport Participation	INC	This data are not available
Active Play	INC	This data are not available
Active Transportation	A-	A single study reported that 86% children and youth of 15-20 years used active transportation to get to and from places. ⁷ (Not a nationally representative study)
Sedentary Behaviours	B+	A single study reported the data of this indicator. The study which included 360 children and youth of 16-19 years reported 78.1% spent no more than two hours/day. ⁶ (Not a nationally representative sample or study)
Physical Fitness	INC	This data are not available
Family and Peers	A	Only a study of sample size 405 including 15-20 years age group reported that 91.4% perceived that they received support from their family for PA while 87.7% perceived they report support from their peers. The average of the two values was taken which is nearly equal to 90%. ⁶ (Not a nationally representative study)
School	INC	This data are not available
Community and Environment	C-	One study found that only 46% of the children and youth (15-20 years) had parks/playgrounds available in their community. ^{6,10} (Not a nationally representative study)
Government	INC	This data are not available

Conclusions/Recommendations

The overall PA level of Nepalese children was found to be low based on only one eligible study reporting this indicator. However, considering the low sample size and the study being limited to a small geographic area, it might not give a generalized scenario of the Nepalese context. Nepal lacks data on 5 out of 10 indicators, which clearly highlights the research gap. In the current socio-political context, there is a need for large-scale studies incorporating a wide range of variables with objective measurement, in this age group, to guide policy and interventions. Likewise, concern and support of stakeholders to promote PA among children and youth is warranted.

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