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

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Introduction

Research demonstrates that almost half of children and youth in India do not meet recommended guidelines for physical activity and sedentary behaviour.¹ The 2016 India Report Card identified several gaps in evidence, including nationally representative data on active living and contextual indicators such as “Active Play” and “Family and Peers.” With India's youth projected to be a major proportion of the world's workforce,^{2,3} evaluating active living in India has implications for the world economy. The 2018 Report Card addresses evidence gaps identified in 2016 using peer-reviewed and grey literature, as well as primary data obtained through key partners.

Methods

A systematic search of peer-reviewed and grey literature from 2010-2018 was conducted for 10 indicators: overall physical activity, organized sport participation, active play, active transportation, sedentary behavior, family and peers, school, community and the built environment, government strategies and investments, and physical fitness. Data sources included one national survey,⁴ several state (i.e., province) and city-level surveys,⁵⁻⁹ as well as primary data from ongoing longitudinal state-level surveys.¹⁰ Relevant grey literature, including government reports and school board policies, were also reviewed during the grading process. Peer-reviewed data were appraised based on representativeness, sample size, data quality, and timeliness (i.e., recentness of data). Grey literature was appraised based on comprehensiveness, validity of the sources cited, and representativeness. Nationally representative data were given a higher weightage, followed by published data, unpublished raw data, and grey literature. Each indicator was assessed against parameters provided by Active Healthy Kids Global Alliance, and grades were assigned based on team consensus using the standardized rubric.

Results and Discussion

The 2018 India Report Card (Figure 1) addressed most of the gaps in evidence identified by the 2016 Report Card; however, it reiterated the need for nationally representative active living research, and renewed government strategies and investments to facilitate active living among children and youth. Although a major

proportion of the children and youth in India appear to participate in active transportation, they are not meeting recommended physical activity and sedentary behaviour guidelines.^{4-7,10} Table 1 provides a summary of the grades. Physical activity type and levels varied significantly across the intersection of gender and socioeconomic status, with girls belonging to lower socioeconomic status having the greatest disadvantage due to cultural and safety perceptions.⁹ Based on the grades assigned to “Family and Peers” (D), “Community and Built Environment” (D), and “Government” (D), the active living challenges faced by Indian children and youth could be attributed to lack of adequate political, social, and physical environmental support. The 2018 India Report Card recommends the institution of a nationally representative survey to accurately capture all active living indicators of children and youth in India. *Active Healthy Kids India* has been established to obtain nationally

Figure 1 — India's 2018 Report Card cover.

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Table 1 Grades and Rationales for India's 2018 Report Card

Indicators	Grades	Rationale
Overall Physical Activity	D	Approximately 25% of children and youth accumulate ≥ 60 minutes of MVPA daily. It is expected that children and youth from rural areas accumulate greater MVPA, however data from these populations is sparse and difficult to align with MVPA guidelines.
Organized Sport Participation	INC	Insufficient data to grade this indicator.
Active Play	C-	An average of 49% of children and youth spend at least 1 hour playing outdoors per day, and 37% spend at least 1 hour in active play per day.
Active Transportation	B-	A weighted average of approximately 65% of children and youth reported walking or cycling to school on a regular basis.
Sedentary Behaviours	C-	Less than half of Indian children and youth are meeting screen time-based sedentary behaviour guidelines (<2 hours/day).
Physical Fitness	F	Approximately 15% of children and youth meet recommended standards for minimum fitness.
Family and Peers	D	Approximately 30% of family/peers participate in physical activity with children and provide support/transport/access to physical activities.
Schools	INC	Insufficient data to grade this indicator.
Community and Built Environment	D	Six major Indian cities received low walkability ratings due to poor and unsafe infrastructure, and lack of sidewalks. Moreover, built environment was rated poorly for lack of urban infrastructure for walking and biking, access to physical activity spaces, safety from crime and traffic, and high pollution.
Government	D	The majority of government strategies in India are focused on competitive sport. There is no readily available evidence of strategies and investments directed towards all children and youth, with a purpose to increase active living among the entire population.

representative data, and advocate for investments to improve active living among children and youth in India.

Conclusion

The 2018 India Report Card shows that although the vast majority of children and youth in India are not accumulating recommended levels of physical activity, there are encouraging signs of their participation in active transportation and active play—a phenomenon that needs to be explored further to facilitate more physical activity.

References

- Katapally TR, Goenka S, Bhawra J, et al. Results from India's 2016 report card on physical activity for children and youth. *J Phys Act Health*. 2016;13(11 suppl 2):S176–S182. doi:10.1123/jpah.2016-0393
- IRIS Knowledge Foundation. *State of urban youth, India 2012*. Mumbai, India: IRIS Knowledge Foundation. 2013. http://www.esocialsciences.org/general/a201341118517_19.pdf. Accessed June 14, 2018.
- Oyularan-Oyeyinka O. (2012). *State of the urban youth 2012/2013*. Nairobi, Kenya: United National Human Settlements Programme.
- Guthold R, Cowan MJ, Autenrieth CS, Kann L, Riley LM. Physical activity and sedentary behavior among schoolchildren: a 34-country comparison. *J Pediatr*. 2010;157:43–49. doi:10.1016/j.jpeds.2010.01.019
- Rani MA, Sathiyasekaran BWC. Behavioural determinants for obesity: a cross-sectional study among urban adolescents in India. *J Prev Med Public Health*. 2013;46:192–200. doi:10.3961/jpmph.2013.46.4.192
- Silva DAS, Chaput JP, Katzmarzyk PT, et al. Physical education classes, physical activity, and sedentary behavior in children. *Med Sci Sports Exerc*. 2018; 50(5):995–1004. doi:10.1249/MSS.0000000000001524
- Shridhar K, Millett C, Lavery AA, et al. Prevalence and correlates of achieving recommended physical activity levels among children living in rural South Asia—A multi-centre study. *BMC Pub Health*. 2016;16:990. doi:10.1186/s12889-016-3353-x
- Vaz M, Swaminathan S, Rajaraman D, Kuriyan R. *Overweight and obesity in Asian Indian children in India and Canada: multi-level determinants, functional consequences, and novel mechanisms*. Ref No. 58/4/2/ICMR-CIHR/2009/NCD-II (IRIS No: 2009–09540. Indian Council of Medical Research; 2015.
- Gregori D, Gulati A, Paramesh EC, et al. Cross-regional analysis of multiple factors associated with childhood obesity in India: a national or local challenge? *Indian J Pediatr*. 2014;81(suppl 1):S5–S16. doi:10.1007/s12098-014-1550-0
- Mohan A, Harish R. Status of physical activity among children and youth in Chennai India: Results from the ORANGE study. 2018. [Working paper].