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

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Introduction

The prevalence of childhood obesity in Lebanon nearly doubled between 1997 and 2009.¹ This shift in population health is extremely alarming, given that obesity is associated with a host of chronic diseases (eg, cardiovascular diseases, diabetes mellitus, cancer)¹ representing the primary causes of death and disease burden in 2012.² Low physical activity (PA) levels and engagement in greater sedentary activities have been used to explain such trends.¹ However, little is known about PA indicators among Lebanese children and youth. This led to the development of Lebanon's first Physical Activity Report Card for Children and Youth (Figure 1).

Methods

A comprehensive review was conducted on peer-reviewed literature, national surveys, and gray literature (eg, government reports). Additionally, the Lebanese Research Work Group communicated with national (eg, governmental institutions) and international organizations (eg, world health organizations) to request any available collected data. The search strategy was developed to identify all publications that discussed any of the following 10 PA indicators adopted by the "Global Matrix 3.0"³: overall PA, organized sport and PA, active play, sedentary behaviors, family and peers, school, community and environment, government, and physical fitness. All records that were identified in the initial search strategy underwent a title and abstract screening by two independent reviewers. A third reviewer was enlisted to this process when the two reviewers disagreed on the inclusion or exclusion of articles. Retained articles, were then reviewed at the full text level by another pair of independent reviewers. Data on nationally representative samples from relevant literature or sources were extracted for inclusion in the grading of each indicator. Finally, the Lebanese Research Work Group assigned a grade for each indicator by following standard benchmarking criteria that were recommended by the "Global Matrix 3.0."³

Results and Discussion

The majority of Lebanese children and youth fail to meet PA guidelines as summarized in Table 1. The *Overall PA* indicator had

the only nationally representative sample that included all target age groups (5-17 years). Three indicators, *Active Transportation*, *Sedentary Behaviors*, and *School*, had nationally representative data for ages 13-18 years, *Organized Sport and Physical Activity* lacked information on age, and *Government* did not need to report on age for grading. All other indicators, *Active Play*, *Family and Peers*, *Community and Environment*, and *Physical Fitness*, lacked nationally representative data, and thus, the grade was "incomplete" (INC). *Government* indicator received the highest grade, "C+", reflecting the efforts of four Lebanese institutions in creating policies that prioritize PA promotion at schools. Whereas, the

Figure 1 — Lebanon's 2018 Report Card cover.

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Table 1 Grades and rationales for Lebanon's 2018 Report Card

Indicator	Grade	Rational
Overall Physical Activity	D	54.1% of children and youth (5-17 years) self-reported achieving 420 minutes of weekly MVPA (Jomaa et al unpublished custom analysis). 12.2% of youth (13-17 years) self-reported achieving 420 minutes of weekly MVPA. ⁵
Organized Sport and Physical Activity	F	During the academic year 2016-2017, the Ministry of Youth and Sports reported that a total of 41,962 students participated in sports competitions organized by the ministry. ⁶ For the same academic year the Ministry of Education and Higher Education reported a total of 924,570 students attending all schools in Lebanon. ⁷ Based on custom analysis it was found that 4.5% of Lebanese youth participated in an organized sport for the academic year 2016-2017.
Active Play	INC	Only one publication had a representative sample that could have been used to address this indicator. ¹ However, based on the format of available data, authors were not able to conduct any custom analysis.
Active Transportation	D	36.8% of adolescents (13-18 years) self-reported riding a bicycle or walking to school (unpublished custom analysis, Lebanon GSHS survey 2016). No nationally representative data were available for ages <13 years.
Sedentary Behaviors	C-	52.4% of adolescents (13-17 years) met the daily recommendations of no more than 2 hours of screen time per day. ⁵ No nationally representative data were available for ages <13 years.
Family and Peers	INC	Publications that could have been used to grade this indicator did not assess a nationally representative sample.
School	D	It is recommended that students at all schools receive two hours of weekly physical education. ⁸ Data for the exact recommendation were not available. 22% of adolescents (13-17 years) self-reported participating in three or more PE sessions every week during the past year. ⁵ 58.7% of adolescents (13-18 years) self-reported participating in at least 1 session of PE per week for the past year (unpublished custom analysis, Lebanon GSHS survey 2016). No nationally representative data were available for ages <13 years.
Community and Environment	INC	Publications that could have been used to grade this indicator did not assess a nationally representative sample and some included samples that were more than a decade old.
Government	C+	The Ministry of Public Health, the Ministry of Education and Higher Education, the WHO regional office, in collaboration with the Knowledge to Policy (K2P) Center of the American University of Beirut, recently launched an initiative to promote effective school policies for childhood obesity prevention in Lebanon. This initiative prioritizes the use of comprehensive school-based promotion approaches. ⁹ This is an important advancement however, it remains insufficient to support PA participation in all contexts. For example, in 2013, pedestrian deaths represented 40% of all reported road traffic deaths. ¹⁰
Physical Fitness	INC	Using all possible search strategies, there were no publications that addressed any of the benchmarks associated with physical fitness.

Organized Sport and Physical Activity indicator received the lowest grade, "F", reflecting low sports participation rates (<20%).

This comprehensive evaluation of Lebanon's performance on PA indicators for children and youth revealed several gaps in the literature. The lack of nationally representative data on several indicators, or for specific age groups, indicates that Lebanon does not have enough research on PA. Communications with governmental institutions revealed that these institutions collected very minimal data on PA or mainly relied on WHO's Lebanon Global School-based student Health Survey (GSHS) 2016.⁴ Last, low grades (<C+) on all scored indicators demonstrates a trajectory of poor engagement in physical activity, which accentuates the need to prioritize PA promotion at a national level.

Conclusion

Nationally representative evidence on PA indicators for children and youth is necessary to develop and implement multi-level support for PA-related behaviors. Current efforts tackling PA behaviors at schools may be insufficient to address the low grades. Therefore, future strategies must be prioritized to facilitate and improve current report card grades.

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