

THE LITHUANIAN PHYSICAL ACTIVITY REPORT CARD FOR CHILDREN AND YOUTH

2022



ACTIVE HEALTHY KIDS

GLOBAL ALLIANCE



LITHUANIAN
SPORTS
UNIVERSITY

THE LITHUANIAN PHYSICAL ACTIVITY REPORT CARD FOR CHILDREN AND YOUTH 2022

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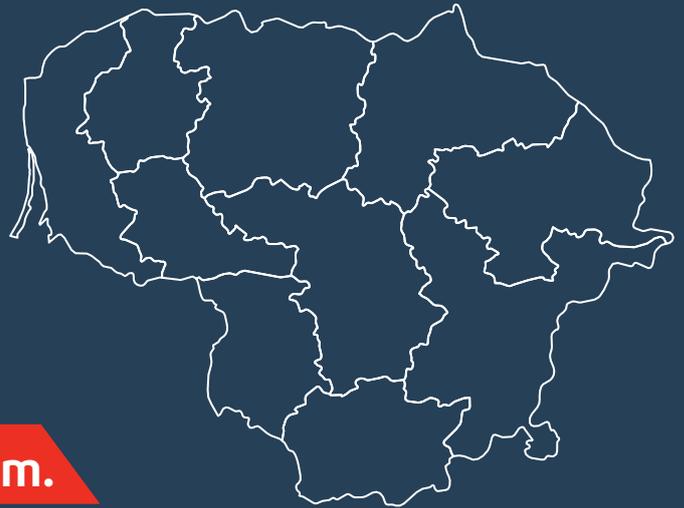
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Inga Gerulskienė, Kasparas Šileikis, 2022

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Some facts about Lithuania:



CAPITAL CITY: Vilnius



LAND AREA: 65,300 sq. km.



POPULATION: 2.8 million



GOVERNMENT TYPE: Parliamentary Democracy



OFFICIAL LANGUAGE: Lithuanian

Lithuania has a total area of 65,300 sq. km and a western coast of 99 km along the Baltic Sea.

Regarding the natural environment necessary for physical activity, while noting that Lithuania lacks any mountainous areas, there are many forests, rivers, lakes, and, most importantly, parks in the cities. Therefore, we can say that Lithuania has a good enough natural environment for outdoor physical activity. The question poses itself whether this environment is sufficiently exploited.



ABOUT THE LITHUANIAN PHYSICAL ACTIVITY REPORT CARDS FOR CHILDREN AND YOUTH

In 2014, the Active Healthy Kids Global Alliance (AHKGA) was established with the aim of advancing physical activity among children and youth from around the world. One of the initiatives of this network of researchers, health professionals, and stakeholders is to promote the production of national Physical Activity Report Cards for Children and Youth.

The purpose of the Report Card is to advance knowledge on the current “state of the nation” regarding physical activity levels of children and youth, identify gaps in current knowledge (research), and act as an advocacy tool to influence researchers and stakeholders who are able to positively influence physical activity opportunities for children and youth.

In April 2017, the Active Healthy Kids Global Alliance invited interested countries to participate in and register for the Global Matrix 3.0 through an open call that was distributed via established networks. Lithuania joined a total of 49 countries that participated and graded the Global Matrix 10 common indicators. That was the beginning of the development of the Lithuanian Physical Activity Report Card for Children and Youth.

In 2019, AHKGA circulated a call to participate in the Global Matrix 4.0. Between 2020 and 2022, 60 countries (including Lithuania) from six different continents (Africa, Asia, Europe, North America, Oceania, and Latin America) registered and 57 completed the development of their National Report Card.

METHODOLOGY



This is the second Lithuanian Report Card on physical activity for children and youth; the first was published in 2018.

The development of the Lithuanian Report Card was initiated and coordinated by the Department of Physical and Social Education, Lithuanian Sports University, in cooperation with the following partners: Vilnius University; Lithuanian National Olympic Committee; Ministry of Education, Science and Sport of the Republic of Lithuania.



The Report Card was developed by ten Report Card team members. The team included a variety of researchers and experts in physical activity, health behaviour and policy development, and represented different scientific perspectives and methodological background. Analysis of literature/documentation sources related to physical activity and physical activity-related indicators of children aged 5–17 was carried out to develop the Lithuanian Physical Activity Report Card for Children and Youth. The analysis covered scientific articles in Lithuanian and foreign journals, various international and national scientific and practical reports, as well as documents of institutions, organisations and movements related to health and physical activity (laws, decrees, sub-statutory acts, etc.). Most of the analysed literature sources were published after 2017.

The development process of the Report Card took about 12 months: cooperation between institutions and experts from backgrounds related to child PA was established, data sources identified, and data collection and synthesis carried out. The data collected were critically assessed in order to identify and grade all 10 PA indicators: 1) Overall physical activity; 2) Organised sport participation; 3) Active play; 4) Active transport; 5) Sedentary behaviour; 6) Physical fitness; 7) Family and peers; 8) School; 9) Community and environment; and 10) Government.

Grades from A to F were given as shown below. If data were available, the disparities (e.g. age, gender, disability, ethnicity, socio-economic status, regional comparisons, etc.) and data trends were taken into account in the assessment. A plus “+” or a minus sign “-” was included if any of those disparities pushed the grade to the upper or lower limits of the benchmark. In addition, the quality of evidence, sample size and representativeness were discussed and, where possible, most recent and larger studies were used throughout the grading process.





94%-100%



(87%-93%)

WE ARE SUCCEEDING WITH A LARGE MAJORITY OF CHILDREN AND YOUTH



80%-86%



74%-79%

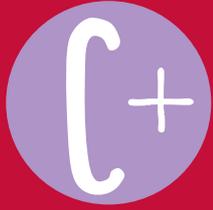


(67%-73%)

WE ARE SUCCEEDING WITH WELL OVER HALF OF CHILDREN AND YOUTH



60%-66%

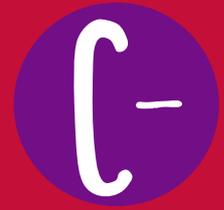


54%-59%



(47%-53%)

WE ARE SUCCEEDING WITH ABOUT HALF OF CHILDREN AND YOUTH



40%-46%



34%-39%



(27%-33%)

WE ARE SUCCEEDING WITH LESS THAN HALF BUT SOME CHILDREN AND YOUTH



20%-26%



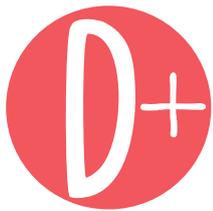
WE ARE SUCCEEDING WITH VERY FEW CHILDREN AND YOUTH (<20%)



INCOMPLETE—INSUFFICIENT OR INADEQUATE INFORMATION TO ASSIGN A GRADE

OVERALL PHYSICAL ACTIVITY

Overall physical activity includes all activities throughout the day, be it organised (such as Physical Education and sports training) or spontaneous, for recreation, chores at home or mobility purposes. Any bodily movement produced by skeletal muscles that requires energy expenditure above resting levels.



(2018 GRADE: C-)



>>> BACKGROUND

Regular physical activity, along with other behaviour modifications such as a healthy diet, would be beneficial in preventing such conditions as obesity, hypertension, diabetes, and dyslipidemia, which could result in cardiovascular disease in adult life (Cesa et al., 2014). It is well noted that physical activity behaviours are established at a very young age (Edwards et al., 2018), thus before their 16th birthday most schoolchildren have adopted a pattern of leisure activities and sport participation that forms the foundation of their adult leisure lifestyle (Bocarro et al., 2008). Nevertheless, the majority of children and youth need more physical activity in various forms to achieve the recommended levels of physical activity. Especially taking into account that due to COVID-19 pandemic restrictions and online learning physical activity level of schoolchildren has decreased, while sedentary time has increased significantly (Zenic et al., 2020).

>>> SOURCES OF INFORMATION

The grade "D+" describes the proportion of Lithuanian children who meet the Global Recommendations on Physical Activity for Health, which recommend that children and youth accumulate at least 60 minutes of moderate to vigorous-intensity physical activity (MVPA) per day on average (World Health Organization, 2020).

The value is given based on current data of national representative samples from 13 scientific studies, one national PA factsheet and data from one report by the Hygiene Institute. The overall physical activity of children and youth covering the ages of 6 to 17 years has been evaluated mainly using HBSC (*Health Behaviour in School-aged Children*), WHO (*World Health Organization*) and IPAQ (*International Physical Activity Questionnaire*) surveys.



>>> KEY FINDINGS

- It is promising to see that 92.7% of 6–9-year-old Lithuanian children from a nationally representative sample (50.6% boys) were “actively playing for at least 1 hour per day” (Whiting et al., 2021). However, fewer than 1% of Lithuanian 1st grade students from a national representative sample of 7–8-year-old children do not have MVPA daily for an hour or more (Petrauskienė et al., 2020).
- Parents of children aged 6–14 years (306; 52.9% female) from two longitudinal ongoing studies and one recent study on Distance Education of Children during the COVID-19 pandemic completed an online survey indicating that around one-third (32%) of boys and girls were physically active for 1 hour per day or more during the first lockdown (two months in spring 2020) (Braidokienė et al., 2021). Only 15.7% of primary schoolchildren (48.4% girls) from three of the biggest cities and regions of Lithuania were sufficiently physically active during their leisure time (Strazdienė et al., 2020).
- Although a large representative study of adolescents aged 13–16 years revealed 41.9% of them to be sufficiently physically active (Sukys et al., 2021), another nationally representative sample of adolescents (51.4% girls) aged 14–18 yrs presented mixed results indicating that “high/moderate” physical activity (60 minutes or more daily, and 30–59 minutes daily) was achieved by 82.3% and 27.8% of high school boys and girls, respectively (Novak et al., 2018).
- In total, 16.3% of students aged 14 to 18 years achieve the WHO recommendation for MVPA (≥ 7 hours per week) in a cross-sectional population-based study representing both urban (61.1%) and rural (38.9%) areas of Lithuania (Mieziene, Emeljanovas, Tilindiene et al., 2021). Furthermore, the mean MVPA in the leisure of 15–17-year-old adolescents was only around 4 hours a week (Mieziene, Emeljanovas, Putriute, et al., 2021). In addition, a composite PA score of 15–18-year-old adolescents recruited from 6 mainstream schools (9th–12th grades) from the 3 largest cities of Lithuania (a multistage sampling performed using a Likert scale from 1 to 5 was used, where “1” is low PA) on average, is only 2.2 (SD 0.6) (Lisinskiene & Juskeliene, 2019).
- Based on estimated prevalence of sufficient physical activity levels, only 10% of 10–17-year-old schoolchildren meet WHO guidelines (World Health Organization, 2018).
- In the population-based study of 11–19-year-old adolescents (48.6% male) from secondary schools in seven major Lithuanian districts representing cities, towns, and rural communities, 43.9% and 23.8% boys and girls, respectively, had ≥ 5 days/week of MVPA (Baceviciene et al., 2019). Similarly, only 33.4% of 5,141 adolescents residing in Lithuania (boys 48.7%) aged 11–19 yrs (5th–12th grade schoolchildren) from randomly selected public schools of all ten counties were classified as active (i.e. meeting WHO daily physical activity guidelines on 5 or more days of the week) (López-Sánchez et al., 2018).

- Based on HBSC 2018 survey with national representative sample of 11–15-year-old schoolchildren, only 20.4% and 16.1% of adolescent boys and girls respectively, indicate having “PA at least 60 minutes a day” (Oja et al., 2020).
- Findings from an international report (HBSC 2017–2018) with national representative samples of schoolchildren aged 11, 13, and 15 years indicated that 60 minutes of MVPA daily was achieved by 22% and 24% of 11-year-old girls and boys; by 14% and 20% of 13-year-old girls and boys; by 12% and 17% of 15-year-old girls and boys, respectively (or 14% vs. 16% adolescent girls and 19% vs. 25% boys of low vs. high family affluence group) (Inchley et al., 2020).
- A national survey under the Health Ministry command of 35,562 schoolchildren (aged 10–16 years, 49.7% boys) of 5th, 7th & 9th grade from all regions in Lithuania (44.9% rural communities) revealed that 38.1% and 13.6% of 10–16-year-old adolescents have 60 minutes PA “for 5 or more days per week including school PE” vs. “daily, excluding school PE”, respectively (Makauskaitė, 2021).

>>> CONCLUSION

Although the reported levels of overall physical activity of primary schoolchildren or male respondents may give a reason to rejoice, this indicator is valued as “less than satisfactory” due to significantly low adherence to the Global Recommendations on Physical Activity for Health in youth.

>>> RECOMMENDATIONS

A general tenet is that at every level of current activity, further increases in physical activity provide additional health benefits, with relatively larger effects among those who are currently not active or active only at light intensity (Weggemans et al., 2018).

Since the recommended amount of physical activity is met more often by boys than girls, and by younger children compared with teenagers, effective strategies to increase physical activity levels in girls and in teenagers is a matter of great relevance.

>>> RESEARCH GAPS

Physical activity has been measured in research by survey questionnaires only. There was no representative data on Actigraph available which would facilitate comparisons with other countries. Therefore, the need for objective measures in monitoring physical activity of children and youth at national level is of the utmost importance.

There is a lack of a national data on physical activity of the “youngest” children (i.e. on 5–6-year-olds).



>>> REFERENCES

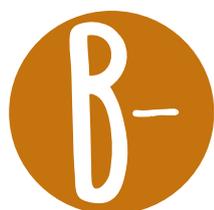
1. Baceviciene, M., Jankauskiene, R., & Emeljanovas, A. (2019). Self-perception of physical activity and fitness is related to lower psychosomatic health symptoms in adolescents with unhealthy lifestyles. *BMC Public Health*, 19, 980. <https://doi.org/10.1186/s12889-019-7311-2>
2. Bocarro, J., Kanters, M. A., Casper, J., & Forrester, S. (2008). School physical education, extracurricular sports, and lifelong active living. *Journal of Teaching in Physical Education*, 27(2), 155–166. <https://doi.org/10.1123/jtpe.27.2.155>
3. Breidokienė, R., Jusienė, R., Urbonas, V., Praninskienė, R., & Girdzijauskienė, S. (2021). Sedentary behavior among 6–14-year-old children during the COVID-19 lockdown and its relation to physical and mental health. *Healthcare*, 9(6), 756. <https://doi.org/10.3390/healthcare9060756>
4. Cesa, C. C., Sbruzzi, G., Ribeiro, R. A., Barbiero, S. M., de Oliveira Petkowicz, R., Eibel, B., Machado, N. B., Marques, R., Tortato, G., dos Santos, T. J., Leiria, C., Schaan, B. D., & Pellanda, L. C. (2014). Physical activity and cardiovascular risk factors in children: Meta-analysis of randomized clinical trials. *Preventive Medicine*, 69, 54–62. <https://doi.org/10.1016/j.ypmed.2014.08.014>
5. Edwards, L. C., Bryant, A. S., Keegan, R. J., Morgan, K., Cooper, S. M., & Jones, A. M. (2018). 'Measuring' physical literacy and related constructs: A systematic review of empirical findings. *Sports Medicine*, 48, 659–682. <https://doi.org/10.1007/s40279-017-0817-9>
6. Inchley, J., Currie, D., Budisavljevic, S., Torsheim, T., Jåstad, A., Cosma, A., Kelly, C., Arnarsson, A. M., & Samdal, O. (Eds.) (2020). Spotlight on adolescent health and well-being. Findings from the 2017/2018 Health Behaviour in School-aged Children (HBSC) survey in Europe and Canada: International report. WHO Regional Office for Europe.
7. Lisinskiene, A., & Juskeliene, V. (2019). Links between adolescents' engagement in physical activity and their attachment to mothers, fathers, and peers. *International Journal of Environmental Research and Public Health*, 16(5), 866. <https://doi.org/10.3390/ijerph16050866>
8. López-Sánchez, G. F., Emeljanovas, A., Miežienė, B., Díaz-Suárez, A., Sánchez-Castillo, S., Yang, L., Roberts, J., & Smith, L. (2018). Levels of physical activity in Lithuanian adolescents. *Medicina*, 54(5), 84. <https://doi.org/10.3390/medicina54050084>
9. Makauskaitė, G. (2021). Mokyklinio amžiaus vaikų gyvenamosios pokyčiai: 2016 ir 2020 metų gyvenamosios tyrimų palyginamoji analizė. Vilnius: Higienos institutas.
10. Mieziene, B., Emeljanovas, A., Putriute, V., & Novak, D. (2021). The direct and indirect relationships within the extended trans-contextual model for moderate-to-vigorous physical activity. *Frontiers in Pediatrics*, 9, 666040. <https://doi.org/10.3389/fped.2021.666040>
11. Mieziene, B., Emeljanovas, A., Tilindiene, I., Tumynaite, L., Trinkuniene, L., & Kawachi, I. (2021). The direct and indirect relationships of environmental, interpersonal and personal factors with high school students' physical activity: An ecological approach. *International Journal of Environmental Research and Public Health*, 18(3), 874. <https://doi.org/10.3390/ijerph18030874>
12. Novak, D., Emeljanovas, A., Mieziene, B., Štefan, L., & Kawachi, I. (2018). How different contexts of social capital are associated with self-rated health among Lithuanian high-school students. *Global Health Action*, 11(1), 1477470. <https://doi.org/10.1080/16549716.2018.1477470>
13. Oja, L., Slapšinskaitė, A., Piksööt, J., & Šmigelskas, K. (2020). Baltic adolescents' health behaviour: An international comparison. *International Journal of Environmental Research and Public Health*, 17(22), 8609. <https://doi.org/10.3390/ijerph17228609>

14. Petrauskienė, A., Grincaitė, M., Kriaučionienė, V., Miščikienė, L., & Vaitkevičiūtė, J. (2020). Lietuvos pirmos klasės mokinių augimo ir gyvensenos stebėseną (COSI): 2008–2019 metų tyrimų rezultatai. Kaunas: Dakra. https://www.lsmuni.lt/media/dynamic/files/21275/cosi_elektroninis.pdf
15. Strazdienė, N., Strukčinskaitė, V., Strukčinskienė, B., Stukas, R., & Arlauskas, R. (2020). Pradinių klasių mokinių fizinis aktyvumas ir sveikata: tėvų nuomonė. *Visuomenės sveikata*, 1(88), 86–91.
16. Sukys, S., Tilindienė, I., & Trinkuniene, L. (2021). Association between health literacy and leisure time physical activity among Lithuanian adolescents. *Health & Social Care in the Community*, 29(6), e387–e395. <https://doi.org/doi:10.1111/hsc.13363>
17. Weggemans, R. M., Backx, F. J. G., Borghouts, L., Chinapaw, M., Hopman, M. T. E., Koster, A., Kreemers, S., van Loon, L. J. C., May, A., Mosterd, A., van der Ploeg, H. P., Takken, T., Visser, M., Wendel-Vos, G. C. W., de Geus, E. J. C., & Committee Dutch Physical Activity Guidelines 2017 (2018). The 2017 Dutch Physical Activity Guidelines. *The International Journal of Behavioral Nutrition and Physical Activity*, 15, 58. <http://doi.org/10.1186/s12966-018-0661-9>
18. Whiting, S., Buoncristiano, M., Gelius, P., Abu-Omar, K., Pattison, M., Hyska, J., Dulevae, V., Milanovic, S. M., Zamrazilova, H., Hejgaard, T., Rasmussen, M., Nurk, E., Shengelia, L., Kelleher, C. C., Heinen, M. M., Spinelli, A., Nardone, P., Abildina, A., Abdrakhmanova, S., ... Breda, J. (2021). Physical activity, screen time, and sleep duration of children aged 6–9 years in 25 countries: An analysis within the WHO European Childhood Obesity Surveillance Initiative (COSI) 2015–2017. *Obesity Facts*, 14(1), 32–44. <https://doi.org/10.1159/000511263>
19. World Health Organization (2018). Physical activity factsheets for the 28 European Union member states of the WHO European region (WHO EU): Lithuania – Physical activity factsheet. https://www.euro.who.int/__data/assets/pdf_file/0005/382334/28fs-physical-activity-euro-rep-eng.pdf
20. World Health Organization (2020). WHO guidelines on physical activity and sedentary behavior. <https://apps.who.int/iris/bitstream/handle/10665/336656/9789240015128-eng.pdf>
21. Zenic, N., Taiar, R., Gilic, B., Blazevic, M., Maric, D., Pojskic, H., & Sekulic, D. (2020). Levels and changes of physical activity in adolescents during the COVID-19 pandemic: Contextualizing urban vs. rural living environment. *Applied Sciences*, 10(11), 3997. <https://doi.org/10.3390/app10113997>



ORGANISED SPORTS PARTICIPATION

Sports hobbies organised by clubs, municipalities, associations, schools, businesses or similar entities. A subset of physical activity that is structured, goal-oriented, competitive and contest-based.



(2018 GRADE: C)



>>> BACKGROUND

Organised sports seem to have greater health benefits compared to non-organised physical activity (PA) due to intensity level which is usually higher than that of non-organised PA (Hebert et al., 2015). The total amount of leisure-time PA usually is also greater among organised sports participants compared to non-participants (Marques et al., 2016). On the other hand, sport is not always inherently healthy, as it has been associated with an increased risk of a range of detrimental effects such as injury, body image issues or negative aspects of the focus on competition (Eime et al., 2016). Nevertheless, for lifelong active living purposes, organised sports during growing years play a significant role in forming the broader leisure-time activities repertoire: the wider the spectrum of sports activities that young people are involved in (e.g. 3 or more different sports during their careers), the more likely that individuals will remain committed sports participants when moving from adolescence to adulthood (Bocarro et al., 2008).

>>> SOURCES OF INFORMATION

The grade “B-” describes the proportion (approx. 60–66%) of Lithuanian children and youth who participate in organised sport and/or physical activity programmes. The data were derived from three nationally representative samples and a study of a smaller scale involving primary schoolchildren and/or their parents/legal guardians. The standardised surveys by WHO COSI (World Health Organization European Childhood Obesity Surveillance Initiative) were used for the records.



>>> KEY FINDINGS

- From nationally representative data of 6–9-year-old Lithuanian children (50.6% boys), 38.6% were “not members of sports/dancing clubs or did not do sports or dance at all” (Whiting et al., 2021).
- More nationally representative data of 1st grade pupils of Lithuania revealed that 66.7% of 7–8-year-old children attend sports or dance club being active for 1–2 hours per week (41.4%), 3–4 hours/week (36.2%) and 5–11 hours/week (22.4%) (Petrauskienė et al., 2020).
- In addition, according to parents of 312 primary schoolchildren (48.4% girls) from three biggest cities and regions of Lithuania, approx. 85% of primary schoolchildren attend various organised sport and physical activities after school (only 15.3% never attend) (Strazdienė et al., 2020).
- In the population-based study of 11–19-year-old schoolchildren (48.6% male) from cities, towns, and rural communities in seven major Lithuanian districts, 53.6% and 38.6% of adolescent boys and girls, respectively participate in organised sport (amounts differ from “twice or more times per week” to “2–3 times per month”) (Baceviciene et al., 2019).

>>> CONCLUSION

Although the situation has improved since last round of evaluation, the need for action to improve the participation rates for organised sports among Lithuanian children is still relevant in order to attain the proportion close to Nordic countries, e.g. in Norway almost everyone (93% in 2017) has been a member of organised sports while growing up.

>>> RECOMMENDATIONS

Evidence exists that organised sport is susceptible to age and gender: it is popular especially amongst younger participants and preferred more by males rather than females. Therefore, sport policies should place a higher priority on grass-roots participation bringing young children into organised sports and preventing adolescents (particularly females) from dropping it when they reach puberty (Eime et al., 2016). Furthermore, health promotion efforts should focus on the needs and preferences of adolescents to develop attractive organised sports offerings. Also, sports organisations and schools should cooperate to reduce barriers and increase accessibility to organised sports for all children and adolescents, in particular for those coming from families with low socio-economic status (Manz et al., 2016). The current situation in Lithuania with extremely high numbers of war refugees from Ukraine has specifically pinpointed the need for their children’s inclusion in various organised sports and immersion in physical activities.

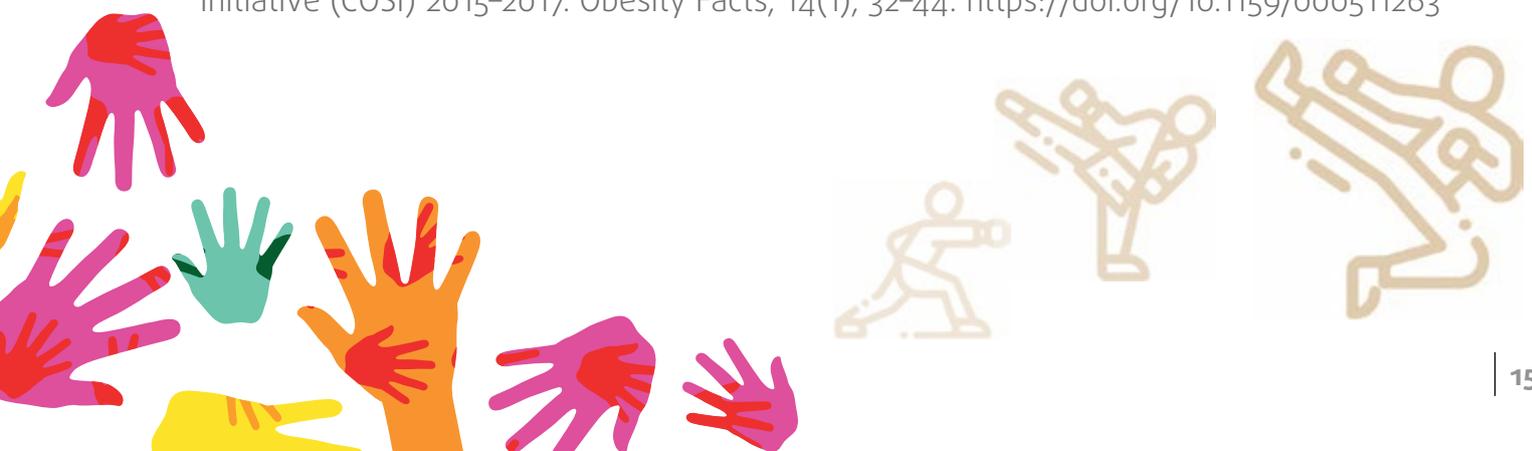


>>> RESEARCH GAPS

There is a lack of a national data on participation in organised sports of the pre-school children. High-quality sport participation data is required to provide the evidence to inform development of sport programmes and policies to meet the needs of Lithuanian schoolchildren.

>>> REFERENCES

1. Baceviciene, M., Jankauskiene, R., & Emeljanovas, A. (2019). Self-perception of physical activity and fitness is related to lower psychosomatic health symptoms in adolescents with unhealthy lifestyles. *BMC Public Health*, 19, 980. <https://doi.org/10.1186/s12889-019-7311-2>
2. Bocarro, J., Kanters, M. A., Casper, J., & Forrester, S. (2008). School physical education, extracurricular sports, and lifelong active living. *Journal of Teaching in Physical Education*, 27(2), 155-166. <https://doi.org/10.1123/jtpe.27.2.155>
3. Eime, R. M., Harvey, J. T., Charity, M. J., & Payne, W. R. (2016). Population levels of sport participation: Implications for sport policy. *BMC Public Health*, 16, 752. <https://doi.org/10.1186/s12889-016-3463-5>
4. Hebert, J. J., Moller, N. C., Andersen, L. B., & Wedderkopp, N. (2015). Organized sport participation is associated with higher levels of overall health-related physical activity in children (CHAMPS Study-DK). *PLoS One*, 10(8), e0134621. <https://doi.org/10.1371/journal.pone.0134621>
5. Manz, K., Krug, S., Schienkiewitz, A., & Finger, J. D. (2016). Determinants of organised sports participation patterns during the transition from childhood to adolescence in Germany: Results of a nationwide cohort study. *BMC Public Health*, 16, 939. <http://doi.org/10.1186/s12889-016-3615-7>
6. Marques, A., Ekelund, U., & Sardinha, L. B. (2016). Associations between organized sports participation and objectively measured physical activity, sedentary time and weight status in youth. *Journal of Science and Medicine in Sport*, 19(2), 154-157. <https://doi.org/10.1016/j.jsams.2015.02.007>
7. Petrauskienė, A., Grincaitė, M., Kriaučionienė, V., Miščikienė, L., & Vaitkevičiūtė, J. (2020). Lietuvos pirmos klasės mokinių augimo ir gyvensenos stebėseną (COSI): 2008–2019 metų tyrimų rezultatai. Kaunas: Dakra. https://www.lsmuni.lt/media/dynamic/files/21275/cosi_elektroninis.pdf
8. Strazdienė, N., Strukčinskaitė, V., Strukčinskienė, B., Stukas, R., & Arlauskas, R. (2020). Pradinių klasių mokinių fizinis aktyvumas ir sveikata: tėvų nuomonė. *Visuomenės sveikata*, 1(88), 86-91.
9. Whiting, S., Buoncristiano, M., Gelius, P., Abu-Omar, K., Pattison, M., Hyska, J., Dulevae, V., Milanovic, S. M., Zamrazilova, H., Hejgaard, T., Rasmussen, M., Nurk, E., Shengelia, L., Kelleher, C. C., Heinen, M. M., Spinelli, A., Nardone, P., Abildina, A., Abdrakhmanova, S., ... Breda, J. (2021). Physical activity, screen time, and sleep duration of children aged 6-9 years in 25 countries: An analysis within the WHO European Childhood Obesity Surveillance Initiative (COSI) 2015-2017. *Obesity Facts*, 14(1), 32-44. <https://doi.org/10.1159/000511263>



ACTIVE PLAY

Active play may involve symbolic activity or games with or without clearly defined rules. The benchmark for this indicator pertains to the proportion of children and youth who participate in un-organised physical activity or unstructured play in leisure time as well as being outdoors for more than 2 hours a day.



>>> BACKGROUND

Getting involved in games and activities for kids and adolescents' is a great way to encourage them to be more active. Additionally, play may seem simple, yet it is fundamental to a person's development and worth mentioning that every child has the right to engage in play (Mrnjaus, 2014). Play makes learning something that happens naturally and joyfully, when a person laughs and wonders, explores and imagines. Active participation in play means that children can freely choose what, where and with whom they interact when playing and in such a way they are developing socially, psychologically and physically (Köngäs et al., 2021). Especially young children (up to 7 years old) have a natural intention to take part in physical activities and mostly spontaneously take part in active play. There are currently no specific international recommendations on time spent in active play. However, active play is recognised as an important way to be physically active for children and adolescent in many international guidelines and as such is promoted in children and adolescents (Australian Government, 2014a; Australian Government, 2014b; Finnish recommendations for physical activity in early childhood, 2016; Tremblay et al., 2011). Individual, parental, and physical (domestic) and social environments appear to play a role in children's outdoor play and time. Ecological factors (i.e. seasonality, rurality) also appear to be related to outdoor play/time (Lee et al., 2021). Active play among youngsters has plummeted by 50% over the last forty years (Juster et al., 2004) and the pandemic situation even has an additional effect on that (Cindrach et al., 2021, Dunton et al., 2020). During the pandemic period even more children reduced their physical activity and active playtime due to all the restrictions keeping social distance, staying at home, and outdoor restrictions on use of playgrounds. Research highlights the critical role that time outdoors and time in nature play in bolstering children and adolescents' resilience to different stressors (Jackson et al., 2021).



>>> SOURCES OF INFORMATION

Grades were based on three cross-sectional nationally representative studies. The number of participants in those studies varied from 3,261 to 3,812 participants. In all research family record questionnaires were used, but research only represents data from primary school age children, hence the grade was initially estimated as incomplete: after long discussions we decided to grade it as B-.

>>> KEY FINDINGS

- Data showed that 64.3% schoolchildren were active playing games more than 2 hours per day on weekdays, and 77.4% more than 3 hours per day at weekends (Petrauksienė et al., 2020; Whiting et al., 2021).
- The evaluation of their active play time varied from C+ to B- mark (from 58.9% – to 61.8% playing outside 2 hours per day) among different age and gender subjects (Petrauksienė et al., 2020; Whiting et al., 2021).

>>> CONCLUSIONS

For this indicator, only 2 scientific studies were done just with 6–9-year-old kids using family record questions. For the second round of the Active kids report in Lithuania we decided to make the grade B-, although data were lacking from different age groups of student's active play time and were additionally lacking for the second benchmark: the percentage of children and youth who report being outdoors for several hours a day. The percentage of children and youth who engage in unstructured/unorganised active play for several hours a day was calculated using simple average – 60.3% ($58.9+61.8/2= 60.3\%$), and this represents letter grade B-.

>>> RECOMMENDATIONS

- Safe environments for active play establishment and unstructured physical activity have to be prioritised.
- Promoting and reducing restrictions (e.g. over-protectionism) for active play in schools, playgrounds etc.
- Listening to children's and adolescents' interests, wishes for unorganised physical activity has to be considered while planning facilities for PA especially for being more outdoors.
- Outdoor education has to be prioritised in children and adolescents.



>>> RESEARCH GAPS

- Children’s active play time targets several hours per day. Data for this benchmark varied considerably, which is why further research is required to establish a benchmark linked to health outcomes.
- There is a need to explore what children and especially youths are doing, how they are spending time after school (in unstructured activities) and additionally, how long children and adolescents are outdoors on weekdays and weekends.
- It is important carefully to monitor active play (especially outdoors) and surveillance for future strategies and interventions.
- Playground markings and facilities can contribute to the PA levels of children and schoolchildren during recess times in the short to medium term.

>>> REFERENCES

1. Australian Government: Department of Health (2014a). Australia’s physical activity and sedentary behavior guidelines for children (5–12 years). <https://www.10000steps.org.au/articles/australias-physical-activity-sedentary-behaviour-guidelines-children-5-12-years/>
2. Australian Government: Department of Health (2014b). Move and play every day: National physical activity recommendations for children 0–5 years. https://extranet.who.int/ncdccs/Data/AUS_B11_National%20Physical%20Activity%20Guidelines%20for%20children%200-5yrs.pdf
3. Cindrich, S. L., Lansing, J. E., Brower, C. S., McDowell, C. P., Herring, M. P., & Meyer, J. D. (2021). Associations between change in outside time pre- and post-COVID-19 public health restrictions and mental health: Brief research report. *Frontiers in Public Health*, 9, 619129. <https://doi.org/10.3389/fpubh.2021.619129>
4. Dunton, G. F., Do, B., & Wang, S. D. (2020). Early effects of the COVID-19 pandemic on physical activity and sedentary behavior in children living in the U.S. *BMC Public Health*, 20, 1351. <https://doi.org/10.1186/s12889-020-09429-3>
5. Jackson, S. B., Stevenson, K. T., Larson, L. R., Peterson, M. N., & Seekamp, E. (2021). Outdoor activity participation improves adolescents’ mental health and well-being during the COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, 18(5), 2506. <https://doi.org/10.3390/ijerph18052506>
6. Joy, play and doing together. Recommendations for physical activity in early childhood (2016). Finland: Ministry of Education and Culture. <https://julkaisut.valtioneuvosto.fi/bitstream/handle/10024/78924/OKM35.pdf>
7. Juster, T. F., Stafford, F., & Ono, H. (2004). Major changes have taken place in how children and teens spend their time: Child development supplement. Ann Arbor, MI: Institute for Social Research, University of Michigan.
8. Köngäs, M., Määttä, K., & Uusiautti, S. (2021). Participation in play activities in the children’s peer culture. *Early Child Development and Care*. <https://doi.org/10.1080/03004430.2021.1912743>



9. Lee, E. Y., Bains, A., Hunter, S., Ament, A., Brazo-Sayavera, J., Carson, V., Hakimi, S., Huang, W. Y., Jassen, I., Lee, M., Lim, H., Santos Silva, D. A., & Tremblay, M. S. (2021). Systematic review of the correlates of outdoor play and time among children aged 3–12 years. *International Journal of Behavioral Nutrition and Physical Activity*, 18, 41. <https://doi.org/10.1186/s12966-021-01097-9>
10. Mrnjaus, K. (2014). The child's right to play?! *Croatian Journal of Education*, 16, 217–223.
11. Petrauskienė, A., Grincaitė, M., Kriaučionienė, V., Miščikienė, L., & Vaitkevičiūtė, J. (2020). Lietuvos pirmos klasės mokinių augimo ir gyvensenos stebėseną (COSI): 2008–2019 metų tyrimų rezultatai. Kaunas: Dakra. https://www.lsmuni.lt/media/dynamic/files/21275/cosi_elektroninis.pdf
12. Tremblay, M. S., Warburton, D. E., Janssen, I., Peterson, D. H., Latimer, A. E., Rhodes, R. E., Kho, M. E., Hicks, A., LeBlanc, A. G., Zehr, L., Murumets, K., & Duggan, M. (2011). New Canadian physical activity guidelines. *Applied Physiology Nutrition and Metabolism*, 36(1), 36–46. <https://doi.org/10.1139/H11-009>
13. Whiting, S., Buoncristiano, M., Gelius, P., Abu-Omar, K., Pattison, M., Hyska, J., Dulevae, V., Milanovic, S. M., Zamrazilova, H., Hejgaard, T., Rasmussen, M., Nurk, E., Shengelia, L., Kelleher, C. C., Heinen, M. M., Spinelli, A., Nardone, P., Abildina, A., Abdrakhmanova, S., ... Breda, J. (2021). Physical activity, screen time, and sleep duration of children aged 6–9 years in 25 countries: An analysis within the WHO European Childhood Obesity Surveillance Initiative (COSI) 2015–2017. *Obesity Facts*, 14(1), 32–44. <https://doi.org/10.1159/000511263>

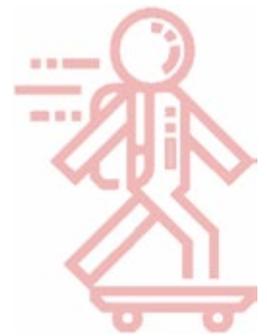


ACTIVE TRANSPORTATION

Active transport refers to any form of human-powered transportation— walking, cycling, using a wheelchair, in-line skating or skateboarding. The benchmark for this indicator pertains to the proportion of children and youth who use active transportation to get to and from places (e.g. school, park, mall, friend’s house).



(2018 GRADE C-)



>>> BACKGROUND

Active transport can include walking, cycling, skating, skateboarding and any incidental activity associated with the use of public transport. The health benefits of walking and cycling for transport are well established, and comparable to those traditionally associated with more structured sport and exercise programmes. There are currently no specific international recommendations on the use of active transportation. However, there is evidence suggest that active transportation adds to overall physical activity level (Chen et al., 2021; Chillón, et al., 2011; Duncan, 2013; Larouche et al., 2018) and additionally can also lead to a more environmental and economically sustainable travel behaviour over a lifetime (Mandic et al., 2016). The results showed that safer pedestrian crossings, and comfortable bicycle paths were the most significant factors that encourage use of active transport (Hatamzadeh et al., 2017; Ikeda et al., 2018). A wider cycling network, and bicycle safety were the most important incentives for the promotion of cycling (Bengoechea & Spence, 2016). It was estimated that secondary school adolescents focused on promoting school travel, with less focus on non-school travel (Fasan et al., 2021) therefore needed support for leisure cycling time.

>>> SOURCES OF INFORMATION

Grades were based on a number of cross-sectional small and nationally representative studies. The number of participants in those studies varied from 902 to 3,812. In most of the research family record questionnaires, or questionnaires for adolescents were used. Research represents data from primary school age children up to 18-year-olds, with similar groups for males and females.



>>> KEY FINDINGS

- Data presented from pre-school children and 18-year-olds were collected by questionnaire survey (Dèdelè & Miškinytė, 2021; Petrauskienė et al., 2020; Whiting et al., 2021).
- Evaluation of their active transport varied from D (for pre-schoolers) to F (for youth) grade (Dèdelè & Miškinytė, 2021; Petrauskienė et al., 2020; Whiting et al., 2021).
- Parents of 6–8-year-old children reported that 36.6% walk/cycle to school, using a combination of walking/cycling and motorised vehicles – 21.3% and 42.1% taking motorised vehicles to school (Whiting et al., 2021).
- One third of 1st graders (32.6 per cent) use mixed forms of transport to and from school (walking/cycling) (Petrauskienė et al., 2020).
- Youths (18 years old) tend to use less active transport – just 24.8% engage regularly in activity such a cycling from one point to another, 43.3% reported carried by private or public transport, and 31.8% – use a combination of walking/cycling and motorised vehicles (Dèdelè & Miškinytė, 2021).

>>> CONCLUSIONS

The grade is based on the percentage of parents' opinion on their children's active transport, and one report from 18 year olds, which indicates that about the half of them are regularly physically active. The percentage of children and youth who use active transportation to get to and from places (e.g. school, park, mall, friend's house) was calculated using simple average: on average 31.3% were walking/cycling to school/workplace $(36.6+32.6+24.8)/3=31.3\%$ which represents a D grade, a decrease in comparison with the previous report.

>>> RECOMMENDATIONS

- Promoting and facilitating safe active transport to school and other destinations.
- Active transportation promotion has to be a key factor in schools and communities.
- Different type of interventions may increase PA.
- Active transport promotion has to include all actors: parents, school, community and policy makers.



>>> RESEARCH GAPS

- There is needed to explore prevalence and trends of active transportation in Lithuania: what kinds of active transport to/from a different points or destinations popular (e.g. parks, shops, sport fields) among different aged children and adolescents, as well as the role of active transport in achieving recommended levels of physical activity.
- Research is needed on the health and social benefits of active transport.
- There is a need to explore how increased numbers of bicycle paths in Lithuania encouraged children and youths to move actively.
- Effectiveness of School, Community and Municipality collaborative interventions that promote active transport.
- Different type of interventions may increase PA, in turn longer follow-ups are needed using standardised outcome measures.
- Examine potential moderators and mediators of active transport behaviour change to help refine interventions.

>>> REFERENCES

1. Mandic, S., Williams, J., Moore, A., Hopkins, D., Flaherty, C., Wilson, G., Bengoechea, E., & Spence, J. C. (2016). Built environment and active transport to school (BEATS) study: Protocol for a cross-sectional study. *BMJ Open*, 6(5), e011196. <https://doi.org/10.1136/bmjopen-2016-011196>
2. Chen, L., Moore, A. B., & Mandic, S. (2021). Using exploratory spatial analysis to understand the patterns of adolescents' active transport to school and contributory factors. *ISPRS International Journal of Geo-Information*, 10(8), 495. <https://doi.org/10.3390/ijgi10080495>
3. Chillón, P., Ortega, F. B., Ruiz, J. R., De Bourdeaudhuij, I., Martinez-Gomez, D., Vicente-Rodriguez, G., Widhalm, K., Molnar, D., Gottrand, F., González-Gross, M., Ward, D. S., Moreno, L. A., Castillo, M. J., Sjöström, M., & HELENA study group (2011). Active commuting and physical activity in adolescents from Europe: Results from the HELENA study. *Pediatric Exercise Science*, 23(2), 207–217. <https://doi.org/10.1123/pes.23.2.207>
4. Dèdelè, A., & Miškinytė, A. (2021). Promoting sustainable mobility: A perspective from car and public transport users. *International Journal of Environmental Research and Public Health*, 18(9), 4715. <https://doi.org/10.3390/ijerph18094715>
5. Duncan, S., White, K., Mavoa, S., Stewart, T., Hinckson, E., & Schofield, G. (2016). Active transport, physical activity, and distance between home and school in children and adolescent. *Journal of Physical Activity and Health*, 13(4), 447–453. <https://doi.org/10.1123/jpah.2015-0054>
6. Fasan, E., Tight, M., & Evdorides, H. (2021). Factors influencing cycling among secondary school adolescents in an ethnically diverse city: The perspective of Birmingham transport stakeholders. *Sustainability*, 13(22), 12400. <https://doi.org/10.3390/su132212400>



7. Hatamzadeh, Y., Habibian, M., & Khodaii, A. (2017). Walking behaviour across genders in school trips, a case study of Rasht, Iran. *Journal of Transport & Health*, 5, 42–54. <https://doi.org/10.1016/j.jth.2016.08.011>
8. Ikeda, E., Stewart, T., Garrett, N., Egli, V., Mandic, S., Hosking, J., Witten, K., Hawley, G., Tautolo, E. S., Rodda, J., Moore, A., & Smith, M. (2018). Built environment associates of active school travel in New Zealand children and youth: A systematic meta-analysis using individual participant data. *Journal of Transport & Health*, 9, 117–131. <https://doi.org/10.1016/j.jth.2018.04.007>
9. Larouche, R., Mammen, G., Rowe, D. A., & Faulkner, G. (2018). Effectiveness of active school transport interventions: A systematic review and update. *BMC Public Health*, 18, 206. <https://doi.org/10.1186/s12889-017-5005-1>
10. Petrauskienė, A., Grincaitė, M., Kriaučionienė, V., Miščikienė, L., & Vaitkevičiūtė, J. (2020). Lietuvos pirmos klasės mokinių augimo ir gyvensenos stebėseną (COSI): 2008–2019 metų tyrimų rezultatai. Kaunas: Dakra. https://www.lsmuni.lt/media/dynamic/files/21275/cosi_elektroninis.pdf
11. Whiting, S., Buoncristiano, M., Gelius, P., Abu-Omar, K., Pattison, M., Hyska, J., Dulevae, V., Milanovic, S. M., Zamrazilova, H., Hejgaard, T., Rasmussen, M., Nurk, E., Shengelia, L., Kelleher, C. C., Heinen, M. M., Spinelli, A., Nardone, P., Abildina, A., Abdrakhmanova, S., ... Breda, J. (2021). Physical activity, screen time, and sleep duration of children aged 6–9 years in 25 countries: An analysis within the WHO European Childhood Obesity Surveillance Initiative (COSI) 2015–2017. *Obesity Facts*, 14(1), 32–44. <https://doi.org/10.1159/000511263>



SEDENTARY BEHAVIOURS

Any waking behaviour characterised by an energy expenditure $\leq 1,5$ metabolic equivalents, while in a sitting, reclining or lying posture.



>>> BACKGROUND

It is important to reduce everyday sedentary time by increasing daily PA levels. Excessive sedentary time has a negative impact on physical, social and mental health (Riso et al., 2016). Due to digital technology developments the engagement in sedentary behaviour by children has increased substantially over the recent years. Furthermore, a great amount of sedentary time during weekdays occurs at school, where students spend hours in sitting and learning without sufficient activity breaks. Children spend nearly two thirds of their school-time in sedentary activities, and particularly girls, older, and obese children have a high volume of sedentary behaviour during school (da Costa et al., 2017). Furthermore, due to COVID-19 pandemic restrictions, online learning, and school closures, physical activity level of schoolchildren has decreased while sedentary time (including screen-time based activities for both educational and recreational purposes) has increased significantly (Zenic et al., 2020).

>>> SOURCES OF INFORMATION

The grade "D+" describes the proportion (34–39%) of Lithuanian children and youth who meet the guidelines for recreational screen-based activities to be less than 2 hours per day. Seven studies were found to be related to the screen-based leisure activities of schoolchildren: four of national representative samples, one as part of a larger international collaborative project, one performed with ongoing longitudinal study samples, and one of a smaller scale presenting data on primary schoolchildren from three biggest cities and regions of Lithuania. The standardised surveys by WHO COSI (World Health Organization European Childhood Obesity Surveillance Initiative) and HBSC (Health Behaviour in School-aged Children) were used for the records.



>>> KEY FINDINGS

- Based on nationally representative data of 6–9-year-old Lithuanian children, 60.3% of boys and girls were spending “<2 hours of screen time per day outside school lessons” (Whiting et al., 2021).
- But another nationally representative data of 1st grade Lithuanian pupils (n=3231) revealed that about 83% and 93.4% of 7–8-year-old children have screen time activities for 2 or more hours per day on weekdays vs. weekends, respectively. Only 16.9% and 6.6% of respondents do not exceed the recommended levels for screen-based activities during weekdays and weekends, respectively (Petrauskienė et al., 2020).
- In a study sample of 304 child-parent dyads (47.4% boys) from Lithuania (as part of larger international collaborative project) children aged 8–10 yrs had “time spent online” averaged score of 2.47 and 3.39 on working and weekend days, respectively (using a nine-point scale, ranging from (1) “little or no time” to (9) “7 hours or more”); and the “frequency of online activities” averaged score was 2.36 (Pakalniškienė et al., 2020).
- According to parents of 312 primary schoolchildren (48.4% girls) from three biggest cities and regions of Lithuania, 70.8% of boys and girls have recreational screen time during their leisure time (Strazdienė et al., 2020).
- According to parents of 6–14-year-old children (306; 52.9% female) from two longitudinal ongoing studies and one recent survey on Distance Education of Children during COVID-19 Pandemic, it was revealed that on average 42.5% boys and girls did not exceed the recommended 2 hours per day of recreational screen time during 1st lockdown (i.e. two months in spring 2020) (Breidokienė et al., 2021).
- From a national survey under Health Ministry command of 35,562 (49.7% boys) 5th, 7th & 9th grade schoolchildren from all regions in Lithuania (44.9% rural communities), 25% of 10–16-year-old children have on average 4 or more hours per day of recreational screen time (Makauskaitė, 2021).
- In the population-based study of 11–19-year-old adolescents (48.6% male) from cities, towns, and rural communities in seven major Lithuanian districts, 82.6% and 70.6% of boys and girls, respectively have >2 hours per day of non-educational screen time on schooldays (on average 5.0 ± 3.2 and 4.1 ± 2.7 hours per day) (Baceviciene et al., 2019).

>>> CONCLUSION

The data of nationally representative samples of schoolchildren indicate that the screen time guidelines for leisure purposes are being followed by the minority of Lithuanian boys and girls.

>>> RECOMMENDATIONS

Strategies such as active breaks could be implemented especially addressing those who are most inactive (da Costa et al., 2017).

Parents, teachers, and school policies could set the boundaries to excessive use of various digital technology devices by children and adolescents.

>>> RESEARCH GAPS

Sedentary behaviour of Lithuanian schoolchildren has been measured in research by survey questionnaires only. It is difficult to perceive and evaluate the amount of sedentary time, therefore the need for accelerometer-based measurements to provide more objective data on monitoring sedentary behaviours of children and youth at national level is of utmost importance.

There is a lack of a national data on physical activity of the “youngest” school-aged children (i.e. on 5–6-year-olds).

>>> REFERENCES

1. Baceviciene, M., Jankauskiene, R., & Emeljanovas, A. (2019). Self-perception of physical activity and fitness is related to lower psychosomatic health symptoms in adolescents with unhealthy lifestyles. *BMC Public Health*, 19, 980. <https://doi.org/10.1186/s12889-019-7311-2>
2. Breidokienė, R., Jusienė, R., Urbonas, V., Praninskienė, R., & Girdzijauskienė, S. (2021). Sedentary behavior among 6–14-year-old children during the COVID-19 lockdown and its relation to physical and mental health. *Healthcare*, 9(6), 756. <https://doi.org/10.3390/healthcare9060756>
3. da Costa, B. G., da Silva, K. S., George, A. M., & de Assis, M. A. (2017). Sedentary behavior during school-time: Sociodemographic, weight status, physical education class, and school performance correlates in Brazilian schoolchildren. *Journal of Science and Medicine in Sport*, 20(1), 70–74. <https://doi.org/10.1016/j.jsams.2016.06.004>
4. Makauskaitė, G. (2021). Mokyklinio amžiaus vaikų gyvensenos pokyčiai: 2016 ir 2020 metų gyvensenos tyrimų palyginamoji analizė. Vilnius: Higienos institutas.
5. Pakalniškienė, V., Jusienė, R., Sebre, S. B., Chun-Li Wu, J., & Laurinaitytė, I. (2020). Children's internet use profiles in relation to behavioral problems in Lithuania, Latvia, and Taiwan. *International Journal of Environmental Research and Public Health*, 17(22), 8490. <https://doi.org/10.3390/ijerph17228490>
6. Petrauskienė, A., Grincaitė, M., Kriaučionienė, V., Miščikienė, L., & Vaitkevičiūtė, J. (2020). Lietuvos pirmos klasės mokinių augimo ir gyvensenos stebėseną (COSI): 2008–2019 metų tyrimų rezultatai. Kaunas: Dakra. https://www.lsmuni.lt/media/dynamic/files/21275/cosi_elektroninis.pdf
7. Riso, E.-M., Kull, M., Mooses, K., Hannus, A., & Jürimäe, J. (2016). Objectively measured physical activity levels and sedentary time in 7–9-year-old Estonian schoolchildren: Independent associations with body composition parameters. *BMC Public Health*, 16, 346. <http://doi.org/10.1186/s12889-016-3000-6>



8. Strazdienė, N., Strukčinskaitė, V., Strukčinskienė, B., Stukas, R., & Arlauskas, R. (2020). Pradinių klasių mokinių fizinis aktyvumas ir sveikata: tėvų nuomonė. *Visuomenės sveikata*, 1(88), 86–91.
9. Whiting, S., Buoncristiano, M., Gelius, P., Abu-Omar, K., Pattison, M., Hyska, J., Dulevae, V., Milanovic, S. M., Zamrazilova, H., Hejgaard, T., Rasmussen, M., Nurk, E., Shengelia, L., Kelleher, C. C., Heinen, M. M., Spinelli, A., Nardone, P., Abildina, A., Abdrakhmanova, S., ... Breda, J. (2021). Physical activity, screen time, and sleep duration of children aged 6–9 years in 25 countries: An analysis within the WHO European Childhood Obesity Surveillance Initiative (COSI) 2015–2017. *Obesity Facts*, 14(1), 32–44. <https://doi.org/10.1159/000511263>
10. Zenic, N., Tajar, R., Gilic, B., Blazevic, M., Maric, D., Pojskic, H., & Sekulic, D. (2020). Levels and changes of physical activity in adolescents during the COVID-19 pandemic: Contextualizing urban vs. rural living environment. *Applied Sciences*, 10(11), 3997. <https://doi.org/10.3390/app10113997>



PHYSICAL FITNESS

Characteristics that permit a good performance of a given physical task in a specified physical, social, and psychological environment.



(2018 GRADE: C+)



BACKGROUND

>>> It was established that health-related physical fitness (PF), particularly endurance, has deteriorated significantly among Lithuanian 11–18-year-old students compared with previous decades (Sukys et al., 2019; Venckunas et al., 2017). PF indicators of young Lithuanians are also unsatisfactory compared with European students' PF norms, which were based on data from 2,779,165 European students from 30 countries (Tomkinson et al., 2018). The cardiovascular endurance of Lithuanian students corresponds to only the 28th and 38th percentiles of boys and girls, respectively; muscle explosive power – 65th and 62nd percentiles; upper body muscle endurance – 67th and 72nd percentiles; lower body muscle endurance – 72 and 84 percentiles; flexibility – 42 and 41 percentiles. The decline in cardiovascular endurance has been observed in recent decades not only in Lithuania but also in other countries (Eberhardt et al., 2020; Tomkinson & Olds, 2007) and this is a major concern for the health of future generations. Poor student PF leads to a pre-existing risk of health problems (Ortega et al., 2008; Ruiz et al., 2016) and a consequent financial burden on the country. National defence is also at stake, as a large proportion of conscripts are rejected for military service or ineffective at it due to poor PF and related health problems (Mieziene et al., 2020; Santtila et al., 2017).

SOURCES OF INFORMATION

>>> The results were derived from nationally representative cross-sectional research published in 2019, that included 3,456 Lithuanian first to fourth-grade children from age 7 to 10 years. Objectively measured data were collected for anthropometric measures, musculoskeletal, motor, and cardiorespiratory fitness of Lithuanian primary school children according to age and sex (Emeljanovas et al., 2020). Among study participants, there were 820 (23.7%) 9-year-olds, and 645 (18.7%) 10-year-olds (the age that matches the Global matrix criteria for inclusion). Physical fitness was measured using a nine-item test battery developed by Fjørtoft et al. (2011). The test battery included 9 tests, however

only the Standing Broad Jump and Shuttle Run 10x5 tests overlapped with the tests provided for reference in the study of Tomkinson et al. (2018). All corresponding percentiles (for each test, each sex, each year of age) were summed up and an average calculated; this average percentile was matched with the corresponding grade.

As the physical fitness of older students was not presented in published research since the previous summary in 2018, the values of our previous Report are valid and can be obtained in Global Matrix 3 (<https://www.activehealthy-kids.org/lithuania/>).

>>> KEY FINDINGS

9–10-year-olds, both boys and girls, are at the 50th percentile and meet the average achievements in explosive strength (Standing Broad jump (cm)) and in speed/agility (Shuttle Run 10x5 (s)) based on age and sex-specific international normative data (Tomkinson et al., 2018).

>>> CONCLUSIONS

The physical fitness of Lithuanian primary school children is at the average level of their European peers.

>>> RECOMMENDATIONS

Therefore, it is important to register and monitor physical fitness, and have updated reference scales in order to manage the problem and to prevent it in good time.

>>> RESEARCH GAPS

Unified research instruments used to measure physical fitness across all age groups of school students in Lithuania and unified measurement in Europe and the world are required. This would allow the proper comparison between age groups, countries, and regions.

>>> REFERENCES

1. Eberhardt, T., Niessner, C., Oriwol, D., Buchal, L., Worth, A., & Bös, K. (2020). Secular trends in physical fitness of children and adolescents: A review of large-scale epidemiological studies published after 2006. *International Journal of Environmental Research and Public Health*, 17(16), 5671. <https://doi.org/10.3390/ijerph17165671>
2. Emeljanovas, A., Mieziene, B., Cesnaitiene, V. J., Fjortoft, I., & Kjønnsniksen, L. (2020). Physical fitness and anthropometric values among Lithuanian primary school children: Population-based cross-sectional study. *The Journal of Strength & Conditioning Research*, 34(2), 414–421. <https://doi.org/10.1519/JSC.0000000000003387>



3. Fjørtoft, I., Pedersen, A. V., Sigmundsson, H., & Vereijken, B. (2011). Measuring physical fitness in children who are 5 to 12 years old with a test battery that is functional and easy to administer. *Physical Therapy*, 91(7), 1087–1095. <https://doi.org/10.2522/ptj.20090350>
4. Mieziene, B., Emeljanovas, A., Cesnaitiene, V. J., Vizbaraitė, D., & Zumbakytė-Sermukšniene, R. (2020). Health behaviors and psychological distress among conscripts of the Lithuanian military service: A nationally representative cross-sectional study. *International Journal of Environmental Research and Public Health*, 17(3), 783. <https://doi.org/10.3390/ijerph17030783>
5. Ortega, F. B., Ruiz, J. R., Castillo, M. J., & Sjöström, M. (2008). Physical fitness in childhood and adolescence: A powerful marker of health. *International Journal of Obesity*, 32, 1–11. <https://doi.org/10.1038/sj.ijo.0803774>
6. Ruiz, J. R., Cervero-Redondo, I., Ortega, F. B., Welk, G. J., Andersen, L. B., & Martínez-Vizcaino, V. (2016). Cardiorespiratory fitness cut points to avoid cardiovascular disease risk in children and adolescents; what level of fitness should raise a red flag? A systematic review and meta-analysis. *British Journal of Sports Medicine*, 50(23), 1451–1458. <https://doi.org/10.1136/bjsports-2015-095903>
7. Santtila, M., Pihlainen, K., Koski, H., & Kyröläinen, H. (2017). Physical fitness trends in Finnish male conscripts between 1975 and 2015 and female recruits during 2005–2015. *Journal of Science and Medicine in Sport*, 20(2), S12. <https://doi.org/10.1016/j.jsams.2017.09.032>
8. Sukys, S., Emeljanovas, A., Gruodyte-Raciene, R., Mieziene, B., Trinkuniene, L., Rutkauskaitė, R., & Tremblay, M. (2019). Results from Lithuania's 2018 report card on physical activity for children and youth. *International Journal of Environmental Research and Public Health*, 16(23), 4710. <https://doi.org/10.3390/ijerph16234710>
9. Tomkinson, G. R., Carver, K. D., Atkinson, F., Daniell, N. D., Lewis, L. K., Fitzgerald, J. S., Lang, J. J., & Ortega, F. B. (2018). European normative values for physical fitness in children and adolescents aged 9–17 years: Results from 2 779 165 Eurofit performances representing 30 countries. *British Journal of Sports Medicine*, 52(22), 1445–1456. <https://doi.org/10.1136/bjsports-2017-098253>
10. Tomkinson, G. R., & Olds, T. S. (2007). Secular changes in pediatric aerobic fitness test performance: The global picture. *Pediatric Fitness*, 50, 46–66. <https://doi.org/10.1159/000101075>
11. Venckunas, T., Emeljanovas, A., Mieziene, B., & Volbekiene, V. (2017). Secular trends in physical fitness and body size in Lithuanian children and adolescents between 1992 and 2012. *Journal of Epidemiology and Community Health*, 71(2), 181–187. <https://doi.org/10.1136/jech-2016-207307>



FAMILY AND PEERS

Any member within the family who can control or influence the physical activity opportunities and participation of children and youth in this environment.



(2018 GRADE: D)



>>> BACKGROUND

The range of factors that determine physical activity (PA) is wide, but researchers draw attention to the importance of access to psychosocial resources (Murayama et al., 2012; Novak et al., 2015) and stress that it is often inefficient to change a person's behaviour regardless of its social context (Pearce & Smith, 2003).

The key reason for the interest in psychosocial resources is that they are readily modified and thus represent a viable target for strategies aimed at developing well-being through health behaviours and mental health. Focusing on psychosocial factors is a more effective strategy than do interventions targeting health behaviours themselves without regard to interpersonal factors (Bowling & Iliffe, 2011).

Social capital represents such psychosocial resources as social support, trust, reciprocity, social norms, social participation, integrity, and cohesion available for the person (Murayama et al., 2012), and might be obtained in different social contexts: family, school, peers, neighbourhood, etc. (Putnam, 2000). Social capital might contribute to PA on an interpersonal level (as a factor of social support and trust), institution (social cohesion, social inclusion), or community levels (social norms and informal social control, neighbourhood safety). The research suggests that it is important to recognise children and adolescents as active agents who themselves shape their social environments as contexts where social capital can be developed and maintained (Kawachi et al., 2013). Indeed, PA is highly included in the socialising process, i.e. building social capital, as participation in physical activities goes along with involvement in and integrated norms of social groups like family, and peers. Based on theoretical assumptions, the value of social capital for PA can be expressed through the knowledge given about PA; through informal social control when students are encouraged to be physically active by important others; and through psychological processes when autonomy or emotional support is provided (Kawachi & Berkman, 2000).



>>> SOURCES OF INFORMATION

Two population-based representative cross-sectional studies were included to represent the impact of family and peers on children's and youth's physical activity. One of them (Mieziene et al., 2021) aimed to identify individual and interpersonal (family and peers among them) factors and their interactions in predicting high school students' physical activity. The study included 1,285 students from 14 to 18 years old, with a mean age of 16.14 ± 1.22 .

Another study (Sukys et al., 2021) aimed to assess the association between adolescents' health literacy and leisure-time physical activity (parental physical activity was a controlling factor). The study was conducted with 2,369 Lithuanian adolescents aged 13–16 years.

The grade is based on the number of physically active parents, which indicates that about half of them are regularly physically active themselves. There are no data on how many parents are engaged in physical activities with their children during the analysed period. Also, it is difficult to evaluate the magnitude of peer and family support and its impact on students' motivation to be physically active and physical activity, as the scale provided for grading is only for descriptive data.

KEY FINDINGS

- Family social capital (general support of parents for their children) is quite high and reaches an average of 4.07 in the range from 1 to 5 (Mieziene et al., 2021).
- Family social capital is related to higher adolescents' physical activity (Mieziene et al., 2021).
- Having more friends and going out together frequently predicted higher leisure-time physical activity (Mieziene et al., 2021).
- Family and peers are not only related to physical activity, but also strengthen adolescents' motivation to be physically active, which in turn increases physical activity (Mieziene et al., 2021).
- 50% of mothers and 53% of fathers are regularly physically active, given that about 60% of their children were not sufficiently physically active (Sukys et al., 2021).
- Fathers' regular exercising was related to higher physical activity in their children (Sukys et al., 2021).



>>> CONCLUSIONS

Family and peers are important actors in school students' motivation to be physically active and in physical activity itself.

Half of all parents meet the criteria for sufficient physical activity. That is more frequent than in a group of school students. However, the recommended amount of sufficient physical activity for adults is more than twice as low in comparison with school students.

>>> RECOMMENDATIONS

Given the importance of peers and family for students' physical activity, intervention planning within a socio-ecological framework should be implemented. Both schools and organisations should initiate family-based physical activities like families' competitions, and children's and parents' competitions, in order to strengthen both social capital within and between families and children as well as encourage physical activity.

>>> RESEARCH GAPS

There is a lack of studies on children-parents and children-peer's physical activity interrelationships.

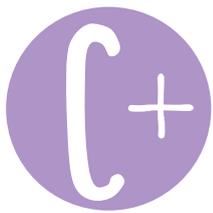
>>> REFERENCES

1. Bowling, A., & Iliffe, S. (2011). Psychological approach to successful ageing predicts future quality of life in older adults. *Health and Quality of Life Outcomes*, 9, 13. <https://doi.org/10.1186/1477-7525-9-13>
2. Kawachi, I., & Berkman, L. F. (2014). Social capital, social cohesion, and health. *Social Epidemiology*, 2, 290–319.
3. Kawachi, I., Takao, S., & Subramanian, S. V. (2013). *Global perspectives on social capital and health*. New York, NY: Springer.
4. Mieziene, B., Emeljanovas, A., Tilindiene, I., Tumynaite, L., Trinkuniene, L., & Kawachi, I. (2021). The direct and indirect relationships of environmental, interpersonal and personal factors with high school students' physical activity: An ecological approach. *International Journal of Environmental Research and Public Health*, 18(3), 874. <https://doi.org/10.3390/ijerph18030874>
5. Murayama, H., Fujiwara, Y., & Kawachi, I. (2012). Social capital and health: A review of prospective multilevel studies. *Journal of Epidemiology*, 22(3), 179–187. <https://doi.org/10.2188/jea.je20110128>
6. Novak, D., Suzuki, E., & Kawachi, I. (2015). Are family, neighbourhood and school social capital associated with higher self-rated health among Croatian high school students? A population-based study. *BMJ Open*, 5(6), e007184. <https://doi.org/10.1136/bmjopen-2014-007184>
7. Pearce, N., & Smith, G. D. (2003). Is social capital the key to inequalities in health? *American Journal of Public Health*, 93(1), 122–129. <https://doi.org/10.2105/ajph.93.1.122>
8. Putnam, R. D. (2000). Bowling alone: America's declining social capital. In L. Crothers & Ch. Lockhart (Eds.), *Culture and politics* (pp. 223–234). Palgrave Macmillan.
9. Sukys, S., Tilindiene, I., & Trinkuniene, L. (2021). Association between health literacy and leisure time physical activity among Lithuanian adolescents. *Health & Social Care in the Community*, 29(6), e387–e395. <https://doi.org/doi:10.1111/hsc.13363>



SCHOOL

The benchmark for this indicator pertains to the proportion of students who are offered physical education lessons, are taught by a physical education specialist, and who have facilities and equipment that support physical activity. Furthermore, it pertains to the proportion of schools that have active school policies and offer physical activity opportunities.



(2018 GRADE: C+)



>>> BACKGROUND

According to the World Health Organization and the United Nations Educational, Scientific and Cultural Organization (2021), children spend more time in school than anywhere other than home, making schools an excellent setting in which to offer quality physical activity education and opportunities for an active school day to large numbers of children. Physical education is a compulsory subject taught in schools, the main goal of which is to promote direct lifelong physical activity, personal and social development, as well as healthy lifestyle. All schools should provide quality physical education as a core part of formal curricula, led by appropriately trained teachers. Despite official commitment to physical education, noncompliance with regulations is evident, with about 29% of countries not actually implementing physical education in accordance with legal and mandatory obligations. Noncompliance often occurs in countries where curriculum responsibility lies with education districts or individual schools (i.e. in the context of localised implementation of curricula). Thus, physical education provision differs across regions and countries according to age or stage of attendance, with variations in the number of lessons per week and weeks taught per year (Hardman et al., 2014).

>>> SOURCES OF INFORMATION

The search was carried out in foreign and Lithuanian scientific journals, using scientific databases, reports from the European Commission on the situation of physical education and sports in schools, as well as research reports, studies, reviews and documents issued by the Seimas of the Republic of Lithuania, the Ministry of Education, Science and Sport, the National Academy of Education, the Ministry of Health, and the National Olympic Committee of Lithuania.

>>> KEY FINDINGS

- Lithuania has Official Active School Policies on the legislation level (Health Education and Disease Prevention Centre, 2021).
- 16% of Lithuanian schools belong to the Official Active School Policies (physical activity policy) on the legislation level and 55% of Lithuanian schools belong to the National Network of Health Promoting Schools (Health Education and Disease Prevention Centre, 2021).
- 13% of Lithuanian schools are involved in the Olympic Education Project “Olympic Generation” (Olympic project for children and youth “Olympic Generation” („Olimpinė karta“, 2021).
- All Lithuanian schools in grades 1–8 offer three physical education lessons per week, and a recommended 20-minute physical activity break per day (Primary, basic and secondary education curriculum for the academic years of 2021–2022 and 2022–2023).
- In all Lithuanian schools of general education physical education lessons are taught by physical education teachers (Education Management Information System, 2021).
- Physical education lessons in primary schools are taught by primary school teachers (Education Management Information System, 2021).
- Physical education is a compulsory subject in all schools of general education in Lithuania (Law on Sports of the Lithuania Republic, 2021).
- All Lithuanian schools offer non-formal physical education to schoolchildren, but only 43% choose it (Evaluation of non-formal education of children: survey and analysis, 2020).
- 25.3% of parents declare that their children are engaged in physical activities at school at least three times per week. The great majority of parents (95.2%) assume that physical activity could be enhanced by a physical activity-friendly environment in the neighbourhood and at school (Strazdienė et al., 2020).

>>> CONCLUSIONS

- Lithuania has Official Active School Policies (physical activity policy) on the legislation level.
- In basic schools, physical education lessons are taught by physical education teachers; physical education lessons in primary schools are taught by primary school teachers.
- Physical education is a compulsory subject in all schools of general education in Lithuania.
- About half of Lithuanian schoolchildren choose non-formal physical education after school.
- The number of physical education lessons increased (grades 1–8); it is recommended to have one, 20-minute long, physical activity break per day.

>>> RECOMMENDATIONS

- Encourage Lithuanian schools to become more involved in the National Network of Health Promoting Schools and to seek Active School status.
- To increase the number of physical education lessons in grades 9–12.
- In primary schools, physical education lessons should be taught by a specialist, i.e. physical education teacher.
- Encourage schoolchildren to choose non-formal physical education after school.

>>> RESEARCH GAPS

It is interesting to know if the literacy of students in the field of physical education and sports in schools that belong to the National Network of Health Promoting Schools is better than in ordinary schools.

There is a lack of research on the number of schools (in percentage form) that offer schoolchildren regular access to the facilities and equipment that support physical activity (e.g. gymnasium, outdoor playgrounds, sports fields, multi-purpose space for physical activity, equipment in good condition).

To improve Physical Activity Policy Assessment tools.

>>> REFERENCES:

1. 2021–2022 ir 2022–2023 mokslo metų pradinio, pagrindinio ir vidurinio ugdymo planai (2021). <https://www.nsa.smm.lt/2021/06/28/2021-2022-ir-2022-2023-mokslo-metu-pradinio-pagrindinio-ir-vidurinio-ugdymo-programu-bendrieji-ugdymo-planai/>
2. Hardman, K., Murphy, C., Routen, A., & Tones, S. (2014). UNESCO-NWCPEA: world-wide survey of school physical education. Paris: United Nations Educational, Scientific and Cultural Organization.
3. Lietuvos mokinių neformaliojo švietimo centras (2020). Neformaliojo vaikų švietimo ir formalųjį švietimą papildančio ugdymo mokyklų, kurių savininko teises ir pareigas įgyvendina savivaldybė, duomenų apžvalga. https://www.lmnc.lt/uplfiles3/NSV%20ir%20FSPU%20duomeny%20apzvalga%20RC%20RV%20LR_vk2-1.pdf
4. Lietuvos Respublikos sporto įstatymas (2021). <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.23317/asr?positionInSearchResults=0&searchModelUUID=d8e4e294-9356-4971-ad18-8d76a23dd834>
5. Lietuvos tautinis olimpinis komitetas (2021). Lietuvos tautinio olimpinio komiteto įgyvendinama programa „Olimpinė karta“. <https://www.olimpinekarta.lt/#!>
6. Strazdienė, N., Strukčinskaitė, V., Strukčinskienė, B., Stukas, R., & Arlauskas, R. (2020). Pradinių klasių mokinių fizinis aktyvumas ir sveikata: tėvų nuomonė. *Visuomenės sveikata*, 1(88), 86–91.
7. Sveikatos mokymo ir ligų prevencijos centras (2021). http://www.smlpc.lt./media/image/Naujienoms/2017%20metai/Vaiku%20sveikata/AM_SARASAS_2021_05_20.pdf
8. Švietimo valdymo informacinė sistema (2021). <http://www.svis.smm.lt/>
9. WHO, UNESCO. (2021). Making every school a health-promoting school – global standards and indicators. <https://www.who.int/publications/i/item/9789240025059>



COMMUNITY AND THE BUILT ENVIRONMENT

The benchmark for this indicator pertains to the proportion of municipalities allocating resources and actively promoting physical activity, proportion of children and parents indicating that their community is doing a good job to prioritise and promote physical activity, and that the community has adequate facilities to do physical activity.



(2018 GRADE:C)



>>> BACKGROUND

Personal health-related behaviour is affected by both personal and environmental factors and their interactions (Sallis et al., 2008). Although health-related behaviour of peers, school, and especially family, is extremely important (Mollborn & Lawrence, 2018), and physical environment related to physical activity and its accessibility and safety are also of great significance, (MacKenzie et al., 2015), the physical environment, residential availability of natural outdoor environments, and accessibility and well as aesthetics are important factors that influence physical activity (MacKenzie et al., 2015; Triguero-Mas et al., 2017). Research evidence also showed that improvement of accessibility and new infrastructure for walking, cycling and public transport were associated with increased overall and transport-related physical activity among adults and children (Kärmeniemi et al., 2018). The safety of the neighbourhood environment is also important. It has been found that parents' perception of the neighbourhood environment as safer is associated with a weekly increase in days of vigorous physical activity among children. In contrast, if the environment becomes perceived as somewhat or not at all safe, this relates to fewer weekly days of vigorous physical activity among children (Datar et al., 2013). Therefore, the development of a safe environment related to physical activity is very important when aiming to promote physical activity, and so must be given high priority both in the country's health policy in general and at the level of the local community and local self-government.



>>> SOURCES OF INFORMATION

All data were collected by using questionnaire survey. A total of 3,928 people participated in all studies. The age of participants ranged from 14 and over. More specifically, perceptions on the good job done by a community/municipality promoting physical activity and existing policies for physical activity promotion were obtained from a nationally representative survey of aged 15 and over (Sprinter tyrimai, 2021) and also all public health bureaus (Vičaitė & Šidalgytė, 2017). Results on communities/municipalities having infrastructure specifically geared towards physical activity promotion were obtained from the representative country sample of aged 15 and over participants (Special Eurobarometer 472, 2018). Results about childrens' or parents' opinion on having facilities, programmes, parks and playgrounds available to them in the community, and perception on neighbourhood where they can be physically active safely were derived from one nationally representative cross-sectional study of 14–18-year-old students (Mieziene et al., 2021) and one additional cross-sectional study of adult citizens of the second biggest city in Lithuania (Gražulevičienė et al., 2020).

>>> KEY FINDINGS

- 73% of Public Health Bureaus implement employee health promotion activities/programmes. 80% of bureaus indicated that the most commonly offered programmes/activities are physical activity promotion (Vičaitė & Šidalgytė, 2017).
- 70% of the population aged 15 and over agree that there are many opportunities to be physically active in their area of residence (Special Eurobarometer 472, 2018). Only 7% totally disagree with this statement.
- 70% of adults from the country's second largest city also are satisfied with pathways and cycling routes, and 75% with the opportunities for walking to reach the city's green spaces or parks (Gražulevičienė et al., 2020).
- Most of the 14–18-year-old students (81.8%) agree that they can easily access playgrounds, parks or a gym close to their home (Mieziene et al., 2021).
- 62% of those aged 15 and over agree that local sport clubs and other local providers offer many opportunities to be physically active (Special Eurobarometer 472, 2018).
- Furthermore, 28% agree with the fact that the conditions for playing sports in their living environment have improved over the last year, while 50% claimed that the possibilities had not changed (Sprinter tyrimai, 2021).
- Three-quarters of both 14–18-year-old Lithuanian children and adults representing the second largest city in the country agree that they feel safe in their neighbourhood (Gražulevičienė et al., 2020; Mieziene et al., 2021;).



- It was found that 45% of children and adults agree that local authorities make sufficient efforts to encourage physical activity among the local population (Sprinter tyrimai, 2021). Although at the same time 40% totally agree that local authority does not do enough for its citizens in relation to physical activities (Special Eurobarometer 472, 2018).

>>> CONCLUSIONS

Most Public Health Bureaus and municipalities administration indicated implementing health promotion activities/programmes. Between seven and eight out of ten children and adults agree that, overall, the neighbourhood environment related to physical activity supportively, and accordingly three out of four agree that it is safe. But almost every second local authority's efforts to encourage physical activity among the local population consider to be sufficient. The indicator of community and built environment improved slightly and this was mainly due to a more favourable opinion on infrastructure specifically geared toward promoting physical activity.

>>> RECOMMENDATIONS

- Local authorities should evaluate the effect of their physical activity promotion programmes on the physical activity of the local community.
- Analyse what kind of additional measures the local community wants to be more involved in physical activities.
- State and local authorities should better highlight the broader health and wellbeing, economic, social, and environmental benefits of participating in physical activity in outdoor and green spaces.

>>> RESEARCH GAPS

- We need to know better how local government activities to promote physical activity affect the physical activity of communities.
- We need systematic research to assess separately the attitudes of children and parents (adults) towards the neighbourhood (and beyond) environment adapted to physical activity.
- We need systematic research to assess the extent to which children and adults use these environments together and separately and the extent to which the environments created affect their daily physical activity.
- We need to better understand the reasons behind geographic and socio-economic inequalities in access and safety.
- Although we have more evidence how older children and adults evaluate opportunities to be physically active in their area of residence, it remains unclear whether these spaces meet needs of younger children.



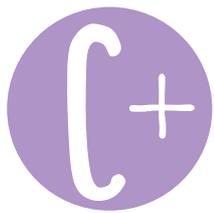
>>> REFERENCES

1. Datar, A., Nicosia, N., & Shier, V. (2013). Parent perceptions of neighborhood safety and children's physical activity, sedentary behavior, and obesity: Evidence from a national longitudinal study. *American Journal of Epidemiology*, 177(10), 1065–1073. <https://doi.org/10.1093/aje/kws353>
2. European Opinion Research Group (2018). Special Eurobarometer 472. European Commission.
3. Gražulevičienė, R., Andrušaitytė, S., Dėdelė, A., Gražulevičius, T., Valius, L., Kapustinskienė, V., & Bendokienė, I. (2020). Environmental quality perceptions and health: A cross-sectional study of citizens of Kaunas, Lithuania. *International Journal of Environmental Research and Public Health*, 17(12), 4420. <https://doi.org/10.3390/ijerph17124420>
4. Kärmeniemi, M., Lankila, T., Ikäheimo, T., Koivumaa-Honkanen, H., & Korpelainen, R. (2018). The built environment as a determinant of physical activity: A systematic review of longitudinal studies and natural experiments. *Annals of Behavioral Medicine*, 52(3), 239–251. <https://doi.org/10.1093/abm/kax043>
5. MacKenzie, J., Brunet, J., Boudreau, J., Iancu, H. D., & Bélanger, M. (2015). Does proximity to physical activity infrastructures predict maintenance of organized and unorganized physical activities in youth? *Preventive Medicine Reports*, 2, 777–782. <https://doi.org/10.1016/j.pmedr.2015.09.005>
6. Mieziene, B., Emeljanovas, A., Tilindiene, I., Tumynaite, L., Trinkuniene, L., & Kawachi, I. (2021). The direct and indirect relationships of environmental, interpersonal and personal factors with high school students' physical activity: An ecological approach. *International Journal of Environmental Research and Public Health*, 18(3), 874. <https://doi.org/10.3390/ijerph18030874>
7. Mollborn, S., & Lawrence, E. (2018). Family, peer, and school influences on children's developing health lifestyles. *Journal of Health and Social Behavior*, 59(1), 133–150.
8. Sallis, J. F., Owen, N., & Fisher, E. B. (2008). Ecological models of health behavior. In K. Glanz, B. K. Rimer, & K. Viswanath (Eds.), *Health behavior and health education: theory, research, and practice* (pp. 465–485). John Wiley & Sons.
9. *Sprinter tyrimai* (2021). Šalies gyventojų sportavimo ir fizinio aktyvumo tyrimas. Vilnius: Švietimo, mokslo ir sporto ministerija.
10. Triguero-Mas, M., Donaire-Gonzalez, D., Seto, E., Valentín, A., Smith, G., Martínez, D., Carrasco-Turigas, G., Masterson, D., van den Berg, M., Ambròs, A., Martínez-Íñiguez, T., Dedele, A., Hurst, G., Ellis, N., Gražulevičius, T., Voorsmit, M., Cirach, M., Cirac-Claveras, J., Swart, W., ... Nieuwenhuijsen, M. J. (2017). Living close to natural outdoor environments in four European cities: Adults' contact with the environments and physical activity. *International Journal of Environmental Research and Public Health*, 14(10), 1162. <https://doi.org/10.3390/ijerph14101162>
11. Vičaitė, S., & Šidagytė, R. (2017). Savivaldybių visuomenės sveikatos biurų vykdomos sveikatos stiprinimo veiklos įmonėse apžvalga. *Visuomenės sveikata*, 4(79), 99–106.



GOVERNMENT

The benchmark for this indicator pertains to the evidence of leadership and general obligation at governmental levels to provide physical activity opportunities for school children. Furthermore, it pertains to the resources allocated to the implementation of political strategies aiming for implementing physical activity promotion strategies for schoolchildren.



(2018 GRADE: C)



>>> BACKGROUND

Every country with its government must take care of the well-being of its inhabitants focusing on health, which, in turn, depends to a large extent on physical activity. Lithuanian governmental bodies are trying to increase opportunities for physical activity and consistently promote physical activity among children and youth.

>>> SOURCES OF INFORMATION

- National Progress Plan 2021–2030;
- Lithuanian Health Strategy 2014–2025;
- National Public Health Care Programme 2016–2023;
- Law on Sport of the Republic of Lithuania;
- Sports Support Fund;
- National Network of Health Promoting Schools;
- Olympic project for children and youth “Olympic Generation”;
- Framework Programme on Health, Sexuality Education and Preparation for Family Life;
- Description of the Procedure for Determining the Physical Fitness of School Aged Children in Primary, Basic and Secondary Education Programmes.



KEY FINDINGS

4 main Lithuanian documents related to healthy lifestyle in general and partly to the physical activity of children can be distinguished:

- In the “National Progress Plan 2021–2030”, attention is paid not only to health and healthy lifestyle in general. A new document includes a statement which identifies attention to physical activity (“... to increase physical activity and participation of children and adults in sports activities, as this reduces the prevalence of harmful habits and determines health and life expectancy”). Thus, it can be stated that one of the main documents defining the future of Lithuania partly focuses on the physical activity of children.

Another important document approved by the Seimas of the Republic of Lithuania in 2014, the “Lithuanian Health Strategy 2014–2025”, provides a specific challenge to promote physical activity, i.e. “develop optimal physical activity habits” and presents one of the four main goals as to “form healthy lifestyle and its culture”. It can be said that the Lithuanian Health Strategy 2014–2025 pays attention to the physical activity of children.

- The third document, the “National Public Health Care Programme 2016–2023”, presents one of the tasks: to increase the physical activity of the population and enable people to be physically active in all areas of life. In carrying out this task it is planned to promote the physical activity of children and adolescents, especially in early childhood, as well as in pre-school institutions and schools; to inform all people about health benefits of physical activity, providing evidence-based knowledge and raise awareness of health-enhancing physical activity; and to encourage different groups of the population to choose appropriate physical activity and reduce sedentary time, etc.
- The fourth document, the “Law on Sport of the Republic of Lithuania”, was updated in 2018.

The law, of course, regulates the legal aspects of sport (sports system and management, sports financing etc.) and focuses more on high performance athletes rather than on the physical activity of schoolchildren.

At the moment, Lithuanian governmental bodies are developing a Sports Development Programme, but no further information is available on its content.

We would like to point out several key initiatives that promote physical activity of children in Lithuania:

- “Sports Support Fund”. The main aim of this fund is to increase the physical activity of the Lithuanian population. All government organisations and NGOs in the field of sports and physical activity may apply to receive funding to finance their activities. The budget of the “Sports Support Fund” increases every year.

- There is a “National Network of Health Promoting Schools” in Lithuania, the vision of which is a healthier school community. In 2019, this was complemented by an “Active School” part. Active school is defined as “A school with a special focus on promoting physical activity in the school community by creating a physical activity-friendly school environment and integrating physical activity into daily school life”.
- Olympic project for children and youth “Olympic Generation”, one of the objectives of which is to encourage children and young people to exercise and learn through sport.
- “Framework Programme on Health, Sexuality Education and Preparation for Family Life”, one part of which deals with physical activity of schoolchildren.
- In 2019, the Ministry of Health of the Republic of Lithuania approved an important document monitoring health-related physical fitness at school: “Description of the Procedure for Determining the Physical Fitness of School Aged Children in Primary, Basic and Secondary Education Programmes”.

CONCLUSION

Although important Lithuanian documents refer to health in many ways and less often but still refer to physical activity, unfortunately, the importance of health-enhancing physical activity is not particularly distinguished as a means of disease prevention and rehabilitation. Any way, every year we have more and more good examples of funds and resources allocated for the implementation of physical activity promotion strategies and initiatives for all children and young people.

While policy agenda, policy formation, implementation, evaluation and decisions about the future are discussed at the governmental level in Lithuania, those issues still are episodic and there is a lack of consistency and clear policy for physical activity (promotion) in children (and society in general). Best proof of that is a lack of attention to promoting children’s physical activity in the Law on Sport of the Republic of Lithuania.

RECOMMENDATIONS

- Develop and implement Physical Activity Recommendations for Schoolchildren at a national level.
- Develop the National Physical Activity Strategy for Lithuanian population covering a broad range of topics.
- Encourage and promote programmes and national campaigns for schoolchildren’s physical activity.
- As soon as possible to finish the Sports Development Programme and implement it.



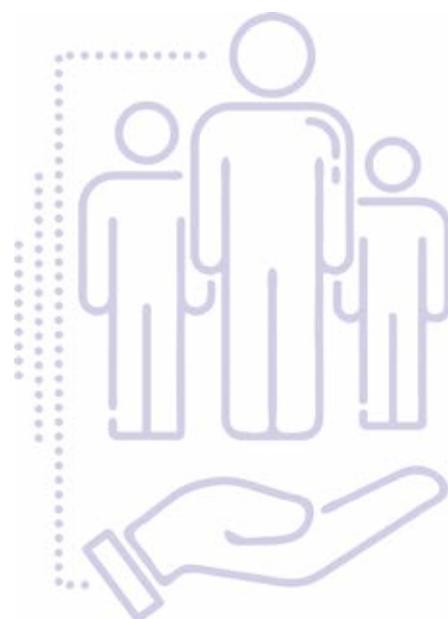
- To pay more attention to promoting children's physical activity in the Law on Sport of the Republic of Lithuania.
- Develop and implement a monitoring system for the Physical Fitness of School Aged Children.
- Collaboration among researchers and policy makers is crucial for making steps towards creating and implementing policy documents.

>>> RESEARCH GAPS

Despite numerous policy documents, programmes, plans, strategies and initiatives, more information is required regarding monitoring, evaluation, funding, and reporting on physical activity among children and youth.

>>> REFERENCES

1. National Progress Plan 2021-2030 <https://lrv.lt/lt/aktuali-informacija/xvii-vyriausybe/strateginis-valdymas/2021-2030-m-nacionalinis-pazangos-planas>
2. Lithuanian Health Strategy 2014-2025 <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/35834810004f11e4boef967b19d90c08/asr>
3. National Public Health Care Programme 2016-2023 <https://www.e-tar.lt/portal/lt/legalAct/4d3dc740a3c411e58fd1fcob9bba68a7>
4. Law on Sport of the Republic of Lithuania <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/f585e4e2d85611e8820ea019e5d9ad04>
5. Sports Support Fund <https://www.srf.lt/>
6. National Network of Health Promoting Schools http://www.smlpc.lt/lt/vaiku_sveikatos_stiprinimas/aktyvi_mokykla/
7. Olympic project for children and youth "Olympic Generation" <http://www.olimpinekarta.lt/apie-mus/olimpine-karta/>
8. Framework Programme on Health, Sexuality Education and Preparation for Family Life https://smsm.lrv.lt/uploads/smsm/documents/files/darbo%20grupes/Programos%20preamble_projektas_galutinis.pdf
9. Description of the Procedure for Determining the Physical Fitness of School Aged Children in Primary, Basic and Secondary Education Programs <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/d43a6300ebf211e99ab7ff5a9ea34fcc/asr>



INDICATOR	GRADES 2022	GRADES 2018
Overall Physical Activity		
Organised Sport Participation		
Active Play		
Active Transport		
Sedentary Behaviours		
Physical Fitness		
Family and Peers		
School		
Community and Environment		
Government		

THE LITHUANIAN PHYSICAL ACTIVITY REPORT
CARD FOR CHILDREN
AND YOUTH 2022

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FINAL NOTES

Although there are studies in Lithuania dealing with the problems related to children's physical activity, there is no systematic approach: different authorities and research institutions apply different methods and duplicate research.

Unfortunately, it is too rare to listen to scientific findings when it comes to promoting physical activity among students.

There is a need to establish the National Physical Activity Research Centre to collect and monitor the data and develop guidelines related to population physical activity and fitness across ages and different groups.

Collaboration among researchers and policy makers is crucial for making steps towards the improvement of physical activity indicators among children and youth.

There is a need to establish a monitoring system of the physical fitness of school aged children to guard them against health-related issues in the near future.
