THE LITHUANIAN PHYSICAL ACTIVITY REPORT CARD FOR CHILDREN AND YOUTH

2018

LITHUANIAN SPORTS UNIVERSITY

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

Regarding the natural environment necessary for physical activity, it should be mentioned that Lithuania does not have any mountainous areas, but there are a lot of forests, rivers, lakes, and, most importantly, parks in the cities. Therefore, we can say that we have a good enough natural environment for outdoor physical activity. The question poses itself whether it is exploited sufficiently.

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 to advance physical activity among children and youth from around the word. 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. Between April 2017 and January 2018, 49 countries (including Lithuania) from six different continents (Africa, Asia, Europe, North America, Oceania, and South America) registered. That was the beginning of the development of the Lithuanian Physical Activity Report Card for Children and Youth.

METHODOLOGY

This is the first Lithuanian Report Card on physical activity for children and youth. The development of the Lithuanian Report Card was initiated and coordinated by the Department of Health, Physical and Social Education, Lithuanian Sports University, in cooperation with the following partners: Vilnius University; Department of Physical Education and Sports under the Government of the Republic of Lithuania; National Olympic Committee of Lithuania; Ministry of Health of the Republic of Lithuania; Ministry of Education and Science of the Republic of Lithuania.

The Report Card was developed by 11 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. Also, AHKGA appointed an international mentor Prof. Dr. Jaak Jürimäe from Estonia (University of Tartu). 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, organizations and movements related to health and physical activity (laws, decrees, sub statutory acts, etc.). Most of the analysed literature sources were published before 2013.

The development process of the Report Card took about 12 months: cooperation between institutions and experts from backgrounds related to child PA were established, data sources identified, data collection and synthesis were 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 transportation, 5) Sedentary behaviour, 6) Physical fitness, 7) Family and peers, 8) School, 9) Community and environment, 10) Government.

The grades from A to F were given as shown below. If data were available, the disparities (e.g. age, gender, disability, ethnicity, socioeconomic status, regional comparisons, etc.) and data trends were taken into account when assessing. A "+" or a "-" was included if any of the aforementioned 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.

WE ARE SUCCEEDING WITH A LARGE MAJORITY OF CHILDREN AND YOUTH (≥ 80%).

WE ARE SUCCEEDING WITH LESS THAN HALF BUT SOME CHILDREN AND YOUTH (20-39%).

WE ARE SUCCEEDING WITH WELL OVER HALF OF CHILDREN AND YOUTH (60-79%).

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

WE ARE SUCCEEDING WITH ABOUT HALF OF CHILDREN AND YOUTH (40-59%).

INCOMPLETE – INADEQUATE INFORMATION TO ASSIGN A GRADE.

OVERALL PHYSICAL ACTIVITY

Overall physical activity includes all activities throughout the day, be it organized (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.

C-

>>> BACKGROUND

The majority of children and youth need more physical activity in various forms to accumulate the recommended levels of physical activity. A pattern of leisure activities and sport participation is adopted by schoolchildren by the age of 16 that form the foundation of their adult leisure lifestyle (Bocarro et al., 2008). Regular physical activity, along with other behaviour modifications such as a healthy diet, would be beneficial in preventing obesity, hypertension, diabetes, dyslipidaemia and, as a consequence, cardiovascular disease in adult life (Cesa et al., 2014).

>>> SOURCES OF INFORMATION

The grade „C-" 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.

The value is given based on current data of national representative samples from 4 scientific studies and one report data by the Hygiene Institute. The overall physical activity of children and youth covering the ages of 7 to 15 has been evaluated mainly using HBSC, WHO and IPAQ questionnaires.

>>> KEY FINDINGS

- Based on self-reports, the amount of MVPA ranges from 1-2 hours per day to more than 2 hours per day in primary school children (33 % and 60.5 %, respectively) (Zaltauske & Petrauskiene, 2016; Strazdiene et al., 2017).
- In comparison, less than 30 % of boys and less than 20 % of girls of adolescent age (11-, 13- and 15-year-olds) have 60 min of MVPA daily (Inchley et al., 2016).
- Another study reported 50 % of youth from 6 municipalities of Lithuania meeting the guidelines on at least 4 days a week (Jociute & Berzanskyte, 2016).
- The worst case was reported by the Hygiene Institute (2016) stating that less than 10 % of Lithuanian adolescent boys and girls exercise daily for 60 or more minutes (NB: the questionnaire did not include physical activity during school hours).

>>> CONCLUSION

Although the reported levels of overall physical activity of primary schoolchildren may grant a reason to rejoice, this indicator is rated 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 more often met by boys than girls, and by younger children compared to teenagers, effective strategies to increase physical activity levels in girls and teenagers is a matter of great relevance.

>>> RESEARCH GAPS

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

There is a lack of national data on physical activity of the "youngest"and the "oldest" school-aged children (i.e. on 5-6 and 16-17 year-olds).

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ORGANIZED SPORTS PARTICIPATION

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

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 organized sports participants compared to nonparticipants (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).

>>> SOURCES OF INFORMATION

The grade „C" describes the proportion of Lithuanian children and youth who participate in organized sport and/ or physical activity programmes. The data were derived from two nationally representative samples and a study on a smaller scale involving 6-11 year-old children and/ or their parents/ legal guardians. The standardized surveys by WHO COSI (World Health Organisation European Childhood Obesity Surveillance Initiative) were used for the records.

>>> KEY FINDINGS

- According to two national surveys on families with young children aged 6-9, 50 to 70 % of primary school children go to sports or dancing clubs twice per week (Wijnhoven et al., 2015; Zaltauske & Petrauskiene, 2016).

- Another study revealed that 8-11 year-old children from the west of Lithuania on average spend 30 min per day for activities in sports or dance clubs, but only 11.3 % of the respondents indicated that they go in for sports. The exercise-based extracurricular activities at secondary schools are chosen by 23.4 % of schoolchildren (Strazdiene et al., 2017).

>>> CONCLUSION

There is a need for action to improve the participation rates for organized sports among Lithuanian children. It is difficult to draw a conclusion regarding adolescents' participation in organized sports due to lack of information on it.

>>> RECOMMENDATIONS

Evidence exists that organized sport is susceptive to age and gender: it is especially popular among younger participants and preferred by males rather than females. Therefore, sport policies should place a higher priority on grassroots participation bringing young children into organized sports and preventing adolescents (particularly females) from dropping it when they reach puberty age (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 organized sports for all children and adolescents and in particular for those coming from families with low socioeconomic status (Manz et al., 2016).

>>> RESEARCH GAPS

There is a lack of national data on participation in organized sports of preschool children and teenagers of 13-17 years of age. Therefore, high quality sport participation data are required to provide the evidence to inform development of sport programmes and policies to meet the needs of Lithuanian schoolchildren.

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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 unorganized physical activity or unstructured play in leisure time.

INC

>>> BACKGROUND

Getting involved in games and activities for kids and adolescents is a great way to encourage them to be more active. 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. Young children (up to 7 years old) in particular have a natural intention to take part in physical activities and mostly spontaneously take part in an active play. There are currently no specific international recommendations on time spent in active play. However, active play is recognized as an important way to be physically active for children and adolescents in many international guidelines and as such is promoted in children and adolescents (Australian Government, 2014a; Australian Government, 2014b; Sääkslahti, Korhonen, 2016; Tremblay et al., 2011).

>>> SOURCES OF INFORMATION

Grades were based on three cross-sectional nationally representative studies. The number of participants in those studies varied from 3,668 to 4,955. Family record questionnaires were used in the research, but the research only represented the data on primary school children, and that is why the grade was estimated as incomplete.

>>> KEY FINDINGS

- 54.3 % of 7–8 year-old children play outside more than 2 h/ day on weekdays and 88 % play outside more than 2 h/ day at weekends (Žaltauskė, 2017);
- 7.5 % of family record question reports showed that 6–9 year-old children play outside less than 1 h/ day (Wijnhoven et al., 2015) ;
- all 7 year-old children's play time amounts to 2.2 (0.7) h/ day (Börnhorst et al., 2015).

>>> CONCLUSIONS

For this indicator all 3 scientific studies were carried out with 6-8 year-old children using Family record questions. Although the evaluation of their active play time varied from A to F (from 7.5 % to all samples playing outside for 2h/ day), we decided to present this indicator with an incomplete mark as the data were related only to 6-8 year-old children.

>>> RECOMMENDATIONS

- Establishment of safe environment for active play and unstructured physical activity have to be prioritized.
- Promotion and reduction of restrictions (e.g., over-protectionism) for active play in schools, playgrounds, etc.
- Children and adolescent's interests and preferences for unorganized physical activity have to be taken into account while planning facilities for PA focusing on the encouragement to spend more time outdoors.

>>> RESEARCH GAPS

- Children's active play time targets several hours per day. The data for this benchmark varied a lot, therefore, further research is required to establish a benchmark that is linked to health outcomes.
- There is a need to explore children and youth's free time activities after school with the focus on unstructured activities.
- It is important to carefully monitor active play (especially outdoors) for future strategies and interventions.

- Playground markings and facilities can contribute to the PA levels in children and schoolchildren during playtime in short to medium terms.

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ACTIVE TRANSPORT

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).

>>> 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, the evidence suggests that active transportation adds to overall physical activity level (Chilon, et al., 2011; Duncan, 2013; Larouche et al., 2018).

>>> 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 78 to 4,436. In most studies family record questionnaires or questionnaires for adolescents were used; the research presents the data obtained from primary school children and up to 24 years old youth.

>>> KEY FINDINGS

- 45 % of 7-8 year-old children use active transport to get to school, and 57.9 % of 7-8 year-old children use active transport to come home from school

(Žaltauskė, 2017; Žaltauskė, Petrauskienė, 2016);

- The majority of 11-13 year-old schoolchildren (84 %) go to/ from school on foot, although it takes only 10 min to walk for the majority of schoolchildren (67.9 %) (Meškaitė et al., 2012);
- 39.2 % of 6-9 year-old children use inactive transportation going to and from school (Wijnhoven et al., 2015);
- Only 12 % of 15-24 year-old subjects are regularly engaged in the activities such as cycling from one point to another (Special Eurobarometer, Sport and physical activity).

>>> CONCLUSIONS

The evaluation is based on the current data of national representative samples from 4 scientific studies and one Special report Eurobarometer on Sport and Physical Activity. The data were obtained from samples of different ages. The evaluation of their active transport varied from A- to F. Parents of 45 % of 7–8 year-old children reported that their children use active transport to get to school and 57.9 % use active transport to come from school. The majority (84 %) of children and adolescents (11-13 year-olds) go to/ from school on foot, although it takes only 10 min to walk for the majority of them (67.9 %). Youth and adolescents (15-24 year-olds) tend to use less active transport - only 12 % of them engage in activities such as cycling from one point to another on a regular basis.

>>> RECOMMENDATIONS

- Promotion and facilitation of safe active transport to get to school and other destinations.
- Promotion of active transportation has to be key factor at schools and communities.
- Different types of interventions may increase PA.
- Parents, school, community and policy makers have to be involved in the promotion of active transport.

>>> RESEARCH GAPS

- There is a need to explore prevalence and trends of active transport in Lithuania, i.e. the most popular kinds of active transportation used to get to/from different points or destinations (e.g., parks, shops, sport fields) among children and adolescents of different ages as well as the role of active transport in achieving recommended levels of physical activity;
- Research on health and social benefits of active transport is needed;
- There is a need to explore the impact of the increased number of cycling paths in Lithuania on children and youth's physical activity.
- Effectiveness of school, community and the municipality's collaborative interventions that promote active transport.
- Different types of interventions may increase PA, in turn longer follow-ups are needed to use standardized outcome measures.
- Examine potential moderators and mediators of active transport behaviour change to help refine interventions.

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SEDENTARY BEHAVIOURS

Any waking behaviour characterized by an energy expenditure ≤ 1,5 metabolic equivalents, while in a sitting, reclining or lying posture.

C-

>>> BACKGROUND

It is important to reduce everyday sedentary time by increasing daily PA level. 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 behaviours 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 high volume of sedentary behaviour in a school setting (da Costa et al., 2017).

>>> SOURCES OF INFORMATION

The grade "C" describes the proportion of Lithuanian children and youth who meet the Guidelines for screen-based activities to be less than 2 hours per day. Five studies were found to be related to the screen-based leisure activities of schoolchildren: three of national representative samples and two of a smaller scale presenting data on central and western regions of the country. The standardized surveys by WHO COSI (World Health Organisation European Childhood Obesity Surveillance Initiative) and HBSC (Health Behaviour of School-aged Children) were used for the records.

>>> KEY FINDINGS

- According to parents, their 6-9 year-old children have 2.6 hours per day of screen time activities on average (Börnhorst et al., 2015). Similarly, it was

reported that in the western region of Lithuania 8-11 year-old boys and girls spend 2.2 hours per day for screen-based activities in their spare time (Strazdiene et al., 2017).

- Furthermore, 74 % of elementary school children spend 2 or more hours per day in their free time using computers for playing games (other than homework) or watching TV at home or somewhere else (Wijnhoven et al., 2015).
- 11-, 13- and 15-year-old adolescents spend two and more hours daily for watching TV (more than 50 %) and using a computer to play games (40-51 %) in their spare time (Inchley et al., 2016).
- A study conducted in the central region of the country indicated, that adolescents (10-13 year-olds) rather than younger children (7-9 year-olds) tend to spend time watching TV (16.2 % vs 10.8 %, respectively) or use their computers other than for homework tasks (17.3 % vs 2.6 %, respectively) for 3 or more hours per day (Smetanina et al., 2015).

>>> CONCLUSION

The data of nationally representative samples of schoolchildren indicate that the screen time guidelines 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 in 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 national data on physical activity of the "youngest" and the "oldest" school-aged children (i.e., 5-6 and 16-17 year-olds).

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PHYSICAL FITNESS

A set of attributes that are either health- or skill-related.

>>> BACKGROUND

Physical fitness plays a key role in child's sustainable growth and developmental process (Zhou et al., 2014). Low physical fitness is an important risk factor for cardiovascular disease, type 2 diabetes and mortality (Faselis et al., 2012; Kokkinos et al., 2012; Timpka et al., 2014). Low cardiorespiratory fitness is associated with risk of mental and physical health (Ortega et al., 2008). Although morbidity usually comes to manifestation in midlife, the basis for disease develops progressively over time with some signs appearing as early as childhood (Peralta-Huertas et al., 2008) or adolescence (Högström et al., 2015). Also, higher physical fitness is apparently associated with improved children's cognitive abilities and academic achievements (London & Castrechini, 2011; Ruiz-Arizaa et al., 2017).

>>> SOURCES OF INFORMATION

The results were derived from a nationally representative research conducted in 2012, that included 5,099 11 to 18 year-old schoolchildren across 10 Lithuanian regions (Venckunas et al., 2017).

>>> KEY FINDINGS

In comparison to the European fitness norms in mean percentile calculated as an average across age were the following for boys and girls, respectively for:

- Endurance (20 m shuttle run) (min/stages): 28.57 and 38.57;
- Lower body muscular power (Standing broad jump) (cm): 65.71 and 62.86;
- Upper body muscular endurance (bent arm hang) (s): 67.14 and 72.86;
- Lower body muscular endurance (Sit-ups) (n/30s): 72.86 and 84.29;
- Flexibility (sit-and-reach) (cm): 42.86 and 41.42.

Table. *The indicators of physical fitness components of Lithuanian 11 -18 year-old schoolchildren in comparison to the European fitness norms in mean percentile*

94 - 100%	87 - 93%	80 – 86%	74 – 79%	67 – 73%	60 – 66%	54 – 59%	47 – 53%	40 – 46%	34 – 39%	27 – 33%	20 -26%	<20%
A+	A	A-	B+	B	B-	C+	C	C-	D+	D	D-	F
Endurance												
												
Lower body muscular power												
												
Upper body muscular endurance												
												
Lower body muscular endurance												
												
Flexibility												
												

CONCLUSION

The results showed an unsatisfactory level of physical fitness not only in comparison to the European reference norms (Tomkinson et al., 2017), but also to the results of Lithuanian schoolchildren of the previous decades in years 2002 and 1992 as well. Specifically, there was a substantial decline in flexibility, leg muscle power and upper body strength and aerobic capacity (cardiorespiratory fitness), that was the most striking - a number of completed stages decreased by nearly 50% during the last two decades. Meanwhile, during the same time there was an improvement in abdominal muscle strength, which improved in girls, agility in boys and balance in both genders (Venckunas et al., 2017).

RECOMMENDATIONS

- Regular annual registration of markers of physical fitness and making the results available for those directly responsible, i.e. parents, clinicians, school community and policy makers would call attention to the child's physical

development and health; it will provide information on the level of different aspects of physical capacity and the need for corrections by means of sports exercises, nutrition, etc. Following the examples of some countries, LITFIT -national fitness monitoring system could be established to make those data gathering and delivering procedures.

- School-based interventions through physical activity targeting development of physical fitness components, especially endurance should be developed on a national level.
- The outstanding performance on particular components might call attention of sports organizations and sports clubs to offer sport programmes that further develop children's athletic performance.

RESEARCH GAPS

>>>

- Physical fitness is affected by multiple factors on individual, interpersonal, organizational, community and global levels, the effect of each could be compensated or amplified in their interplay. Therefore, studies of single factors do not tackle this interaction. Consequently, there is a lack of studies examining the effect of multiple interplaying factors for the development of physical fitness.
- Longitudinal studies are required for tracking development of physical fitness components.

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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.

>>> BACKGROUND

Physical activity as health related behaviour in childhood and adolescence depends on social influence. Family and peers are among the most important sources of influence for sports and physical activity. The child's level of physical activity may depend on adults' attitudes, habits, opportunities to promote social and economic support. Parents can provide material support by paying for activities and facilities. They also could engage in physical activities together with their children. Motivational support is provided by encouraging children to be physically active. Informational support is provided discussing various physical activities, their benefits for health (Beets et al., 2010; Cheatom, 2014; Zaltauske, 2017).

>>> 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 108 to 2,335 (parents or children).

The results for encouragement of family members (e.g., parents, guardians) who facilitate physical activity and sport opportunities for their children were derived from a cross-sectional study of 15 – 17 year-old adolescents (n=400) (Rutkauskaitė & Maciulevičienė, 2013).

The results for meeting the Global Recommendations on Physical Activity for Health in parents of primary school children were obtained from two small

cross-sectional studies with the number of parents in each of them, respectively n=159 (Cesnaitiene & Sukys, 2014) and n=108 (Rutkauskaite & Bukauske, 2016). For older, 13 – 18 year-old students, the data from a cross-sectional nationally representative study was used with the number of participants of 2,335 (Sukys et al., 2014).

The data on family members (e.g., parents, guardians) who are physically active with their kids were obtained from 349 parents of primary school children in a cross-sectional study (Strazdiene, 2015). The data on common parent-kid physical activity in a sample of older students were obtained from cross-sectional study of 15 – 17 year-old adolescents (n=400) (Rutkauskaitė & Maciulevičienė, 2013). The latter study was also the source of the data for peer encouragement and support for being physically active (n=400) (Rutkauskaitė & Maciulevičienė, 2013).

>>> KEY FINDINGS

- Only 36.6 % of 15–17 year-old adolescents admit that their parents encourage them to involve in physical activity (Rutkauskaitė & Maciulevičienė, 2013).
- Only about 40 % of primary school children's parents (mostly mothers) are physically active enough (having accumulated the sum of physical activity bouts more than 24 in accordance with Godin Leisure Time Questionnaire (Godin & Shepard, 2011) or are physically active more than 4 hours per week) (Cesnaitiene & Sukys, 2014; Rutkauskaite & Bukauske, 2016).
- Only 4.2 % of 13–18 year-old students indicated that both of their parents exercised regularly (Sukys et al., 2014).
- 17.6 % of adolescents indicated that at least one parent exercised regularly (in 65.4 % of cases, this parent was the father) (Sukys et al., 2014).
- Both parents exercising was more often mentioned by 15–16 year-old students (6.3 %), less often by 13–14 year-old students (5.1 %), and least often by 17–18 year-old respondents (2.6 %) (Sukys et al., 2014).
- Parents with higher levels of education exercised more often than less-educated parents (10.3 % vs 3.4 %) (Sukys et al., 2014).
- Just a small number of primary school children's parents (2.9 %) exercise together with their children on weekdays, 5.7 % are physically active with their children in leisure time, (Strazdiene, 2015).

- The most popular parent-children physical activities are cycling (45.8 %) and playing sports games (37.8 %) at weekends. 8.9 % play sports games with children (Strazdiene, 2015).
- 9.3 % of adolescents (n = 400; 15–17 year-olds) admit that their parents are often active together (Rutkauskaitė & Maciulevičienė, 2013).
- Another important social influence group for children and adolescent is peers. The results indicated that 54.8 % of adolescents admit that their peers are often active together, 23.5 % of adolescents admit that their peers often offer PA to them (Rutkauskaitė & Maciulevičienė, 2013).

>>> CONCLUSIONS

The indicators of social influence for physical activity in Lithuanian children and adolescents are still not satisfactory. The highest grade, that is C+, was indicated for peers' encouragement and support for adolescents' physical activity. The lowest grade, that is F, referred to family members (e.g., parents, guardians) who are physically active with their kids. The percent across cross-sectional studies for common parent-children different activities varied from 4.2 to 45.8. However, more than one third of parents strongly suggest physical activity for their children, that is actually still not enough, as there is clear evidence that most of the parents are not active themselves.

>>> RECOMMENDATIONS

- Community-based interventions at school and in neighbourhoods are needed for practicing physical activities together with family members and peers.
- Physical activity-friendly environment (cycling paths, playgrounds and other physical activity facilities) should be created at schools and in communities.
- Motivational social support for families could be provided on an organizational level (school and workplaces) and community level (community leaders). More media support by providing evidence based benefits of physical activity and showing the ways for being physically active as well as providing good examples and sharing best practices would be also valuable.

>>> RESEARCH GAPS

- Only cross-sectional studies are available for family and peers' social influence on adolescent physical activity. There is a lack of nationally representative and longitudinal studies, that examine not only correlational, but also causal relationships.

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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.

C+

>>> BACKGROUND

The main advantages and disadvantages related to physical education and sport in schools in 30 different European countries are revealed in the Eurydice (European Commission/EACEA/Eurydice, 2013) report. The report points out that 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. The report presents the number of physical education lessons per year compared with other subjects, the possibility for specialist teachers and generalist teachers to teach physical education in primary and basic education, and the process of physical activity in non-formal (after-school) education at school.

>>> 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 and Science, the Education Development Centre, the Min-

istry of Health and Labour, the Department of Physical Education and Sports, and the National Olympic Committee of Lithuania.

>>> KEY FINDINGS

- Lithuania is missing Official Active School Policies on the legislation level (Health Education and Disease Prevention Centre, 2018);
- 38 % of Lithuanian schools belong to the National Network of Health Promoting Schools (Česnaitienė, Šukys, 2014) and 9 % are involved in the Olympic Education Project "Olympic Generation" (Olympic project for children and youth "Olympic Generation" ("Olimpinė karta", 2018)).
- In all Lithuanian schools of general education (except for primary education schools), i.e. about 13% of all Lithuanian schools, physical education lessons are taught by physical education teachers (Education Management Information System, 2018);
- Physical education lessons in primary schools are taught by primary school teachers (Education Management Information System, 2018);
- Physical education is a compulsory subject in all schools of general education in Lithuania (basic and secondary education curriculum for academic years of 2017–2018 and 2018–2019, 2017).
- All Lithuanian schools offer non-formal physical education. A survey of 5,000 schoolchildren revealed that 23.4 % of sports education programmes were selected by pupils (Evaluation of non-formal education of children: survey and analysis of questionnaires, 2017),
- 51 % of parents stated that there is a sufficient number of extracurricular activities in schools that encourage physical activity of children and 51 % of parents stated that school gyms are available for exercise after school (Česnaitienė, Šukys, 2014);
- 19.9 % of parents agree that conditions for exercising at schools are good (Strukčinskienė and Raistenskis, 2012).

>>> CONCLUSIONS

- Lithuania is missing 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 are taught by primary school teachers in primary schools.
- Physical education is a compulsory subject in all schools of general education in Lithuania.
- Few schoolchildren choose non-formal physical education after school.
- Half of Lithuanian schoolchildren's parents said that there is a sufficient number of extracurricular activities in schools that encourage physical activity of children and that school gyms are available for exercise after school.

>>> RECOMMENDATIONS

- Implement physical activity policies in schools.
- Encourage Lithuanian schools to become more involved in the National Network of Health Promoting Schools.
- 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.
- The reasons why few students choose non-formal physical education after school should be found out.
- 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).
- Create, install, and use Physical Activity Policy Assessment tools.

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kontekste: Comenius regio partneryščių projekto „socialinė integracija per sportą“ pradinių klasių mokinių tėvų ir mokytojų apklausos rezultatų lyginamoji analizė ir rekomendacijos. Kaunas: Kauno rajono Savivaldybės administracijos Kultūros, švietimo ir sporto skyrius; Lietuvos sporto universitetas.

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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 god job to prioritize and promote physical activity, and that the community has adequate facilities to do physical activity.

C

>>> BACKGROUND

Personal health-related behaviour is affected by both personal and environmental factors and their interactions (Sallis, Owen, Fisher, 2008). Although health-related behaviour of peers, school, and in particular family is extremely important, physical environment related to physical activity, its accessibility and safety are of great significance, as well (MacKenzie et al., 2015). The development of a safe environment related to physical activity depends not only on the country's health policy, but also on the attention paid by the local community and local self-government.

>>> SOURCES OF INFORMATION

The results on work promoting physical activity in municipalities were derived from nationally representative research including 32 municipality administrations (Radzevičiutė et. Al., 2015), all public health bureaus (Vičaitė and Šidlgytė, 2017), and also 2,962 13-14 year-old children's parents or guardians (Jociūtė ir Beržanskytė, 2016). The results about the environment for physical activity were derived from representative sample of related 3,802 7-8 year-old children's parents or guardians (Žaltauskė ir Petrauskienė, 2016) with additional

findings from Special Eurobarometer 2014 and the Department of Physical Education and Sports under the Government of the Republic of Lithuania.

>>> KEY FINDINGS

- 73 % of Public Health Bureaus implement employee health promotion activities / programmes. 80 % of the bureaus indicated that the most commonly offered programmes / activities are related to physical activity promotion (Vičaitė ir Šidagytė, 2017).
- 84.4 % of municipality administrations applied physical activity promotion interventions for adults in the last three years (Radzevičiūtė ir kt., 2015).
- However, 56 % of 15 year-old and older people agree that local authorities do not do enough for their citizens in relation to physical activities (Special Eurobarometer 412 "Sport and Physical activity", 2014). Likewise, 48 % of physically active parents and guardians of 13-14 year-old children indicated that the municipality should take appropriate actions to increase physical activity (Jociūtė ir Beržanskytė, 2016).
- 62 % of parents of 6-7 year-old children from 10 districts of Lithuania indicated that roads to school are safe. 78.7 % of parents indicated that children have recreation areas in their living environment (Žaltauskė & Petrauskienė, 2016).
- 81 % of the respondents agree that local sport cubs and other local providers offer many opportunities to be physically active (1023 (there is not enough data obtained from 15-24 year-olds; Special Eurobarometer 412 "Sport and Physical Activity", 2014).
- 30.5 % of research participants indicated that opportunities for sports and physical activity in their living environment were improved during the last year (survey on physical activity of the Lithuanian population (Sprinter survey conducted under the contract with the Department of Physical Education and Sports under the Government of the Republic of Lithuania)).

>>> CONCLUSION

- More than half of the parents agree that overall neighbourhood environment related to physical activity is supportive, safe, and 30 % of the parents

agreed that such environment was improved. Also, local sport clubs offer a lot of opportunities for physical activity.

- Most Public Health Bureaus and municipality administrations indicated that they are implementing health promotion activities/ programmes.
- More than half of the parents indicated that local authority, the municipality is doing enough for its citizens in relation to physical activities. Although parents consider the efforts of the local authorities to be rather favourable, they also want even greater efforts to promote physical activity of children.

>>> RECOMMENDATIONS

- Ensure that the environment designed to promote physical activity are adapted for the disabled, as well as for people of all ages.
- Local authorities should evaluate the effect of their physical activity promotion programmes on physical activity of the local community.
- Analyse what kind of additional measures the local community wants to be more involved in physical activities.

>>> RESEARCH GAPS

- There is insufficient knowledge of the extent to which physical activity promotion is affecting the physical activity of the communities.
- Although there is enough knowledge on parents' opinion about the adaptation of the environment to encourage physical activity and its safety, there is lack of information on children's of different ages assessment of this environment and how regularly it is used.
- Although the opportunities offered by sports clubs for exercising are evaluated favourably, there is a lack of data on the distribution of the use of these services according to socio-demographic and country's geographical characteristics.

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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 allocated resources to the implementation of political strategies aiming for implementing physical activity promotion strategies for schoolchildren.

C

>>> BACKGROUND

Physical activity is a very important indicator that can positively influence health. It is especially important for a growing person. The level of physical activity of children and adolescents affects their health in adulthood. Therefore, every state must take care of the well-being of its inhabitants focusing on health, which, in turn, depends to a large extent on physical activity. The Government of Lithuania also plays an important role in promoting physical activity among children. Although lately politicians have been talking about schoolchildren's health a lot, attention to their physical activity and related indicators is insufficient.

>>> SOURCES OF INFORMATION

- National Progress Strategy "Lithuania 2030" (1);
- Lithuanian Health Strategy 2014-2025 (2);
- National Sport Development Strategy 2011-2020 (3);
- National Public Health Care Programme 2016-2023 (4);
- Law on Physical Education and Sport of the Republic of Lithuania (5);
- School curriculum (6);
- Physical Education and Sports Support Fund (7);

- National Network of Health Promoting Schools (8);
- Lithuanian Physical Education Badge Programme (9);
- Olympic project for children and youth "Olympic Generation" ("Olimpinė karta") (10);
- Framework Programme on Health, Sexuality Education and Preparation for Family Life (11).

>>> KEY FINDINGS

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

In the National Progress Strategy "Lithuania 2030" (1), attention is paid to health and healthy lifestyle, but the term "physical activity" is not used at all. Thus, it can be stated that one of the main documents defining the future of Lithuania does not directly focus 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 (2), provides a specific challenge to promote physical activity, i.e. "develop optimal physical activity habits" and presents one of the four main goals to "form healthy lifestyle and its culture". It can be said that the Lithuanian Health Strategy 2014-2025 pays attention to physical activity of children.

The third important document, approved by the Seimas of the Republic of Lithuania in 2011, is the National Sport Development Strategy 2011-2020 (3). One of the goals of the Strategy is to "systematically raise public awareness that physical activity and sport is a prerequisite for a sustainable personality and universal value", but tasks and means focus on sport rather than on physical activity; attention is paid to public administration of sport, sport for human resources and the development of sport infrastructure rather than infrastructure favourable to physical activity.

The fourth document, the National Public Health Care Programme 2016-2023 (4), presents one of the tasks - to increase physical activity of the population and enable them to be physically active in all areas of life. In carrying out this task it is planned to promote physical activity of children and adolescents, espe-

cially in early childhood, as well as in pre-school institutions and schools; inform all people about health benefits of physical activity - provide evidence-based knowledge and raise awareness of health-enhancing physical activity; encourage different groups of the population to choose appropriate physical activity and reduce sedentary time, etc.

The fifth document, the Law on Physical Education and Sport of the Republic of Lithuania (5), was adopted a long time ago - in 1995, although there were attempts to change it. Although the new draft law is being prepared, this version is still in force. The law, of course, regulates the legal aspects of sport and physical education and focuses more on sport rather than physical activity of schoolchildren.

The main Lithuanian documents do not distinguish health promoting physical activity as a means of disease prevention and rehabilitation. It also does not emphasize the problem of reducing health inequalities and the need for inter-sectoral cooperation.

- We would like to point out several key initiatives that promote physical activity of children in Lithuania:
- Ministry of Education and Science (2015) recommended promotion of organized physical activity during breaks, at least one break per day lasting for at least twenty minutes (6);
- Physical Education and Sports Support Fund (7). All government organizations and NGOs in the field of sports and physical activity may apply to receive funding to finance their activities;
- There is a National Network of Health Promoting Schools in Lithuania, the vision of which is a healthier school community (8). Its content shows that there are many different events organized to promote physical education in schools;
- Lithuanian Physical Education Badge Programme. There is an opportunity provided for schoolchildren to test their physical fitness and sports-related knowledge (9);
- Olympic project for children and youth "Olympic Generation" ("Olimpinė karta"), one of the objectives of which is to encourage children and young people to exercise and learn through sport (10);

- Framework Programme on Health, Sexuality Education and Preparation for Family Life, one part of which deals with physical activity of schoolchildren (11).

>>> 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. We have good examples of allocated funds and resources for the implementation of physical activity promotion strategies and initiatives for all children and young people (both direct and indirect), for example, the Ministry of Education and Science (2015) recommended promotion of organized physical activity during breaks, at least one break per day lasting at least twenty minutes. Physical Education and Sports Support Fund: all government organizations and NGOs in the field of sports and physical activity may apply to receive funding to finance their activities. Lithuanian Physical Education Badge Programme: there is an opportunity provided for schoolchildren to test their physical fitness and their sports-related knowledge. Although in Lithuania policy agenda, policy formation, policy implementation, policy evaluation and decisions about the future are discussed at the governmental level, those issues still are episodic, there is a lack of consistency and clear policy for physical activity (promotion) in children (and society in general). Best proof for that is a lack of guidelines for promoting physical activity in Lithuania. National recommendations for physical activity are also still missing.

>>> RECOMMENDATIONS

- Develop and implement Physical Activity Recommendations for Schoolchildren at a national level;
- Perform monitoring of physical activity policy implementation at schools and explore its relationship with schoolchildren's physical activity and other health indicators;
- Develop the National Physical Activity Strategy for Lithuanian population covering a broad range of topics;

- Encourage and promote programmes and national campaigns for schoolchildren physical activity.

>>> RESEARCH GAPS

To collect evidence on factors influencing delivery and implementation of physical activity policy guidelines at school within different sectors (e.g., transport, urban planning, sport, education), as well as the impact of the policies on different outcomes (Behavioral, health, achievement).

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INDICATOR	GRADE	RATIONAL
Overall Physical Activity	C-	The value is given based on current data of national representative samples from 4 scientific studies and one report data by the Hygiene Institute. The overall physical activity of children and youth covering the ages of 7 to 15 years has been evaluated mainly using HBSC, WHO and IPAQ questionnaires. The amount of MVPA ranges from 1-2 hours per day to more than 2 hours per day in primary school children (33 % and 60.5 %, respectively); in comparison to less than 30 % of boys and less than 20 % of girls in adolescent age who have 60 min of MVPA daily.
Organized Sport Participation	C	According to two national surveys of families with young children, 50 to 70 % of primary school children go to sports or dancing club twice per week. Another study revieled that on average 8-11 year old children of Western Lithuania spend 30 min/day for going to sports or dancing clubs, but only 11.3 % of the respondents indicated that they are going for sports. The exercise-based extracurricular activities at secondary schools are chosen by 23.4 % of schoolchildren.
Active Play	INC	For this Indicator all 3 scientific studies were done just with 6-8 year old kids using Family record questions. Although the evaluation of their active play time waried from A to F mark (from 7.5 % - to all sample playing outside 2h/day), we decided to to present this indicator with incomplete mark as it was presented data just from 6-8 year old kids.
Active Transportation	C-	The value is given based on current data of national representative samples from 4 scientific studies and one Special report Eurobarometer on Sport and Physical Activity. Data presented from different samples and ages. Evaluation of their active transport waried from A- to F mark. 7–8 year aged children parents reported that 45.% their kids using active tranpsort to school and 57.9 %. using active tranpsort from school. Majority (84 %) cof children and adolescent (11-13 year) comute to/ from school on foot, although to majority (67.9 %) it takes just 10 min walk. Youths and adolescents (15-24 year) tend to use less active transport - just 12 % engage regularly in activity such a cycling from one point to another.
Sedentary Behaviours	C-	Five studies were found to be related with the screen-based leisure activities of schoolchildren. The data of nationally representative samples of 7-17 year old children indicate that the screen time guidelines are being followed by the minority of Lithuanian boys and girls. According to parents, their 6-9 years of age children have 2.6 hours per day of screen time on average. Adolescents in their spare time spend two and more hours daily for watching TV (more than 50%) and using computer to play games (40-51 %).
Physical Fitness	C+	The grade is based on nationally representative research in 2012 results, published in Journal of Epidemiology and Community Health (2017). Eurofit test battery was applied to children aged from 11 to 18 years old. The results in comparison of European fitness norms in mean percentile calculated as an average across age were the following for boys and girls respectively: for Endurance (20 m shuttle run) (min/stages): 28.57 and 38.57; Lower body muscular power (Standing broad jump) (cm): 65.71 and 62.86; Upper body muscular endurance (bent arm hang) (s): 67.14 and 72.86; Lower body muscular endurance (Sit-ups) (n/30s): 72.86 and 84.29; Flexibility (sit-and-reach) (cm): 42.86 and 41.42. The comparison of results show not satisfactoraly level of physical fitness in comparison with both: European reference norms (Tomkinson et al., 2017) and results of Lithuanian schoolchildren of the previous decades in years 2002 and 1992 (Venckunas et al., 2017).

Family and Peers		The grade is based on a number of cross-sectional research (sample size varied from 108 to 2335 participants). Results of those research confirm each other and show very low level of parents' physical activity (37 – 40% of parents active enough) in accordance of the Global Recommendations to accumulate at least 150 minutes of moderate-intensity aerobic physical activity throughout the week. Also, parental involement into physical activities together with their children is far from satisfactorily and varies from 2.9 to 45.8% depending on activity and weekday. The results of peers' involement in physical activity, which showed that 54.8% of adolescents admit that their peers are active together often, is based on one cross-sectional study covering the age group of 15-17-years-old children and neither is confirmed by any other study in the same age group, nor represents the situation in other age groups.
School		Lithuania is missing Officiall Active School Policies on the legislation level. However, 430 schools belongs to the network of Lithuanian Health-enhancing Schools, i.e. about 38 percent out of all schools in Lithuania. The mission and vision of those schools is to enhance health in school community. Among other health topics, the importance of physical activity is also addressed. Physical education (PE) in all Lithuanian schools (except primary education schools, i.e. about 13% of all schools in Lithuania) is tought by PE specialist. PE classes are mandatory. Practically all schools in Lithuania offer physical activity opportunities (in addition to PE), but not all children choose it. Although studies have shown that 51% of parents report that their children have access to physical activity opportunities at school in addition to PE classes, but this is not a study representing population of the Lithuanian school-aged children.
Community and Environment		Half of parents agree that overall neighbourhood environment related to physical activity supportive and 60% reported that environment are safe. More than half of parents indicated that local authority, municipality is doing enough for its citizens in relation to physical activities. However, the data mentioned above are based on survey of parents of certain children age group (despite of populational type of studies). Populational based studies indicated that 73 % of municipalities implement health promotion activities / programs.
Government		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 there is not particularly distincted as a mean of disease prevention and rehabilitation. We have good examples of allocated funds and resources for the implementation of physical activity promotion strategies and initiatives for all children and young people (both direct and indirect). Some of them presented below: Ministry of Education and Science (2015) recommended promotion of organized physical activity during breaks, at least one break per day, not less than twenty minutes; Physical Education and Sports Support Fund. All government organizations and NGOs in the field of sports and physical activity may apply to receive funding to finance their activities; Lithuanian Physical Education Badge program. There is an opportunity provided for schoolchildren to test their physical fitness and their sports-related knowledge. Although in Lithuania policy agenda, policy formation, policy implementation, policy evaluation and decisions about the future is discussed at the governmental level, those issues still are episodic, lack consistency, there is no clear policy of physical activity (promotion) in children (and society in general). Best proof for that is the lack of guidelines for promoting physical activity in Lithuania. National recommendations for physical activity are also still missing.

FINAL NOTES

Although there are studies in Lithuania dealing with the problems related to physical activity of children, there is no systematic approach; different authorities and research institutions apply different methods and duplicate research. There is no intercourse between institutions, therefore it is difficult to see a unified picture.

Unfortunately, few practical steps are taken using scientific findings to promote and enhance pupils' physical activity.

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 improvement of physical activity indicators among children and youth.