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STUDY INTO CHILDREN'S PHYSICAL HEALTH IN THE BARENTS REGION

FINAL REPORT

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wsp

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Executive Summary

The World Health Organisation (WHO) recommends that children and youth aged 5-17 should accumulate at least 60 minutes of moderate - to vigorous-intensity physical activity daily to maintain a good physical health and mental wellbeing. However, it is estimated that as much as 81 percent of school aged children and youth are not sufficiently physically active. Children and youth spend a significant portion of their time awake in sedentary activities, such as on screens. Physical activity and outdoor playtime is decreasing with age and lower activity levels are typically reported for girls than for boys.

Considering this global trend, it is plausible to assume that the situation is similar for children and youth in the Barents region, the northernmost parts of Norway, Sweden, Finland and North-West Russia. To contribute to an understanding of what the status of children's physical health does look like in the 13 regions that form part of this area and to understand what good practices are in place to promote physical health in the region, Västerbotten County Administration, as part of its chairmanship for the Barents Regional Council, commissioned a study into this topic.

The study was made by WSP Sweden and took place from June to November 2021. It was based on remote interviews with some 40 municipal and regional representatives from the four countries included in the Barents cooperation, as well as a review of some 50 documents and web-based statistics. The study draws the following conclusions:

The status of children's physical health in the Barents regions in the four countries are relatively similar to each country's national average. In other words, the health outcomes for each country's Barents regions do not stand out in and of themselves. Instead, there are variations within specific regions and municipalities, much in the same way as there are intraregional and intra-municipal variations in any geographical context. This study concludes that these variations are due to factors such as Social Determinants of Health, intersectional variables, geography and climate.

Notwithstanding the above, there are similarities between the different Barents regions that are specific and inherent to the region. These are small populations with low population density, extended periods of darkness and harsh climate, as well as long distances to services. If any geographical context an urban-rural dimension must be considered, this is particularly true for the Barents region.

For policy making and finding good practices to foster good physical health and physical activity amongst children and youth, the study has considered the interventions on the part of the regions, municipalities and third sector according to feasible entry points. These entry points are health promotion intervention, interventions within the domain for the school, and ensuring equal access to opportunities by focusing on the most vulnerable and resource poor. In order to address the Social Determinants of Health and unequal health outcomes due to socio-economic status, it is important to design strategies and interventions where and in close proximity to where the children have equal opportunities (the school), as well as make targeted effort to bring the most vulnerable along.

The report makes the following high-level recommendations:

- **Recognise that health among children and youth is socially determined.** A health-in-all-policy approach is necessary. There is a need for multilevel governance in order to foster the necessary collaborations between sectors and levels. It is also critical that individual children and parents be specifically targeted, by focusing on an including all children perspective.
- **Focusing on the smallest communities.** Recognising that the intra-regional differences are vast, leaving especially the smallest and most remote communities in difficult situations. Regional as well as municipal strategies need to pay particular attention to the conditions and opportunities in these communities.

- **Continuous learning**, between regions and through monitoring and evaluation. This study has shown that results, strategies and initiatives vary between communities, regions and nations in the Barents region. A more systematic comparative approach alongside with dissemination and sharing of initiatives and good example may serve as an instrument for both policy learning and launching tools and projects addressing children and young. It is also critical to monitor and continually evaluate initiatives, to understand what works well and what does not.

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Abbreviations

BMI	Body Mass Index
BRC	Barents Regional Council
FAS	Family Affluence Scale
HiAP	Health in All Policies
OECD	Organisation for Economic Cooperation and Development
SDOH	Social Determinants of Health
WHO	World Health Organisation



1 Introduction

1.1 Background

The Barents Regional Council (BRC) is a forum for regional cooperation, with the aim to promote the use of the local regional knowledge to accelerate regional cooperation, cross-border projects and programmes. BRC has a rotating chair and Västerbotten County in Sweden chaired the cooperation for the period 2019 to 2021.

During its chairmanship, Västerbotten County Administrative Board decided to focus on five horizontal perspectives¹ and four thematic priorities. One of these priorities were Children’s Sport and Health. The reason for this focus was the decrease in physical activity and in participation in organised sports amongst children and youth. Laying foundations for habits and competencies that include sports and physical activity early in life are evidenced to help children continue to lead healthy lives. Yet, with the negative trend, parents, schools, and healthcare agents today struggle to give children the prerequisite to a healthy lifestyle.

To understand the current state of children’s physical health in the Barents region, and to seek recommendations regarding concrete strategies and tools for improving physical activity, Västerbotten County Administrative Board commissioned WSP Sweden to conduct a study into the field. The study took place June – November 2021.

¹ The priorities were environment and climate, youth, gender equality, indigenous peoples, and visibility.

1.2 This report

This report summarises the findings from the study and has the following structure:

- Section 2 describes the purpose, scope, and method for the assignment. It also defines some of the concepts used for analysing health impacts as well as health policy.
- Section 3 maps the status of the children's physical health in the region and discusses causes for different health outcomes that are specific to the Barents region.
- Section 4 describes the organisation and governance structure of public health in the Barents countries.
- Section 5 discusses strategies used in the four countries to promote and improve children's physical health, as well as enabling and disabling factors for fostering good physical health amongst the children in the region.
- In section 6 examples from the regions per strategy category are presented.
- Finally, in section 7 overall conclusions from the study are drawn key recommendations presented.

2 Approach and methodology

This section sets out the purpose and objectives of the study, as well as scope and data limitations. It explains some of the concepts referred to and used in the study for analysis of findings and for conceptualising the recommendations.

2.1 Purpose, scope and method

Västerbotten County Administration's expected the study to respond to the following:

1. Present today's situation of physical health among the children in the Barents Region.
2. Describe which goals (if any) concerning children's physical health that exist on national, regional, and local level.
3. Describe existing (if any) national, regional, and local strategies to reach the goals.
4. Identify and describe best practice, good examples to increase children's physical health from the Barents Region.
5. Propose a concrete toolbox with at least four tools for regional and local level to which will break the negative trend with less and less physical activities among the children. If this toolbox is used it will increase children's physical health.

The scope of the study was all the Barents region, in other words:

- Norway - Troms/Finmark fylke and Nordlands fylke
- Sweden – Norrbotten and Västerbottens county
- Finland - Lappland, Oulu, Kainuu and North Karelia
- Russia – Republic of Komi, Republic of Karelia, Murmansk Oblast, Arkhangelsk Oblast and Nenets Autonomous Okrug

Of the full geographical coverage above, two regions per country were selected and from each region two municipalities. This meant that all Barents regions in Norway and Sweden were included in the study, whereas in Finland two of four were included, Kainuu and North Karelia. In Russia, Republic of Karelia and Nenets Autonomous Okrug were included in the scope. In total this meant 8 regions and 20 municipalities.

As analytical framework for the investigation, WSP used an approach underpinned by intersectionality and social determinants of health (refer to section 2.2 below). To understand the current situation regarding children's physical health in the different regions and what can be learnt and shared between them, the data collected and used has consisted of interviews with a total of 40 individuals at regional and municipal levels across the Barents region, as well as review of some 50 documents and websites.

Within the data collected, there was significant variations in the level and quality of statistics. WSP also had varying access to informants in different regions and municipalities. This means that it has not been possible to make robust comparisons between countries or regions regarding current physical health outcomes and levels of activity, as the data frequently was not comparable and based on different metrics and values. Instead, the information collected has been used to draw a picture of the situation in each of the regions and municipalities consulted, to understand common challenges, different responses to the challenges and what can be learnt and shared in terms of good practice.

2.2 Concepts explained

As one analytical concept, this study has used **Social Determinants of Health (SDOH)**² (based on the Marmot Commission and WHO's work). SDOH are conditions in the places where people live, learn, work, and play that affect a wide range of health risks and outcomes.



It is common to use a set of five key areas when assessing and working from a SDOH perspective. The five areas interact and reinforce a person's overall prospects to lead a healthy life. Economic stability explores the connection between financial resources – income, cost of living, socio-economic status – and health outcomes. Social & community context explores the connection between the characteristics of the context in which people live, learn, work, and play and their health and wellbeing. Neighborhood & environment investigate the relationship between where a person lives – housing, neighborhood, and environment – and their health and wellbeing. Health care addresses the interplay between people's access to and understanding of health services and their own health. Finally, education explores the connection of education to health and wellbeing. It includes issues such as graduating from high school, enrolment in higher education, educational attainment in general, language and literacy, and early childhood education and development.

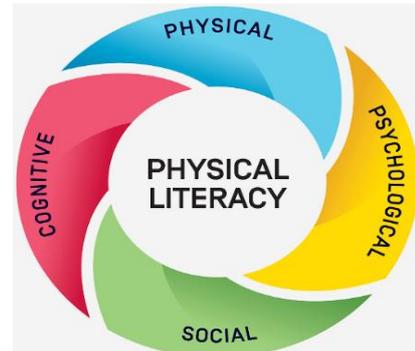
The benefits of targeting the SDOH the social determinants of health have become widely recognised and used by policymakers across the world.

In addition to SDOH, the **intersectionality** of different perspectives and identities has been considered in the analysis of the data collected. An intersectionality approach acknowledge that different aspects and backgrounds intersect and risk reinforce pre-existing vulnerabilities and conditions for a good health. In an intersectionality analysis, the normative structures that makes different people's conditions and situations invisible are highlighted and brought to the fore. This enables an understanding of who loses out and who gains in a given situation and policy context. In this way, different people's and sub-groups that would otherwise be regarded as homogenous entities are made visible and explicit. In this study intersectional perspectives of relevance have been gender (girls, boys, transgender and undisclosed), indigenous people, rural-urban dimension, socio economic situation (as per SDOH, above).

WSP considers the intersectionality perspective to align well with several of Västerbotten County's horizontal perspectives that are to stretch across all working groups and Barents entities. This refers in particular to youth, gender equality and indigenous people, but also to environment and climate change and how this interacts with prospects for opportunities for a physical lifestyle.

² Based on the Marmot Commission and work by the World Health Organisation

SDOH and background intersectionality factors in turn impact on physical health outcomes, and determinants for establishing a good physical health in early ages. Good physical health, and sustaining physical health, is facilitated by **physical literacy**. Physical literacy is the “motivation, confidence, physical competence, knowledge, and understanding to value and take responsibility for engagement in physical activities for life. life”³.



Health in All Policies (HiAP) is defined by WHO as an approach to public policies across sectors that systematically takes into account the health implications of decisions, seeks synergies, and avoids harmful health impacts in order to improve population health and health equity. HiAP is based on the recognition that our greatest health challenges—for example, noncommunicable diseases, health inequities and inequalities, climate change, and spiraling health care costs—are highly complex and often linked through the social determinants of health.

In this context, promoting healthy communities, and in particular health equity across different population groups, requires that the social determinants of health are addressed, such as public transportation, education access, access to healthy food, economic opportunities, and more. While many public policies work to achieve this, conflicts of interest may arise, or unintended impacts of policies are not measured and addressed. This requires innovative solutions, and structures that build channels for dialogue and decision-making that work across traditional government policy siloes.

³ Physical literacy definition by the International Physical Literacy Association, <https://www.physical-literacy.org.uk>

3 Status of children's physical health in the Barents region

This section maps the problem analysis and describes the status of the children's physical health in the Barents region. It discusses causes for different health outcomes that are specific to the region and looks at the different health outcomes for children and youth in the 11-17-year-old age span per country and region.

3.1 Overall problem analysis

According to the World Health Organisation (WHO) as much as 81 percent of school aged children and youth are not sufficiently physically active.⁴ Children and youth spend a significant portion of their time awake in sedentary activities, such as on screens. Physical activity and outdoor playtime are decreasing with age and lower activity levels are typically reported for girls than for boys.

Sedentary behavior is a major cause of non-communicable diseases worldwide in all age groups. An increase in sedentary behavior increases the risk of various diseases such as high blood pressure, elevated cholesterol levels, obesity, cardiovascular disease, and diabetes. Studies have shown that treatment of overweight in children are challenging and have limited effect. Preventing obesity and other non-communicable illness is critical as these diseases tend to carry over into adulthood.⁵

Physical activity has proven to have broader health benefits, in particular for children and youth. Apart from physical endurance, muscle mass, blood pressure and BMI, physical activity is beneficial for the development of cognitive functions and contribute to life quality and psychological health. A newly released report from the Public Health Agency of Sweden demonstrates results that children who are more physically active report higher life satisfaction and less problems with mood swings, depression, irritability, nervousness and sleeping problems, compared to children who are less physically active. While in some places participation in organised sports go up, there is an overall drop in physical activity across the week. Screen time contribute to more inactivity between the organised sports activities.⁶

Conversely, mental well-being can deteriorate because of physical inactivity. A vicious circle and perpetuation of the problem for children with lower levels of physical activity is noticeable and can result in lethargy and lack of focus and meaning of life, leading to lack of motivation to exercise and be active physically, in turn leading to deteriorating physical stamina and physical health. Furthermore, a connection between sedentary activities and higher levels of sugary drinks has been proven, indicating less healthy eating habits follow sedentary activities and screen time.⁷

School and homework stress both contribute to children and youth letting go of physical activities or de-prioritising it, as well as a lack of sufficient physical activity contributes to lower resilience in coping with stress.

In many instances, parents prioritise convenience and efficiency in terms of school transportation and sedentary activities. Children are increasingly being driven to school, removing the natural daily activity of walking, or biking to school, a very important contributing factor to reaching the WHO recommended daily activity levels. Parents' concern over road-safety and other risks may also play a part. Children's and youth's extensive use of screens can to some extent be explained by convenience, with busy parents relying on screens as an easy option for the children to access for leisure and spare time.

⁴ *Skolbarns hälsovanor i Sverige 2017-18*, Folkhälsomyndigheten

⁵ *Daily and Weekly Variation in Children's Physical Activity in Norway: A Cross-Sectional Study of the Health Oriented Pedagogical Project (HOPP)*, Kharlova, Valand Fredriksen, Mamen and Fredriksen, 2020

⁶ *Skolbarn som är fysiskt aktiva rapporterar bättre psykisk hälsa*, Folkhälsomyndigheten, April 2021

⁷ *Skolbarns hälsa och levnadsvanor i Norrbotten 2018/2019*

Notwithstanding the above, it is important to recognise that physical health outcomes and access to physical activity follow socio-economic dimensions. There is a growing health gap between groups with high socio-economic status. Privileged and affluent families are reportedly more active, with children more frequently enrolled in organised after-school hobbies and activities.

3.2 Physical health in the countries of the Barents region

For available comparable statistics for all four countries included in the study, WHO’s *Findings from the 2017/2018 Health Behavior in School-aged Children (HBSC) survey in Europe and Canada* is largely the only source available, for consistency, comparability and reliability of indicators measured. According to the report, no country satisfactorily reaches the recommended daily guidelines of 60 minutes moderate to vigorous physical activity daily.⁸ For the three age-groups monitored in the study, Finland has the highest number of active children and youth.

Table 1:

Moderate to vigorous physical activity

Self-reporting at least 60 minutes of MVPA daily

Finland		Norway		Russia		Sweden	
Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
2014		2014		2014		2014	
11 yr: 47	11 yr: 34	11 yr: 32	11 yr: 19	11 yr: 26	11 yr: 18	11 yr: 21	11 yr: 13
13 yr: 29	13 yr: 23	13 yr: 18	13 yr: 12	13 yr: 21	13 yr: 15	13 yr: 14	13 yr: 10
15 yr: 22	15 yr: 12	15 yr: 23	15 yr: 7	15 yr: 21	15 yr: 11	15 yr: 15	15 yr: 10
2018		2018		2018		2018	
11 yr: 52	11 yr: 38	11 yr: 22	11 yr: 19	11 yr: 26	11 yr: 18	11 yr: 23	11 yr: 13
13 yr: 33	13 yr: 24	13 yr: 15	13 yr: 11	13 yr: 18	13 yr: 10	13 yr: 15	13 yr: 14
15 yr: 22	15 yr: 12	15 yr: 13	15 yr: 9	15 yr: 16	15 yr: 9	15 yr: 13	15 yr: 9

In terms of vigorous physical activity four or more times per week, the statistics demonstrates better results for all countries than for the recommended 60 minutes of moderate activity per day. Again, Finland has the highest level of active 11, 13 and 15-year-olds in this category. Norway and Russia are on similar levels for boys, but with a marked difference between boys and girls, where girls are on average less active than their boy peers. The best gender parity is found in Sweden and Norway, where girls’ activity levels are not as far behind the boys as in other countries – for Sweden, 13-year-old girls are according to this study more active than the boys, and in Norway 11-year-old girls are more active than boys the same age.

Table 2:

Vigorous physical activity

Self-reporting vigorous physical activity four or more times per week

Finland		Norway		Russia		Sweden	
Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
2014		2014		2014		2014	
11 yr: 69	11 yr: 58	11 yr: 54	11 yr: 43	11 yr: 48	11 yr: 38	11 yr: 47	11 yr: 37
13 yr: 61	13 yr: 57	13 yr: 48	13 yr: 43	13 yr: 46	13 yr: 33	13 yr: 46	13 yr: 36
15 yr: 50	15 yr: 48	15 yr: 51	15 yr: 42	15 yr: 41	15 yr: 27	15 yr: 50	15 yr: 38
2018		2018		2018		2018	
11 yr: 67	11 yr: 68	11 yr: 50	11 yr: 41	11 yr: 50	11 yr: 42	11 yr: 40	11 yr: 38
13 yr: 62	13 yr: 55	13 yr: 44	13 yr: 45	13 yr: 46	13 yr: 35	13 yr: 41	13 yr: 44
15 yr: 46	15 yr: 39	15 yr: 50	15 yr: 45	15 yr: 43	15 yr: 30	15 yr: 45	15 yr: 30

⁸ *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 VOLUME 2. KEY DATA, World Health Organization, Regional Office for Europe*

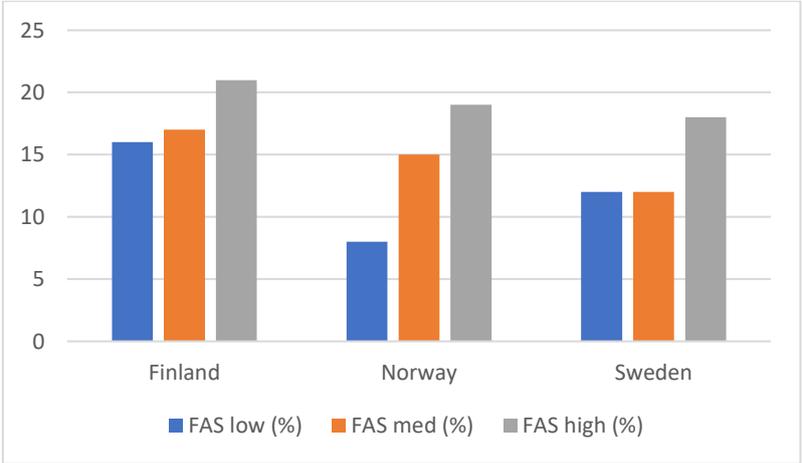
In all four countries, there are more boys than girls who are overweight or obese in all three age categories surveyed. In Finland, Norway and Sweden, the number of overweight or obese girls and boys have increased between the two periods surveyed, from 2014 to 2018, while for Russia a positive trend is noticeable, with fewer overweight and obese children in 2018 compared to 2014.

Table 3:
Overweight and obesity

Finland		Norway		Russia		Sweden	
Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
2014							
11 yr: 25	11 yr: 17	11 yr: 17	11 yr: 9	11 yr: 30	11 yr: 19	11 yr: 20	11 yr: 13
13 yr: 25	13 yr: 14	13 yr: 18	13 yr: 11	13 yr: 24	13 yr: 13	13 yr: 22	13 yr: 15
15 yr: 24	15 yr: 15	15 yr: 22	15 yr: 9	15 yr: 24	15 yr: 8	15 yr: 22	15 yr: 15
2018							
11 yr: 26	11 yr: 14	11 yr: 18	11 yr: 9	11 yr: 27	11 yr: 14	11 yr: 24	11 yr: 17
13 yr: 29	13 yr: 17	13 yr: 20	13 yr: 15	13 yr: 21	13 yr: 13	13 yr: 24	13 yr: 16
15 yr: 22	15 yr: 15	15 yr: 22	15 yr: 14	15 yr: 19	15 yr: 12	15 yr: 17	15 yr: 14

Applying a Social Determinants of Health (SDOH) perspective on the activity levels, according to available data for 15-year-olds for the Nordic countries that are included in the Barents region (Finland, Norway and Sweden), the greatest gap between the group that belong to families with of lower affluence, compared to the group belonging to families of higher affluence was found in Norway. The smallest gap between high and low affluence were found in Finland. According to the study, Finland and Sweden have been equally successful in equal health outcomes.

Diagram 1: 15-year-olds in the Nordic countries who report at least 60 minutes of moderate-to-rigorous physical activity daily vary depending on Family Affluence Scale (FAS).⁹



⁹ Policies to address the social determinants of health in the Nordic countries, University of Bergen/ Norwegian Institute of Public Health

In sum, the following observations are made regarding the 11-15-year-olds' physical health in the four countries:

- Overall, Sweden reports the lowest levels of physical activity, with some exceptions.
- Finland has the highest levels of activity for most age groups and measures, year-on-year.
- Finland and Sweden report the most equal health outcomes, with the smallest disparity between families of lower affluence levels and those of higher affluence levels.
- Norway reports relatively high levels of the recommended vigorous physical activity four or more times a week, just behind Finland. Russia and Sweden have similar levels of vigorous physical exercise four times a week.
- All countries are struggling with a drop in physical activity for girls with age. There is a steady decrease for girls from 11 to 13 to 15 years of age.
- The tendency over time seem to be a small increase in physical activity measured by instances per week, while at the same time generally an increase in over-weight and obesity, although with variations between countries and age groups (Russia notes lower levels for both sexes and age groups from 2014 to 2018).
- Despite having the lowest levels of physical activity amongst the countries studied, the overweight and obesity prevalence was overall the lowest in Sweden.

3.3 Are children in the Barents region worse off?

For eight out of the thirteen regions in the Barents area included in this study, the secondary data collected does not indicate significant differences in the health status among children and youth in the Barents regions compared to the national averages. The variations observed are not persistent over time and can to some extent be explained by variations in other factors, such as socio-economic variations between regions. However, data on the regional levels may hide variations within regions, both within the socio-economic groups as mentioned but also any systematic variations between e.g. municipalities within regions.

The data on the regional that WSP has accessed has significant variations in structure and quality. For some regions data is missing all together. What is feasible to do instead is to compare the selected regions in each country with their national average, to understand how the regions deviate. Once this has been done, it is possible to compare the Barents regions of one country with another to see how they compare to their respective national averages. This section, therefore, attempts to draw these individual pictures of some of the regions and municipalities included in the study, based on a combination of secondary statistical data, as well as in-depth representative interviews for the region.

Finnish regions: Kainuu and North Karelia

Data for the Finnish regions are based on the National Institute for Health and Welfare' School Survey¹⁰. The study does not follow the same regional division as the Finnish administrative regions, instead it uses "health regions", however, the differences between the two are marginal outside of major cities (see chapter 3 below),

Some key-indicators from this survey is shown in the table below.

¹⁰ Enkäten: Hälsa i skolan

Table 4: Overweight and exercise among school children in Kainuu and North Karelia 2021 (2019)

	Percentage overweight 2021 (2019)			Percentage exercising 1hr+ per day 2021 (2019)		
	<i>Kainuu</i>	<i>N. Karelia</i>	<i>Finland</i>	<i>Kainuu</i>	<i>N. Karelia</i>	<i>Finland</i>
Boys and girls in grades 8-9	19,2 (17,6)	20,4 (19,7)	18,0 (16,9)	24,6 (20,6)	24,3 (21,9)	24,3 (21,9)
Boys and girls in upper secondary school	17,3 (15,4)	19,0 (17,8)	17,1 (15,9)	21,6 (16,9)	18,4 (14,5)	17,5 (13,9)

Data above suggest that overweight is an increasing problem over time for Finnish school children. The level of increase does not differ much between our two Barents regions and comparable national data. However, if comparing with geographical entities smaller than regions the disparities are much more pronounced. Comparing the share of overweight in e.g. 8-9 graders in **North Karelia** – 20.4 percent – with that of Helsinki City – 13.8 percent, the difference is significant. This again suggest that the socio-economic dimension in the determinants of health is probably of more importance than other regional dimensions.

We can also see that the proportion of children and youth that exercise one hour or more per day, is relatively high in the two Barents’ regions, on par or higher than in Finland in general. This suggests that the differences between young people are more significant within the two Barents regions than in Finland in total. This data seems to be in line with the other Nordic Barents’ regions, i.e. that the intra-regional disparities between those who exercise extensively and those who do not exercise at all seem to be big in the Barents area.

The data for mental health, such as individuals reporting to have two or more symptoms of poor mental health or suffering from severe anxiety, does not suggest any significant differences between the Barents’ regions and Finland in total. However, the data indicate a rapid increase in especially the ratio suffering from severe anxiety between 2019 and 2021.

When interpreting data from the two years – 2019 and 2021 – some caution is necessary since 2021 is likely to be affected by the Covid-situation whilst this was not the case in 2019.

Norwegian regions: Nordland and Troms & Finnmark fylken

From the Norwegian Public Health Institute, the ‘Folkhelseprofil’¹¹ comparative regional data for 2019 presents physical activity levels for 13-17-year-olds. The data looks at frequency of moderate to vigorous exercise per week per age group, as well as overweight and obesity levels.

26 percent of 17-year-olds (upper secondary school, ‘gymnasiet’) in **Nordland** region report that they exercise less than once a week, which is the same as the Norwegian average. In **Troms & Finnmark fylke** as many as 30 percent of the 17-year-olds exercise less than once a week. The share of 17-year-olds in the two Norwegian Barents’ regions engaged in physical activities for at least 150 minutes per week does not deviate much from the national average: 53 percent of the 17-year-olds in Troms og Finnmarks fylke claim to achieve this activity level, and 54 percent in Nordland fylke as (national average is at 56 percent).

The number of 17-year-olds that report overweight and obesity in the two Norwegian Barents’ regions differ significantly from the national average. In Troms & Finnmark fylke 29 percent of the 17-year-olds were either overweight or obese and 28 percent of the 17-year-olds in Nordland fylke. The national average is 22 percent for this age group and the difference between the Barents’ regions and the national average is statistically significant. This differ from Finland, where the two Finnish Barents regions had similar overweight and obesity levels as the national average.

¹¹ Folkhelseprofil, 2021, Folkhelseinstituttet.

From data available, both Nordland and Troms & Finnmark regions show very similar activity levels compared to the national average for lower secondary school (13-16-year-olds). About 66,5 percent of the children in this age group in the Norwegian Barents regions self-report to exercise 3 or more times per week, compared to 67 percent for the national average. For upper secondary school (16-19-year-olds), the levels are noticeably lower than for the national average: 50,7 percent self-report to exercise 3 or more times per week, compared to 58 percent for the national average. There are significant differences between municipalities included in the study, with Bodö reporting activity levels on par with the national levels.

In terms of mental health and psycho-social well-being, the Norwegian interview participants noted that children and youth in the Norwegian Barents region report lower status than the national average.

Russian regions: Karelia and Nenets

In Russia, children's health is monitored according to five categories: 1) healthy children, 2) mildly sick/mild diseases (such as problems with dental health, skin problems), 3) chronic diseases (children who experience health or sickness difficulties 2-3 times per year, 4) children with minor disabilities, 5) children with serious disabilities.

In **Karelia**, interview participant noted an increase in children that moved down from category 1 to category 2 between 2019 and 2020. This means that most of the children in Karelia now belong to category 2 (some 70-75 percent), with some form of health problems. Their physical health is not considered optimal and the reason for this is considered to be too much sedentary activity, largely due to excessive screen time.

In the three municipalities covered in the Republic of Karelia, interview participants considered that the children's health was deteriorating. In Petrozavodsk municipality, the trend was that physical activity amongst children was going down. Due to interventions and preventive work, in the past ten years the activity levels have gone up but are not considered optimal by officials, as in between organised sports and other activities, there is too much sedentary activity. The 3-18-year-olds have at least 2-3 hours of physical education in school, in addition at least 15 percent participate in sports schools after regular school hours, and another group also participate in sports clubs in connection to the end of the school day. In Olonet municipality, physical education teachers in schools anecdotally comment that children's physical performance has gone down and that eating habits have deteriorated. In Kostomuksha municipality, interview participants commented that by every year there are more children with health handicaps (belonging to lower levels of the health categories)

Swedish regions: Norrbotten and Västerbotten

In **Västerbotten** region, the prevalence of overweight and obesity in the youngest ages - four-year-olds - has gone down but with significant variations within the region.¹² There is a clear health gap between those who exercise and those who don't along socio-economic lines. Those who already exercised for example before the onset of the Covid-19 pandemic exercise more, those who did little do less. Poorer health outcomes are frequent in vulnerable communities, such as Sami and individuals who arrived during the 2015 Mediterranean migration wave.

This overall health picture has several parallel as well as contradictory trends. For example, the support to Västerbotten's civil society¹³ is the highest in Sweden and based on this measure, Västerbotten has Sweden's most active population. However, the most vulnerable groups have significantly lower levels of participation. In one area, the number of 7-20-year-olds who were active in community-based organisation/organised civil society activity were 16 percent, while in a neighboring area participation levels was at 46-60 percent.

In **Norrbotten** region, most 10-11-year-old girls and boys report that they exercise at least three times a week outside of school. They also report having relatively healthy eating habits and only about two hours of screen

¹² Folkhälsomyndigheten, *Hälsa på lika villkor*

¹³ LOK – Local Activity Funding (Lokalt Aktivitetsstöd)

time a day. This is on par with, if not better than the national Swedish average. Yet, about 25 percent of children in this age group are overweight and obese, indicating an unbalance between diet and level of exercise.¹⁴ This is higher than the national levels, where 17 percent of 11-year-old girls and 24 percent of the boys were reported as overweight or obese.

The number of 13-14-year-old girls and boys who are physically active is lower than for the 10-11-year-olds. Overweight and obesity levels is lower for girls in this age group than in the younger age (10-11-year-olds), while for boys the opposite is true (more overweight for boys in age 13-14). Children in this age group report less healthy eating habits than in the younger group.

Fewer students in gymnasiet/upper secondary school exercise at least three times a week. Screen time appears to increase with age. More students at gymnasiet are overweight or obese compared to the younger age groups, with a total of 25 percent belonging to this weight category.

There are differences between schools along socio-economic lines in all Swedish municipalities studied.

3.4 Determinants of children's health status in the Barents region

The main determinants of health in children in the Barents region are not different from their national contexts, i.e. they are centered on the socio-economic determinants such as the education and income/affluence levels of the parents, parents country of origin outside of Europe or OECD countries. While this is true also for the Barents regions there are factors that are specific to the Barents region that impact on the health status. These factors intersect with general social determinants and sometimes act to reinforce the regionally specific factors.

One regionally specific factor is geographically disbursed populations, which in turn results in several communities with very low numbers of population and low population density, meaning far distances between communities and between services. Another specific factor is that for the communities in the region, the winters are colder and darker, and this can in some cases further add disincentives both to take part in organised activities and walking or cycling.

As the Barents region are sparsely populated areas, spanning vast geographies, developing, maintaining and organising relevant sports infrastructure and physical activities across the full territories is a challenge, if not impossible. This presents real hurdles in providing equal access to physical activity for all people in the region. The distance between people is also a challenge for children whose main physical activity can be expected to consist of spontaneous activities, such as use the immediate neighborhood for soccer, playing in the terrain, skateboarding etc. With vast differences between people it is difficult to drop by a friend to play outdoors.

The above said, there is a clear rural-urban divide, as well as the added challenge of the smallest and most isolated municipalities. There are more options for organised activities in urban areas, a divide which is potentially more distinct in the Barents region with extremely low population density outside the urban centres. Yet, with small populations overall in some municipalities, there is sometimes a lack of well-developed sports infrastructure, facilities, and stadiums, even in the cities.

Urban planning and the number of hours of daylight contribute to being physically active outdoors. Being outdoors has proven to contribute to higher activity levels and the possibilities of being active increase if the local neighborhood and immediate environment provide access to walking and bicycle paths, playgrounds, open spaces, and forest. With the lack of daylight for part of the year, children and youth in the Barents region face additional hurdles for outdoor activities, even if just walking or biking to school, after school activities, or friends.

¹⁴ *Skolbarns hälsa och levnadsvanor i Norrbotten 2018/2019*

In any region or locality, children of socio-economically well-off parents participate to a higher degree in organised sports activities outside of school, and this is true for the Barents region as well. The schools' ability to foster physical activity as a mechanism for social inclusion is of crucial importance. The most significant determinant of children's physical health in the Barents as well as other regions is family affluence levels and the socio-economic position of the family and the parents.

4 The organisation and governance of children's public health

This section briefly looks into the governance challenges relating to the organisation of children's public health. The responsibility for children's and youth's public health is horizontally divided between different policy areas, as well as vertically between different geographical governance layers and entities. In 4.1 we describe which the three policy areas are, in 4.2- 4.4 we describe the line of responsibility between national, regional and local levels in the four countries. Understanding these governance challenges enables a better assessment of local and regional responses and efforts to promote physical health and physical activity among children and the youth (section 5).

4.1 The complexity of organising children's public health

Like many social challenges the governance of children's health is a complex issue, which is reflected in the analysis of how the responsibilities and mandates of the Barents' regions and municipalities are formed in the four respective national contexts.

This social challenge that spans across a number of policy fields, such as health services, social welfare, schools and education and physical planning. Public health among children, rooted in the social determinants of health and health in all policy perspectives, need to be embedded in all those policy systems. But the challenge is how? In modern governments the institutions coordinating between policy sectors are few. In practice it is often only through government and from the prime ministers' or treasury offices that coordination take place. This presents a challenge when numerous perspectives (not only health) need cross-sectoral coordination and that those perspectives sometimes point in different directions.

In analysing how the countries and regions have organised children's public health, this study makes a distinction between three horizontal overarching types of policy-areas:

- Health-providing policies
- Schools and education policies
- The widest type of public health policies

Moreover, children's health policies are also dependent on a well-functioning multi-level-governance where local and regional disparities can be addressed alongside socio-economic disparities. This study has found considerable variations (as well as similarities) in how the multi-level-governance challenge has been addressed in countries.

4.2 The varying role of national levels

While the role and organisation of the national levels vary, between the four countries studied it is possible to conclude that, generally, the national level has three roles:

1. Regulatory and monitoring
2. Funding
3. Dissemination of knowledge

For health-provision relating to schools and education, the **regulatory and monitoring function** of the national levels is very pronounced in all four countries. The central government institutions regulate in detail the medical procedures and standards or the school curricula, and they monitor that central standards are met. With regards to public health policies – the interest of this study - the regulatory and monitoring role of the national levels is much less explicit. Norway appears to be an exception, where national regulation requires municipalities to integrate public health plans in their respective local general plans (under the *Folkhelse Act*). Compliance with this requirement is monitored by national level, through the regionalised 'Statsforvaltinga'.

The central government institutions are important sources of **funding** for various policy-fields, from schools and education where funding is typically shared with municipalities and regions to health care where funding is also divided between levels. Funding is in general not that proliferate in relation to public health policies although the government fund numerous local and regional projects in most of the studied countries. This is particularly prominent in Russia, with large transfers of funds to regions for the implementation of nation-wide initiatives and projects, with sums of money for the development and maintenance of facilities as well. The Finnish model of leisure-money stands out, as an unusual government ear-marked transfer directed to individual families across Finland, with a set amount of money per child for leisure activities. The other three countries have no similar scheme for children (although Sweden e.g. allow tax reductions on employer subsidies for their employees' leisure activities can be seen as a similar policy although not targeting children and families in the same way as the Finnish model).

Notwithstanding the above two mentioned roles, in all three Nordic countries the main role for national levels with regards to public health policy is centered on **knowledge generation and dissemination**, targeting among others the regional and local level agents.

4.3 Despite several reforms, still a complexity of agents at regional levels

In the three Nordic countries encompassed in this study, the regions have been subject of numerous constitutional reforms. This includes the division of responsibilities between the national agents and regions, how regional representation shall be organised (through cooperating municipalities or through direct representation) and the redrawing of regional borders.

Finland still displays the most complex division of governance at the regional level, with two different regional entities, both constituted of municipal assemblies, one responsible for the provision of health care and one responsible for regional development including public health. However, the two entities are not geographically compatible, although the overlap in the Barents region is considerable. In Finland there is also a third geographical division including the much larger central level regional organisation, with responsibility for monitoring both health care and regional development. In total this creates three types of regions, with different geographical divisions.

In Sweden, recent reforms have assembled health care provision and most of regional level public health responsibility in the regionally elected regions, while some monitoring remain the responsibility of state regional administrative boards.

In Norway, reforms have relatively recently centralised all specialist health care provision, while municipalities have an important role in relation to primary health care. In combination with the strong emphasis on public health in municipal planning and the governments monitoring of this can be seen as having left the regionally elected Fylkes kommunene with a minor role, focusing on strategically trying to reach out to all municipalities, especially the smallest ones.

4.4 Local levels are key, but their responsibilities and capacities vary greatly

In this sub-section, the role of the local level is described. We have previously in this section discussed the three forms of policy of relevance to children's and youth's health as being health provision, schools and education, and public health. The municipalities have a role in all three policy forms.

While local authorities are responsible for primary health care in Norway and Finland, this is a regional responsibility in Sweden and Russia. In Finland municipalities join in assemblies at the regional level to organise primary and secondary health care.

In Sweden, the municipalities are responsible for both primary and secondary education. In Norway the primary education is the responsibility of the municipalities while the secondary education is the responsibility of the regions (Fylkeskommunen). In Finland the secondary education is the responsibility of central

government. The Swedish system also allows for a large share of private or independent (charter) schools especially at the level of secondary education, but still with municipalities as the main responsible authority.

One important aspect of the local level is the great variance between municipalities, in particular regarding population size. In Sweden, the two Barents' regions comprise both the city of Umeå with a population of 130 000 inhabitants and Sweden's smallest municipality Bjurholm with 2 400 inhabitants. In Norway, the variation spans between Tromsø with 77 000 inhabitants and Träna with 450 inhabitants. The Finnish Barents' regions included in the study spans between Joensuu city of 77 000 inhabitants and Ristijärvi with approximately 1200 inhabitants. For the smallest of municipalities, often combined with diminishing population numbers, the cost of maintaining both investments in facilities and various social services can become considerable. In Norway, mountains and fjords often add to the general dimension of long distances making municipal cooperation a challenge.

In all four countries, the Nordics as well as Russia, there are extensive national systems for transferring of funds to disadvantaged municipalities in place, compensating for some of the exposedness in small municipalities.

5 Addressing the problem

This section discusses how the different Barents regions work to foster children's health, and children's physical health and raised activity levels. Entry points for planning and implementing relevant interventions are discussed, as well as enabling factors for fostering good physical health for the children and youth in the region.

5.1 Entry points for fostering children's physical health

As per the discussion in section 4, promoting children's public health, including improving their physical health require interventions at different levels – horizontally across different policy areas, as well as vertically between national, regional and local levels. In pragmatically addressing declining levels of physical health and physical activity in the region, and to lift vulnerable groups and focus on equal access for all, WSP to work across the policy areas and governance levels more pragmatically. We propose entry points for strategies and interventions that the regions already have in place and that we categorise according to the following:

- Health promotion
- Inclusions of all and the role of the schools
- Equal access to opportunities

This section defines these three categories and discusses briefly examples of how the different regions work with fostering children's physical health can be viewed according to the three categories, which can also be used as entry-points for future interventions and approaches.

Health promotion

Health promotion and disease prevention programs focus on keeping people healthy. Health promotion programs aim to engage and empower individuals and communities to choose healthy behaviors and make changes that reduce the risk of developing chronic diseases and other morbidities. Defined by the WHO health promotion...

"...enables people to increase control over their own health. It covers a wide range of social and environmental interventions that are design to benefit and protect individual people's health and quality of life by addressing and preventing the root causes of ill health, not just focusing on treatment and cure."

Health promotion and disease prevention programs often address social determinants of health, which influence modifiable risk behaviors (refer to section 1 for a definition of social determinants of health). Modifiable risk behaviors include, for example, tobacco use, poor eating habits, and lack of physical activity, which contribute to the development of chronic disease.

Typical activities for health promotion, disease prevention, and wellness programs include:

- Communication - raising awareness about healthy behaviors for the general public. Examples of communication strategies include public service announcements, health fairs, mass media campaigns, and newsletters.
- Education - empowering behavior change and actions through increased knowledge. Examples of health education strategies include courses, trainings, and support groups.
- Policy, Systems, and Environment - making systematic changes – through improved laws, rules, and regulations (policy), functional organisational components (systems), and economic, social, or physical environment – to encourage, make available, and enable healthy choices.

All regions included in the study work with **health promotion** aimed at children and youth in different ways and respects. **Russia** works with a variety of communication and education campaigns, such as national awareness campaigns, national competitions, national exercise projects and events and state television ads. Health promotion activities are initiated, and funded, by the central government, Ministry of Education or Ministry of Health, with instructions to the regions to operationalise and implement in their jurisdiction.

In **Finland** the responsibility for (children's) public health lie at all levels of government, from the national institute for health and welfare to individual municipalities and assemblies of municipalities both working on health care and on regional development including public health policies. National campaigns play an important part in Finnish health promotion strategies, including campaigns directed at schools and municipalities as well as campaigns directed at individuals and families. The latter is unique in a Nordic-Barents perspective.

In **Norway**, the Public Health Act contributes to broad support for reducing social health inequalities, particularly at the local level. The municipalities increasingly recognise how their services such as day care, schools and leisure time activities can include a health equity perspective. The act also institutionalises public health.¹⁵ Regulating public health promotion in municipalities by law give Norwegian central government the mandate to monitor and follow up on local implementation in a way that its counterpart in at least Sweden and Finland lack. The Norwegian government also funds campaigns where municipalities and regions may apply for national money to stimulate public health.

The Public Health Agency of **Sweden** is responsible for collecting and disseminating knowledge of children's health and inspiring the use of effective initiatives which promote health and prevent ill-health among children and adolescents. The monitoring of health of children and adolescents over time and how factors impacting health change over time are important instruments in this work. The Agency also participates in the "Health Behaviour in School-aged Children" (HBSC) study, a collaborative WHO project.

Inclusion of all: the role of schools

Schools play a central role in including all children in the same curricula regardless of background. It serves as social equalisation and contributes to social integration. Children of lower affluence families can through school be presented with opportunities he or she may not otherwise have had.

For physical health and physical activity, this means that the number of physical education hours in schools across the Barents region are extremely important. Most schools in the region have 2-3 hours of physical education per week. In Sweden, some municipalities have 4 hours per week. Physical health also includes healthy diet and the schools have a role in educating all students in this respect. Children from more vulnerable families and/or with poorer nutrition can through schools raise their awareness of the importance of healthy food choices.

In Sweden, several schools work with the concept "Active Schools" which means integrating elements of physical literacy into the school day, moving some academic classes outside, and walking while practicing others. Norway works with health promoting pre-schools and schools, according to ten different health promotion criteria.

Equal access to opportunities

Across the region, health promotion initiatives are implemented that aim at providing access for vulnerable or resource poor children and youth to physical activities. To ensure non-discriminatory policies and interventions, it is important to surface specific strategies that are helpful for more vulnerable or resource poor groups.

In **Russia**, there is regional financial support for families with lower income to use for children to participate in the sports. A sports school in the Republic of Nenet has six subsidiaries and can be used by the public in the provinces and rural areas, free of charge. The school has instructors and coaches who can organise lessons for any group, children and adults alike. In Nenet, starting in 2021, sports activities for children and youth are free, previously families had to pay 20 percent of actual cost.

In **Finland**, the Finnish model is designed to make sure that every child and young person has access to leisure activities no matter their family background and where they live. It provides funding for each child to use

¹⁵ *Policies to address the social determinants of health in the Nordic countries*, University of Bergen/ Norwegian Institute of Public Health

towards a leisure activity, usually organised in connection to and immediately after the school ends, in order for children who live far from school stays and engages in an after-school activity. In **Sweden**, a sports library (“Fritidsbanken”) has been established to allow for anyone to practice a sport that may require expensive equipment.

5.2 Enabling factors

Based on document research and the interviews conducted, this study draws some conclusions regarding enabling factors for a good physical health and for raising the level of physical activity across the region. The most dominant enablers are listed here.

- A **holistic view** is required on public health and children’s physical health. The psycho-social is strongly related to the physical, emotional well-being is reinforced by physical well-being. Depression, stress and mood swings are in turn exacerbated by low levels or lack of physical activity.
- It is important to address **socio-economic factors** for equal access to physical activities. The strongest determinant for good health outcomes in children and youth are socio-economic group and family affluence status. Sports, especially sports in the winter dominated Barents regions, can be expensive to practice both in terms of memberships and equipment.
- The **earlier healthy habits** are addressed and created the better. This strengthens the likelihood that the behaviors will be sustained into adolescence.
- The role of the **parents** is often instrumental in attracting and maintaining a child’s motivation to be physically active. This may mean role modelling by being a physically active parents, as well as facilitating the child’s organised activity as well as encouraging the child to move by on force (walking, biking) to and from school, and to and from activities.
- There is a strong consensus that **less screen-time** would be a significant enabler for a more active life. The introduction of multiple media and screens have had negative effects on overall physical activity levels in the sense that time spent in sedentary activities have risen sharply. While in many cases the children practice sports several times per week, the time in between organized physical activities are spent in physically passive mode. To foster good cardiovascular levels and counteract overweight and obesity it is important to find ways to reduce sedentary time. Furthermore, the consumption of sugary drinks was found to be higher with prolonged phases of sedentary activity.
- **Children and youth participation** in generating ideas, in design and decision making is likely to increase motivation and ownership and contribute to sustained interest in activities on offer. Their participation will also increase the relevance of the activities and more suited to different children’s needs and capabilities.
- It is necessary to try and provide a **diversity of activities** in a municipality or school, in order to address children’s different interests and capabilities, thereby maximizing the probability that the child’s interest and engagement is secured over time.
- Dissemination of **good examples** would enable inspiration and learning across the region.

6 Examples from the regions

This section intends to provide inspiration between the different regions and present examples according to the different entry points discussed in section 4 – examples of interventions related to health promotion, examples related the school domain, and examples for targeting the most vulnerable.

6.1 Health promotion

Example: The National Demography project, Russia

Russian national projects are implemented following a presidential executive order in 2018 *On National Goals and Strategic Objectives of the Russian Federation* through to 2024. The aims are achieving breakthroughs in science and technology and socioeconomic development in the Russian Federation, increasing the country's population, improving the living standards and conditions of the citizens, and creating an environment and opportunities for all to fulfil their potential.

The National Demography project aims to improve the living standards of the Russian citizens so that they live both longer and lead active lives in decent conditions. While the greatest share of the project's budget is on supporting families with a newborn child, through maternity grants, the project places significant importance to promoting healthy living and combating addictions.¹⁶

Within the demography project, an initiative called "Sport is the norm of life" is being implemented in the regions. Initiatives within the project are aimed at the whole family and intends to mobilise parents as well as children. Activities include campaigns to mobilise families around physical activities, including advertising using celebrities (actors, politicians, Olympic stars) as role models, national sports days, building of new sports facilities.

The Russian regions and municipalities consulted in this study all implement "Sport is the norm of life". The initiative is considered by those consulted to have resulted in a **strong mobilisation around physical activity**, sports themes and a trend meaning it is fashionable to be healthy and exercise. The idea to mobilise the nation **around a common cause** – with different activities implemented within this cause – and the **involvement of parents** is a natural part of the activities and considered the most important enabler to attract and retain the children's interest.

¹⁶ [The National Project "Demography" – The Roscongress Information and Analytical System](#)

Example: Health promoting pre-schools and schools, Nordland county, Norway

While a national working group to develop criteria for health promoting pre-schools and schools were initiated in 2017 in Norway, the Nordland county administration advanced its work at the regional level to be able to start its work with health promoting monitoring in its municipalities' schools more immediately. In close dialogue with the municipalities and the public health alliance in Nordland, it has further developed health promotion criteria, which will enable systematic and structured health promotion work in the schools. The criteria will also enable accountability and results-orientation and facilitate evaluation and follow-up.

Nordland county administration has a formal agreement with 41 municipalities for this initiative. Each municipality has in its agreement specific criteria for health promotion in the pre-schools and schools in their respective locality. The county administration supports each school in choosing criteria and provides thematical courses and training based on the school's individual needs. Participating schools are invited to annual seminar to share lessons learnt and promote best practice.

10 overarching criteria

1. The schools have ownership of the work related to health promotion
2. The school works systematically with fostering psychological and good psycho-social environment
3. All students are physically active at least 60 min per day
4. National guidelines for school lunch is followed
5. The school tobacco and substance free
6. The school has a satisfactory cross-disciplinary health service
7. The school has good routines for cooperation with the students and caregivers
8. The school provides education in healthy life habits
9. The school collaborates and coordinates with other initiatives, according to the student's health needs
10. The school works in a preventive way, systematically with health and safety at the school

➤ Further read: [Helsefremmende grunnskoler forside \(hmts.no\)](https://hmts.no)

Example: Children's physical health integrated into all sectors and services, Luleå municipality, Norrbotten region in Sweden

Luleå municipality in Norrbotten county has moved from separate programmes to an overarching municipal vision of nine goals, and a plan with six sub-areas with sub-goals and budgets.

The first goal of *Vision Luleå 2025* is "Equal health for Luleå's population". One of the sub-areas are equality focusing on children and youth, partly through the principle "Experience and participate" ("Uppleva och utöva").

The overarching view was considered essential by this study's interview participants, through which overarching goals relating to health equality, in turn broken down to physical health results are that are reported on annually.

In the new action plan physical activity is in focus, and deviations from targets monitored. All departments in the municipal administration have to include how they within their mandate contribute to improving physical activity and a better physical health for children and youth. For example, department for spatial and city planning how it facilitates physical activity, how department for culture and leisure activities allocate funds for civil society and sports organisations, etc.

➤ Further read: [Luleå 2050 sept08 engelska.pdf \(lulea.se\)](https://lulea.se)

Example: Active School Transportation, Luleå municipality and Luleå University of Technology, and implemented by municipalities across Norrbotten

Active School Transport is a project designed and implemented by Luleå University of Technology and Luleå Municipality. The aim of the project is to increase the number of students getting to and from school in a way that promotes physical activity, such as cycling or walking.

As cited by Luleå University of Technology, active school transport is no novelty, many municipalities have carried out projects to get more children to walk or cycle to school. This school-based project is, however, more of a promotional approach, as well as gamification, empowerment and the integration of educational assignments. The empowerment and gamification dimensions are central to Luleå's approach, by which empowerment is intended that an individual should feel that he/she has the power over their own situation, their tasks and their environment. Gamification is the use of game design to reinforce behaviors other than in games. This has been shown to increase the students' motivation for behavioral change and the parents' involvement in the project, which in turn leads to increased sustainability. The integration of learning during the active school transport increases the motivation for schools to set aside time and resources for implementing the project.

Several primary schools in Luleå's municipality have participated in the project. Key results observed by Luleå University of Technology include:

- Changed attitudes amongst the parents' after the children participated in active transportation, the key to this was the children's enthusiasm.
- The children were more energetic in school and it was easier for them to sit still and concentrate. They were happier especially in the morning as they had socialized on the way to school, meaning that they were more ready when the class started.
- The children built new relationships and were paired two and two or three by geography and encouraged to cycle or walk together. Children who had not previously socialized, got to know each other better.
- The children's active travel affected the parents behaviour. A side effect was that the increased physical activity of the children also increased physical activity among the parents.

➤ Further read: [Active school transport - Luleå University of Technology \(ltu.se\)](https://www.ltu.se/active-school-transport)

6.2 Inclusion of all: the role of schools

Example: Introducing physical activity in the normal curriculum, Norsjö municipality and others

In the spirit of "Increased movement and physical activity in school" in Norsjö municipality, and through the approach "active-school" promoted to other Swedish municipalities by the Active School foundation, the intention is to introduce daily physical activity and movement into the regular curriculum and during normal classes. This on account of a full curricula and already long days with limited possibilities to include more than 3 hours of physical education per week, while at the same time contributing to increased level of physical activity for school children.

According to the active-school approach, any class and subject matter usually allows for some aspects of the class to be taught and learnt physically. Furthermore, there is evidence that exercises aimed at raising the heart rate immediately before a test generates good academic results.

It can be a challenge for a municipality to have the task of ensuring that the public increases its physical activity, while schools are in a better position to reach the children and youth. In Norsjö in Västerbotten county, the school has worked systematically with "increased movement and physical activity in school" to the extent that this has had a spill-over effect on the students outside of school, where there reportedly are change behaviors involving more activity. The schools work closely with the after-school clubs, as well as with the region's health clinic to coordinate activities. In the schools' physical environment, for example the school yards, there are ambitions to include more activity elements, such as obstacle courses on the way to the school cafeteria etc. As a matter of systematically working actively with integrating physical activity into school, two follow-ups per year are done, which provide evidence and background for strategy and planning.

Not-for-profit Swedish organization Generation Pep has a free-of-charge toolbox for schools to use in order to integrate physical activity into the regular classes and the school day.

➤ Further read:

[Verktyg | Generation Pep Skola - Generation Pep handlingsplan-rorelsesatsning-i-skolan.pdf \(rf.se\)](#)

[Rörelse ska stimulera inlärning på Norsjöskolan | Norsjö kommun \(mynewsdesk.com\)](#)

[Kreativa lärare på Norsjöskolan skapar för spontan rörelse | Norsjö kommun \(mynewsdesk.com\)](#)

Example: Exposing children to sports diversity during school hours

The school has an important role in ensuring equal access to opportunities for all children. This includes facilitating equal access to different types of physical activities, in order provide options that are suitable for different interests and capabilities. In this way, children who do not have the opportunity to test new activities outside school can get exposure to activities that may catch their interest during school hours.

In some municipalities in both Sweden (e.g. Norsjö), and Russia (e.g. Petrozavodsk), the schools work together with sports clubs and civil society more broadly to organize opportunities and dedicated days when they are allowed to test different sports. Sometimes this is done after school has finished, but in close connection to the school day. In Petrozavodsk, several sports clubs have opened in or in close vicinity to schools.

6.3 Equal access to opportunities

Example: The Finnish Model

The main objective of the Finnish model is to increase the wellbeing of children and young people. The aim is to enable every child and young person to have a leisure activity in connection with the school day that they enjoy and one that is free of charge.

The Finnish model focuses on hearing children about their wishes for leisure activities. Municipalities decide how they want to provide the activities based on children's and young people's wishes. The activities take place in the schools and in places near the schools. They may be organised by sports clubs, arts and cultural actors, youth organisations, municipal actors and other communities involved in children's and young people's leisure activities.

“Leisure activities have many positive effects on the wellbeing of children and young people. A meaningful leisure activity allows them to experience joy and success and helps them find friends. The positive effects that leisure activities bring carry through into adulthood. The Finnish model for leisure activities is designed to make sure that every child and young person has access to leisure activities no matter what their family background is and where they live.”

Minister of Science and Culture Annika Saarikko.

Pupils and students in years one to nine of comprehensive school as well as students in additional education were the target group for the first stage of the Finnish model. The aim is to anchor the Finnish model as a permanent approach in municipalities. In the longer term, the creation of a legal basis and an examination of the system of central government transfers will be considered. However, the project will commence with an annual call for government grants.

- Further read: [The Finnish model - OKM - Ministry of Education and Culture, Finland \(minedu.fi\)](https://www.minedu.fi)
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Example: The Sports Library

The “Sports library” was a two-year pilot project that is not an integrated part of the municipal Sports and Recreational service. It aimed to enable participation in sports by all children, regardless of background and income levels. By creating a sports library, to which the public donated material, it became possible to borrow equipment and thereby reduce the cost for practicing sports and to exercise. The target group was 6-19-year-old children and youth.

The sports library is now a permanent feature in Luleå municipality, called “Fritidsbanken”. Fritidsbanken is a well-established phenomenon in many Swedish municipalities.

In Nenet there are similar solutions in some municipalities, where you can borrow equipment to try out or more regularly practice a sport.

- Further read: [Alla får låna! Allt är gratis! - Fritidsbanken](#)

7 Conclusion and recommendations

The Barents region presents significant diversity in terms of national contexts as well as inter-regional context, with the Nordic countries sharing similar characteristics compared to Russia. This presents complexity in assessing and comparing physical activity and health among children and youth.

In the analysis of health data in this study, the main conclusion drawn is that health in general - including among children and the youth - is above all determined by social aspects. Variations between socio-economic groups play far greater importance than variations between municipalities, regions or nations. Therefore, the differences displayed between the regions and municipalities in this study primarily reflects a geographically uneven socio-economic structure rather than regional variation as such.

Notwithstanding the above, there are geographical aspects that do affect the variation in health in children and young people in the Barents region. Some of these factors relate to low population density and small and sometimes isolated communities, a cold climate and long dark winters with little or no daylight. In some municipalities the socio-economic conditions also intersect with indigenous minority communities often facing specific challenges. In other municipalities newly arrived immigrants from outside of Europe often faces other challenges.

This study demonstrates that the Barents region is flourishing both with national, regional and local strategies for a better public health, not least so among children and young people. In addition to the strategies there are an almost infinite number of projects or task forces trying to encourage and enable more physical activity among children and youth. The projects include health promotion and health in all policies initiatives, work at raising physical movement and activity in schools, and efforts aimed at equal opportunities and inclusion of all.

Presenting conclusions and recommendations that are generally applicable to all four countries and all the Barents regions remains a challenge. In order to arrive at some final recommendations careful attention has to be paid to how they are contextualised and articulated. By way of draft and preliminary recommendations, the following recommendations are proposed for fostering good physical health amongst the children and youth in the region:

1. **Recognise that health among children and youth is socially determined.** This means that a health-in-all-policy approach is needed, including social welfare, schools and education, health care as well as physical planning. This points to the need for continuing to allow for a smooth multilevel governance in order to foster the necessary collaborations between sectors and levels. It also points to that individual children and parents need to be specifically targeted in this work, focusing on an including all children perspective. Here civil society initiatives have proven to be of outmost importance.
2. **Focusing on the smallest communities.** This means recognising that the intra-regional differences are vast, leaving especially the smallest and most remote communities in difficult situations. Regional as well as municipal strategies might need to pay extra attention to the conditions and opportunities in these communities. Not only are municipal resources often scarce in these communities, in many cases civil society initiatives are unable to reach the remote communities.
3. **Continuous learning,** between regions and through monitoring and evaluation. This study has shown that results, strategies and initiatives vary between communities, regions and nations in the Barents region. A more systematic and detailed comparative approach alongside with the dispersal of initiatives and good example may serve as an instrument for both policy learning and launching tools and projects addressing children and young. It is also critical to monitor and continually evaluate initiatives, to understand what works and what does not.

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