7.4

Extracurricular education as an investment in Estonia's security

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KEY MESSAGES

- **The effective prevention of youth offending requires well-timed interventions, as different offences and age groups have distinct risk periods.** Violence peaks around midday, theft and traffic offences mainly occur after school, and substance-related offences concentrate late in the evening. Prevention strategies must consider when to intervene, which groups to target and which forms of risk behaviour to address.

- **Exclusion in school and in extracurricular education increases the likelihood of risk behaviour among the most vulnerable young people.** Children with special educational needs and those from low-income families are more likely to be excluded both in school and from extracurricular education. This double exclusion means they receive support from neither formal nor non-formal learning environments, which deepens learning difficulties and marginalisation and increases the risk of offending.

- **Adolescents face the highest risk of offending but participate least in extracurricular education.** Among 7–12-year-olds, offences are concentrated during school hours (8:00–14:00), whereas among 13–17-year-olds they occur mainly after school, during the period typically associated with extracurricular activities (14:00–20:00). Despite this, participation in extracurricular education is lowest among 13–17-year-olds, even though their offending patterns are more dispersed, their independence greater and their risk factors more diverse.

INTRODUCTION

The links between education and law-abiding behaviour are often deeper than they appear at first glance. Research shows that reforms in the education system introduced with positive or innovative aims can nonetheless have unintended adverse effects on levels of youth offending. For example, the introduction of a four-day school week has been associated with up to a 20% increase in property offences among pupils in upper secondary school, largely due to the additional unsupervised day without a structured routine.[1] An even more striking example concerns teachers' strikes: during strike periods, property offences committed by young people may rise by as much as 14%.[2]

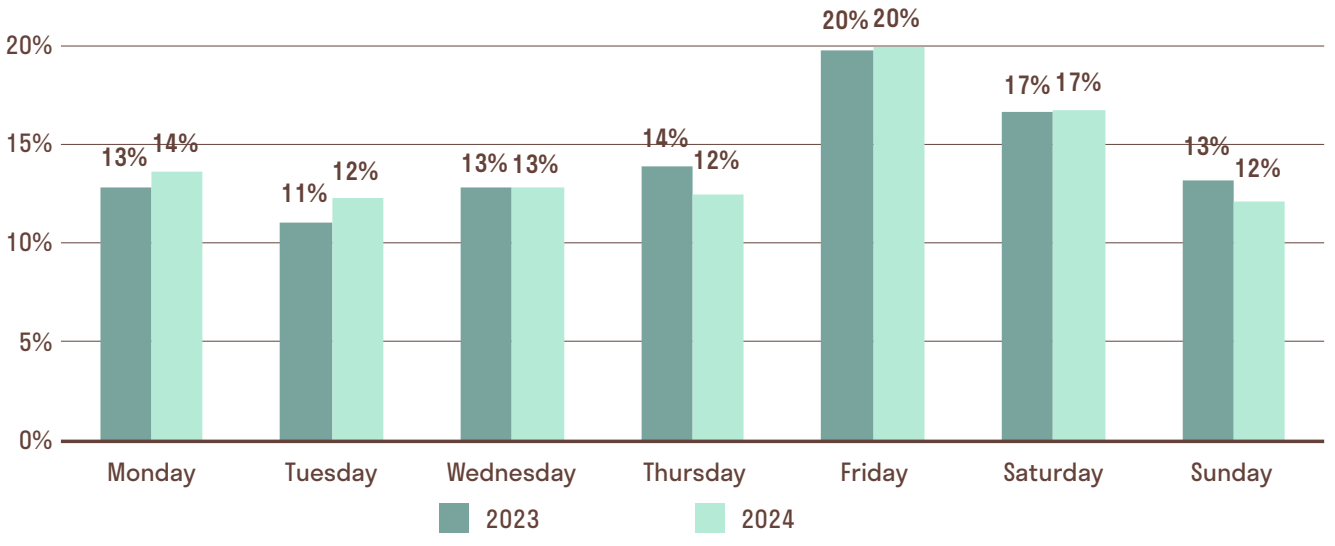
Studies indicate that the early onset of offending substantially increases the risk of persistent criminal behaviour. If a young person has not committed an offence by the age of 15, the likelihood of later involvement in crime is low.[3] Given that young people spend a significant share of their formative years in school, the school-day environment plays a central role in shaping both risk and protective factors. Protective factors function as buffers that mitigate risks and support healthy development, including a supportive school climate, positive peer relationships, a safe physical environment, opportunities for self-expression through extracurricular education, and the development of self-confidence and coping skills. Previous research has shown that offences involving pupils tend to increase during the school year – particularly in autumn and spring – and decline during the summer months.[4]

Data and methodology. From September to the end of May in the 2023 school year, the Estonian Police and Border Guard Board registered 2,701 offences committed by 7–17-year-olds; during the same period in 2024, 2,520 offences were recorded. The offences were mapped across a 24-hour time scale.

The aim of this article is to analyse the temporal distribution of youth offending on school days in order to identify key risk windows – that is, times when the likelihood of offending is highest. It also provides an overview of the availability of extracurricular education in Estonia, as research identifies it as one of the most effective measures for reducing youth offending.

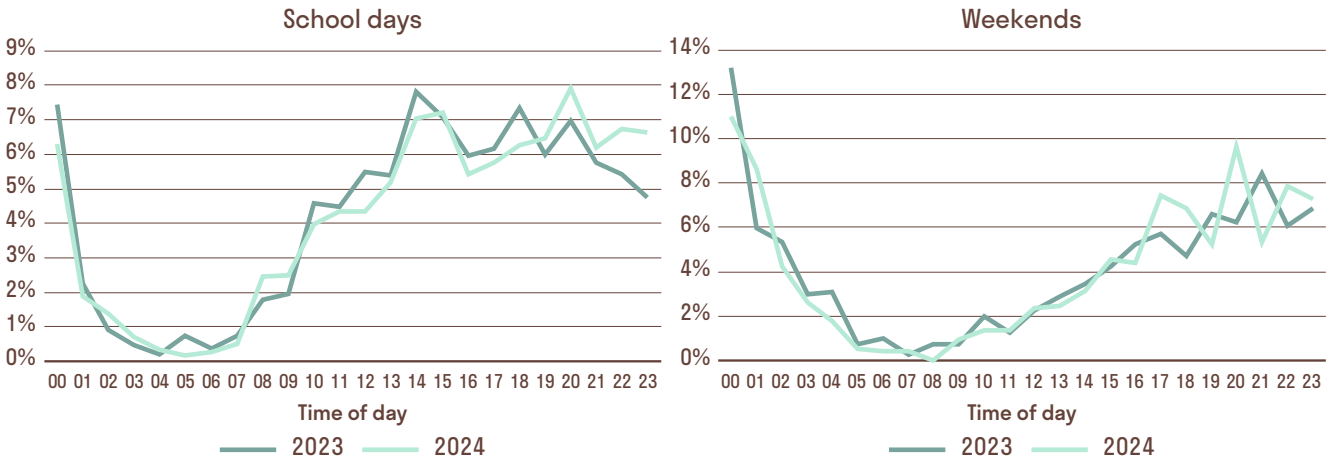
Data and methodology. From September to the end of May in the 2023 school year, the Estonian

Figure 7.4.1 Youth offences by day of the week, school months 2023 and 2024



SOURCE: Estonian Police and Border Guard Board

Figure 7.4.2 Youth offences on school days and weekends, school months 2023 and 2024



SOURCE: Estonian Police and Border Guard Board

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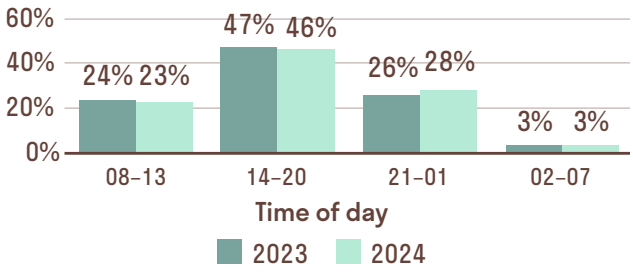
THE RISK WINDOW FOR OFFENDING IN ESTONIA IS LONGER THAN IN OTHER COUNTRIES

Youth offences during the school months of 2023 and 2024 followed a clear pattern: most incidents occurred on school days, particularly on Fridays (20%), when the risk appears to be highest (Figure 7.4.1). Fewer offences were recorded on Tuesdays and Wednesdays. The midweek decline may indicate that the regular structure and routine of the school week help reduce risk on those days.

Figure 7.4.3 Youth offences on school days, school months 2023 and 2024



SOURCE: Estonian Police and Border Guard Board

A comparison of school days and weekends reflects clearly different daily routines (Figure 7.4.2). The data indicate that youth offending is closely linked to daily schedules and levels of supervision. The end of the school day and late-night hours at weekends constitute risk windows that warrant particular attention in prevention efforts and in safeguarding young people. This pattern is consistent with routine activity theory in criminology, which holds that the likelihood of an offence is greatest when a motivated offender encounters a suitable target in the absence of capable guardianship.[5] Such conditions often arise at the end of the school day, when parents are still at work, and during late evening hours outside the home.

Research dating back to the 1940s has shown that youth offending is not concentrated at weekends but occurs more frequently on weekdays, particularly after the end of the school day.[6] Numerous studies have confirmed that both offending and victimisation among young people peak immediately after the final school lesson.[7] The most frequently cited risk window falls between 14:00 and 18:00 or 15:00 and 18:00 – precisely the time when school has ended but parents are still

at work.[8] Estonian data, however, point to an even longer risk window. Figure 7.4.3 shows that the main risk period for youth offending in Estonia on school days extends from 14:00 to 20:00. This may partly be explained by family structure and supervision-related factors. In 2024, single-parent households accounted on average for 12.7% of households with children in the European Union, whereas in Estonia the figure was 36.7% – the highest in the EU.[9] Estonia was followed by Lithuania (29.5%), Latvia (24.9%) and Denmark (23.2%). In 2023, one in three single parents in Estonia lived at risk of poverty, and one in four single-parent households experienced material deprivation, meaning an inability to afford several goods and services regarded as standard in society.[10]

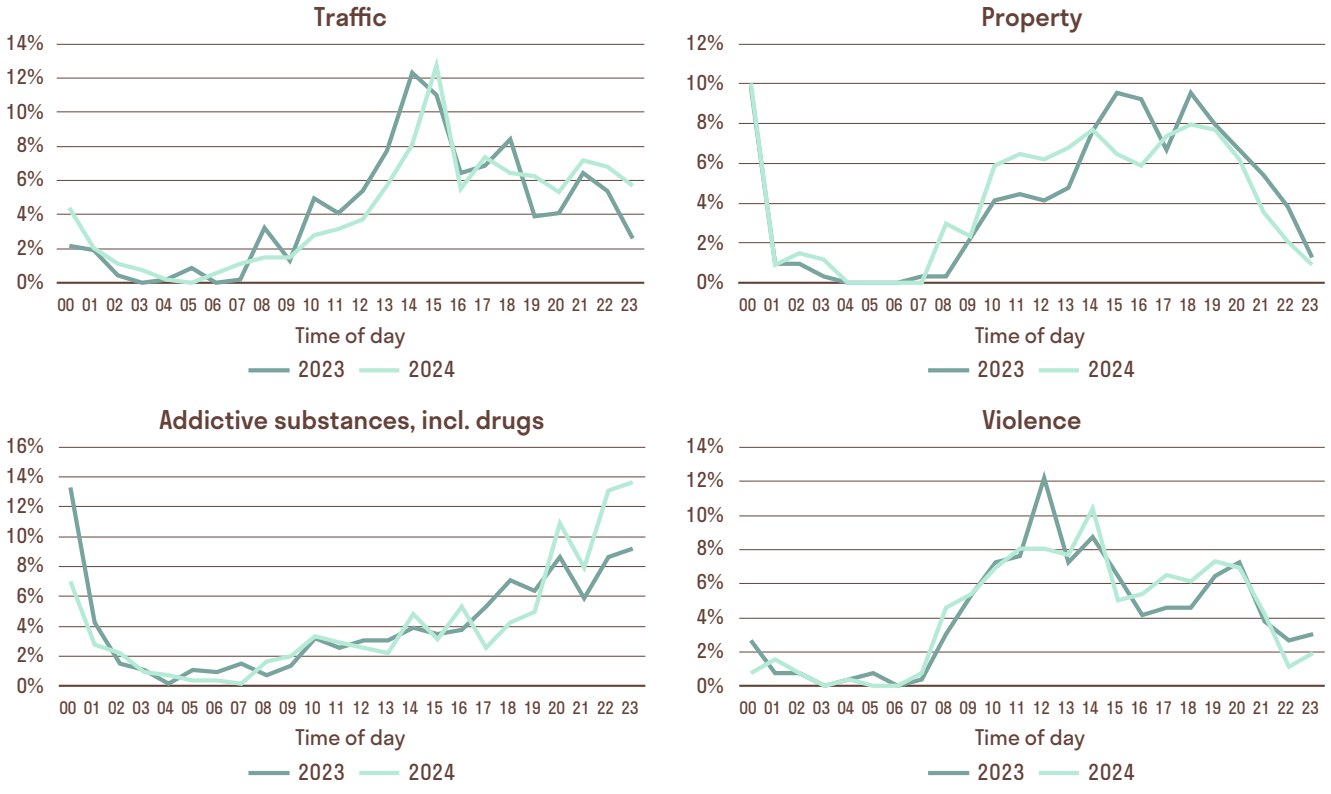
Many parents, including single parents, work long hours or shifts, leaving young people unsupervised more often in the late afternoon and evening. Similar patterns have been observed internationally: young people growing up in low-income single-parent households or in families affected by violence or substance misuse are significantly more likely to come to the attention of the justice system.[11]

Approximately half of all offences committed on school days occur within the six-hour period between 14:00 and 20:00 (Figure 7.4.3). Offences are particularly concentrated between 14:00 and 18:00, when around one third of the day's total offences are recorded.

PEAK TIMES IN YOUTH OFFENDING VARY BY OFFENCE TYPE: DAYTIME VIOLENCE, NIGHT-TIME SUBSTANCE OFFENCES, AFTER-SCHOOL THEFT AND TRAFFIC OFFENCES

We next examine which types of offences occur at what time of day. Our analysis (Figure 7.4.4) shows that, on school days, each category of offence has a characteristic peak period – a time

Figure 7.4.4 Youth offences by time of day on school days, by type of offence



SOURCE: Estonian Police and Border Guard Board

interval when the risk of that specific offence is highest. Traffic offences peak between 13:00 and 15:00, accounting for nearly 14% of all such incidents; half of all daily traffic offences occur between 13:00 and 18:00. Property offences are concentrated between 14:00 and 20:00, with a peak immediately after the end of the school day. Substance-related offences differ markedly: they occur predominantly late in the evening, between 21:00 and 00:00, when nearly half of all such incidents are recorded. Violent offences are most frequent between 11:00 and 14:00, coinciding with lunch breaks and, in some cases, the end of the school day, when supervision may be weaker and tensions between young people intensify.

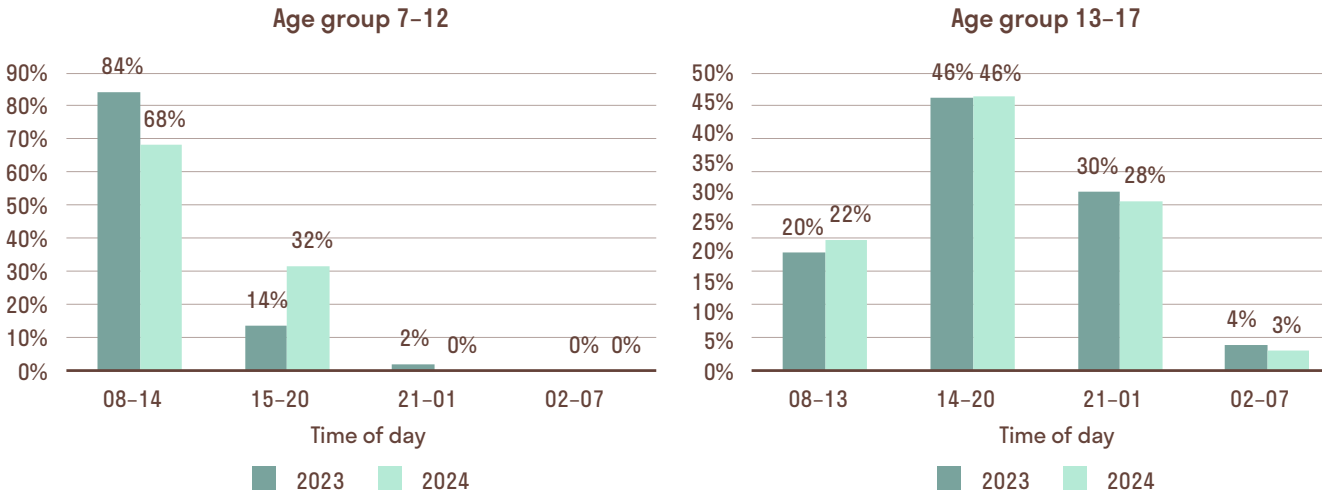
Different types of youth offending also tend to cluster on specific days of the week. The highest number of offences occurs on Fridays, when young people's independence and presence in public space increase. Substance-related offences clearly peak at the start of the weekend: nearly half of all such incidents are recorded on Fridays and Saturdays, suggesting an interaction between leisure time and reduced supervision. Violent incidents, by contrast, are concentrated in the middle of the school week – Wednesday to Friday – pointing to the possible accumulation of tensions in the school environment.

The temporal pattern of offending shifts with age: younger children offend mainly during the school day, whereas adolescents' offences are spread across the afternoon and evening.

Figure 7.4.5 highlights a marked difference between the two age groups in the distribution of offences on school days. Among 7–12-year-olds, offences are clearly concentrated during school hours (8:00–14:00): in 2023, as many as 84% of incidents occurred during this period, and in 2024 slightly fewer, at 68%. This suggests that problems arise primarily within the school environment, where peer conflicts, behavioural difficulties and insufficient supervision may play a role. After the end of the school day, the number of offences declines sharply, with only isolated cases occurring in the evening and at night.

Among 13–17-year-olds, offences on school days are distributed much more evenly than among younger children. Although 14:00–20:00 remains the main risk window (46% of incidents in both years), a substantial share of offences also occur late in the evening, between 21:00 and 01:00. In 2023, 30% of all incidents occurred during this period, and in 2024, 28%. This reflects greater independence, more active social lives and often limited supervision after the end of the school day.

Figure 7.4.5 Youth offences by time of day on school days, by age group



SOURCE: Estonian Police and Border Guard Board

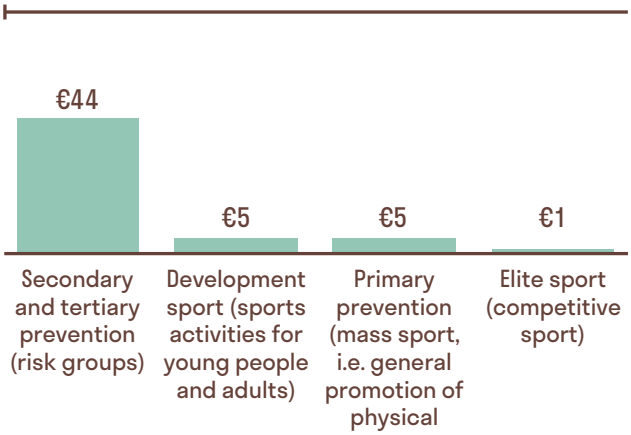
Age-related differences in risk behaviour indicate that preventing youth offending cannot be confined to the school day alone. Data from the United Kingdom show that nine out of ten young people in custody have some form of special educational need, most commonly emotional and behavioural difficulties and dyslexia.[12] Many of these young people do not experience a single success during the school day, which in turn deepens exclusion and behavioural problems. Non-formal education, such as extracurricular education, may therefore serve as a crucial support mechanism. It offers young people opportunities to experience belonging, self-development and positive social relationships outside the structures of formal education, helping prevent escalating risk behaviour and marginalisation.[13] Estonian studies indicate that not all youth workers are prepared or equipped to include young people with behavioural difficulties or special educational needs.[14] As a result, these young people may face double exclusion – first within the formal education system, where they do not receive adequate support, and then in extracurricular education, where they are not always adequately included.

INEQUALITIES IN EXTRACURRICULAR EDUCATION IN ESTONIA MAY INCREASE YOUTH RISK BEHAVIOUR AND OFFENDING

Criminological research indicates that non-formal education, including extracurricular education and activities, is one of the most effective preventive measures against youth risk behaviour.[15] This is particularly important for older adolescents, whose daily lives are marked by increasing independence, reduced adult supervision and more pronounced existential concerns. Miller's five-year study of 21 youth gangs found that group-based offending is often driven by existential factors, notably boredom arising from a sense that life is empty, aimless and without meaning.[16] According to Miller, society must reconsider how it relates to young people and recognise the harmful and potentially destructive effects of existential boredom.[17] This applies to both risk behaviour and mental health.

High-quality extracurricular education that genuinely engages young people can reduce youth offending through two main mechanisms. First, it provides a safe setting and supervision during the critical afternoon hours when risk behaviour tends to increase. Second, it supports the development of values and social skills, strengthening internal motivation and a sense of belonging – effects that accumulate over time.[18] For example, each

Figure 7.4.6 Social return on investment in youth sport



SOURCE: Gosselin et al. 2020[19]

NOTE. In public health, primary prevention aims to prevent the onset of disease. Secondary prevention involves early detection and treatment to avoid deterioration, while tertiary prevention seeks to reduce the consequences of an existing condition.

Data and methodology. Extracurricular education refers to structured, long-term learning provided by licensed extracurricular schools registered in the Estonian Education Information System. Extracurricular activities are less formal and take place in various settings, such as schools and youth centres. As comprehensive national data are available only for extracurricular education, extracurricular activities are not included in this analysis. Statistics Estonia analysed participation in extracurricular schools among 7–19-year-olds in 2020–2023, examining participants' background characteristics, including parental income and education, place of residence and school dropout. On average, 45% of children in this age group (approximately 84,269) participated annually in extracurricular schools, while 55% (approximately 102,962) did not.

euro invested in sports activities for at-risk young people has been estimated to generate an average long-term saving of 44 euros for society (Figure 7.4.6). This impact is particularly significant when activities target risk groups – young people from disadvantaged socio-economic backgrounds, those with special educational needs, or those experiencing mental or physical health difficulties.

Participation in extracurricular education is more common among younger children, although the need for prevention is greatest among adolescents (Table 7.4.1). The age groups with the lowest participation rates are also those whose offending is more widely distributed across time and often more serious. Participation declines sharply from the age of 13: only 47% of 13–15-year-olds and 25% of 16–19-year-olds take part in extracurricular education. At the same time, data from the Estonian Police and Border Guard Board show that offences committed by 13–17-year-olds cluster in the critical afternoon and evening hours (14:00–20:00), when this age group is often unsupervised. This points to a clear policy implication: the provision and accessibility of extracurricular education should focus more strongly on adolescents, who need support precisely at the times when they are most vulnerable to risk behaviour.

SOCIO-ECONOMIC AND REGIONAL INEQUALITIES IN EXTRACURRICULAR EDUCATION

A 2019 study from the United Kingdom shows that the school a pupil attends, the region in which they grow up and their family's socio-economic background largely determine which extracurricular opportunities are available outside the classroom.[20] What is the situation in Estonia?

Among children whose parents have a high monthly net income (over 1,800 euros for mothers and over 2,100 euros for fathers), nearly

Table 7.4.1 Participation in extracurricular schools by age group, 2020–2023

Participation in extracurricular schools	Age			
	7–9	10–12	13–15	16–19
Participated	55%	56%	47%	25%
Did not participate	45%	44%	53%	75%

SOURCE: Statistics Estonia

Table 7.4.2 Parents' monthly net income and child participation in extracurricular schools, 2020–2023

	Mother				Father			
Participation in extracurricular schools, 2020–2023	59%	47%	40%	37%	60%	48%	43%	40%
Net income per month	over €1,820	€1,283–€1,820	€837–€1,283	under €837	over €2,141	€1,289–€2,141	€630–€1,289	under €630

SOURCE: Statistics Estonia

60% participate in extracurricular education. In contrast, in low-income families (below 837 euros for mothers and below 630 euros for fathers), participation falls to 37–40% (Table 7.4.2). When children from lower-income families are excluded from extracurricular education, they are more likely to spend time unsupervised and to engage in risk behaviour.

Extracurricular schools are located mainly in county centres, particularly Tallinn, Tartu and Pärnu, which may limit access for children and young people in peripheral areas (Table 7.4.3). While more than half of children in cities and small towns participate in extracurricular education (51% and 52%, respectively), only 31% of children living in rural areas do so. This indicates substantial access barriers in rural areas, whether due to distance, limited transport or a narrower range of activities. Rural areas also tend to have lower average incomes than cities, which directly constrains participation in extracurricular schools.

School dropout is more common among those who do not participate in extracurricular education. Table 7.4.4 shows that children from low-income families participate less often in extracurricular education and are more likely to leave school early – both recognised risk factors for offending. For example, among children whose mother's monthly income is below 837 euros and who have not participated in extracurricular education, school dropout is three times more frequent than among children whose mother has the same income level but whose child has participated in extracurricular education for at least four years (3% vs. 1%). The same pattern is observed for fathers. It should be emphasised that this does not imply a causal relationship.

Table 7.4.3 Participation rates in extracurricular education by county, 2020–2023

County													
Harju	Tartu	Pärnu	Võru	Saare	Hiiu	Järva	Viljandi	Lääne	Ida-Viru	Rapla	Põlva	Jõgeva	Valga
53%	47%	43%	43%	40%	37%	37%	36%	36%	32%	32%	30%	27%	21%

SOURCE: Statistics Estonia

Table 7.4.4 Years of participation in extracurricular schools, parental income and school dropout, 2023

	Mother							
School dropout (2023)	0.6%	0.1%	0.7%	0.1%	1.0%	0.1%	3.0%	1.0%
Years in extracurricular schools (2020–2023)	0	4	0	4	0	4	0	4
Parent's net income	over €1,820		€1,283–1,820		€630–1,289		under €630	
	Father							
School dropout (2023)	1.0%	0.2%	0.6%	0.1%	1.1%	0.1%	2.0%	0.4%
Years in extracurricular schools (2020–2023)	0	4	0	4	0	4	0	4
Parent's net income	over €2,141		€1,289–2,141		€630–1,289		under €630	

SOURCE: Statistics Estonia

SUMMARY

A young person's life rests on four main pillars: family, leisure time, peers and school. While the state cannot intervene directly in family life, it can influence the other three through school and extracurricular education. In Estonia, greater attention should be directed towards adolescents. Adolescence is a developmental stage in which young people seek belonging and role models, and peer influence is particularly strong. The more young people find their place in extracurricular education and organised activities rather than in loosely structured peer groups or unregulated online environments, the better the outcomes for both them and society. At the same time, marked socio-economic inequalities persist in Estonia: participation in extracurricular education is significantly lower among young people from low-income families and those living in rural areas.

REFLECTION

Madis Kallas

During the school day, children have structured activities and adult supervision. Immediately after the school day ends, however, unstructured time increases the risk of drifting into harmful behaviour. Young people want to spend time with friends and seek shared ways to dispel boredom. The need for belonging and the desire to prove oneself become particularly salient. When these needs are met through sport or other extracurricular activities under adult guidance and in an appropriate setting, the outcomes are constructive. When left unsupervised, the result is often behaviour typical of loosely organised peer groups – from tobacco and alcohol use or inappropriate language to theft and vandalism in public spaces and online. This is evident in the statistics and, regrettably, in everyday life in larger cities.

Every child can find an activity that genuinely interests them. If we want to guide young people towards extracurricular education, we must support the development of intrinsic motivation. Although participation may begin at the urging of parents or friends, sustained engagement and genuine achievement arise only when motivation comes from within the young person. Extracurricular activities provide belonging and opportunities for self-realisation, improve concentration and strengthen the capacity to maintain routines. How can extracurricular education be made more accessible and more young people guided from unstructured peer groups into organised teams? I propose three measures.

Transport and mobility support must form an integral part of financing extracurricular education. A realistic objective would be to ensure access to at least one activity costing 20–50 euros per month for every child within their county. It is not feasible to provide a broad range of activities in every small settlement or rural school, but county centres can offer such diversity. Public transport and targeted mobility subsidies are essential, and ensuring access from all parts of a county requires deliberate policy effort.

A further concern relates to participation in performances and competitions. Regular competitions, performances and camps are integral to extracurricular education, even where there is no ambition to reach elite level. Young people need opportunities to present and compare their skills, build networks and broaden their horizons. The greater the distance from major centres, the higher the costs for families. Socio-economic disparities further intensify this inequality.

Children should be confidently guided towards suitable activities. In addition to parents, teachers and instructors should be able to direct children towards appropriate activities and recommend changes where necessary if a current activity does not suit the child or sustain interest. In a per-capita funding system, changing activities requires resolve, but such flexibility is essential because the child's well-being and development are at stake. If a young person would

thrive in a team setting, individual athletics training may not be the most suitable starting point. Conversely, if team ball sports do not align with a child's strengths, running, swimming or cycling may be more appropriate.

When an activity is ill-suited, boredom and withdrawal often follow quickly, returning the young person to a situation in which they are disengaged during their free time. In many municipalities, suitable options already exist within the range of available extracurricular activities. Adults surrounding the child have a responsibility to guide them accordingly.

Higher pay to properly value people working in extracurricular education. Estonia has created increasingly favourable conditions for pursuing diverse interests. Music schools, stadiums, sports halls and other facilities provide a strong foundation for a wide range of activities. The main challenge now lies in the shortage of qualified and motivated instructors. Infrastructure has improved, but remuneration remains inadequate.

Time spent after school and at weekends is as significant for a child as time spent in school. During these hours, a skilled instructor can cultivate belonging, provide opportunities for self-development and reinforce constructive values. Extracurricular education is not merely a way of filling leisure time; it is a direct investment in young people's development and sense of belonging, and ultimately in a safer present and future for the state.

REFERENCES

1. S. Fischer, D. Argyle, Juvenile crime and the four-day school week. – *Economics of Education Review* 64, 2018.
2. B. A. Jacob, L. Lefgren, Are idle hands the devil's workshop? Incapacitation, concentration, and juvenile crime. – *American Economic Review* 93 (5), 2003.
3. M. N. Natsuaki, X. Ge, E. Wenk, Continuity and changes in the developmental trajectories of criminal career: Examining the roles of timing of first arrest and high school graduation. – *Journal of Youth and Adolescence* 37 (4), 2008.
4. T. Jones, E. Karger, *School and crime*. CESifo Working Paper 10702, 2023.
5. L. Cohen, M. Felson, Social change and crime rate trends: A routine activity approach. – *American Sociological Review* 44, 1979.
6. W. Kvaraceus, *Juvenile delinquency and the school* (World Book Company, 1945).
7. D. Soulé, D. Gottfredson, E. Bauer, It's 3 p.m. Do you know where your child is? A study on the timing of juvenile victimization and delinquency. – *Justice Quarterly* 25 (4), 2008.
8. H. N. Snyder, M. Sickmund, *Juvenile offenders and victims: 2006 national report* (Office of Juvenile Justice and Delinquency Prevention, 2006).
9. Eurostat, *Household composition statistics* (2025).
10. 84 000 Eesti inimest tunneb ilmajäetust. Mida see tähendab? – Statistikaamet. Blog, 14.02.2024.
11. N. Pyle, A. Flower, J. Williams, A. M. Fall, Social risk factors of institutionalized juvenile offenders: A systematic review. – *Adolescent Research Review* 5, 2020.
12. Office for National Statistics, *The education background of looked-after children who interact with the criminal justice system* (2022).
13. J. L. Mahoney, H. Lord, E. Carryl, An ecological analysis of after-school program participation and the development of academic performance and motivational attributes for disadvantaged children. – *Child Development* 76, 2005.
14. S. Haugas, E. Kendrali, *Noortevaldkonna tulevikustsenaariumid* (Mõttekoda Praxis, 2022).
15. J. A. Fox, S. A. Newman, *After-school crime or after-school programs: Tuning in to the prime time for violent juvenile crime and implications for national policy. A report to the United States Attorney General* (Fight Crime: Invest in Kids, 1997).
16. J. Miller, Killing time: The role of boredom in Glasgow gangs. – *British Journal of Criminology* 64 (6), 2024.
17. J. Miller, Killing time: The role of boredom in Glasgow gangs. – *British Journal of Criminology* 64 (6), 2024, 1459.
18. S. A. Newman, J. A. Fox, E. Flynn, *America's after-school choice: The prime time for juvenile crime, or youth enrichment and achievement* (Fight Crime: Invest in Kids, 2000).
19. V. Gosselin, D. Boccanfuso, S. Laberge, Social return on investment (SROI) method to evaluate physical activity and sport interventions: A systematic review. – *International Journal of Behavioral Nutrition and Physical Activity* 17, 2020.
20. M. Donnelly, P. Lažetić, A. Sandoval-Hernandez, K. Kumar, S. Whewall, *An unequal playing field: Extra-curricular activities, soft skills and social mobility* (Social Mobility Commission, 2019).