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*Published in:*  
Education Sciences

*DOI:*  
[10.3390/educsci14010043](https://doi.org/10.3390/educsci14010043)

Published: 01/01/2024

*Document Version*  
Final published version

*Document License*  
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*Please cite the original version:*

Hofman-Bergholm, M. (2024). Nature-Based Education for Facilitating Resilience and Well-Being among Youth—A Nordic Perspective. *Education Sciences*, 14(1), Article 43. <https://doi.org/10.3390/educsci14010043>

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# Nature-Based Education for Facilitating Resilience and Well-Being among Youth—A Nordic Perspective

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**Abstract:** This article provides a brief overview of current research regarding well-being among youth to find factors that may have influenced an increase in mental health problems among children and young people and to clarify the current state of knowledge. Research highlighting protective factors that seem to promote resilience is put forward, which includes factors regarding interactions between youth and their families, friends and education providers. An insight into the development of the Finnish education system is also provided in the search for factors that affect students learning and engagement in school. To provide a possible pathway forward, the article will highlight some existing studies on resilience building from nature-based activities, indicating a possibility to help youth and children with mental illness or problematic school absences develop socio-emotional skills, confidence in themselves and a belief in the future.

**Keywords:** well-being; youth; resilience; nature-based activities; nature-based interventions



**Citation:** Hofman-Bergholm, M. Nature-Based Education for Facilitating Resilience and Well-Being among Youth—A Nordic Perspective. *Educ. Sci.* **2024**, *14*, 43. <https://doi.org/10.3390/educsci14010043>

Academic Editor: Xinqiao Liu

Received: 12 November 2023

Revised: 22 December 2023

Accepted: 28 December 2023

Published: 29 December 2023



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## 1. Introduction

During recent decades, our world has changed radically, and we now live in an era of an abundance of information and contacts. Rapid technological development and the development of social media have shrunk the world in an incredible way. You can join various forums and communities and even reach the most remote corners of the globe with a smartphone. The standard of living has never before been so high in many Western countries, but at the same time, the first quarter of the 21st century has been turbulent in many ways and is characterized by an increasingly harsh social climate. Public debate has hardened, and polarization has increased. The world and everyday life have changed significantly in a short time [1–4].

These are aspects that also affect the everyday lives of our young people and, thus, their opportunities for well-being. The range of choices for young people has never been so wide as today, but this seems to come with a price, as our individual choices and actions are portrayed as crucial to our future. Many young people feel that it has become more difficult to make the right choices in life, and research shows that young adults are increasingly worried about their future. Many youths feel that there are too many possibilities and too many decisions that should be made, and they feel pressure that too much is required of them [5].

According to several studies, the mental well-being of our young people is not very good. In the Nordic countries and the whole Western world, more and more young people, especially girls, are showing symptoms of mental health problems, and several reports reveal that mental illness is increasing alarmingly fast among adults, youth and children. Also, in Finland, the mental health of schoolchildren is deteriorating, and the proportion of young people with problematic school absenteeism is increasing. This is a bit of an eye-opener in a country considered by many to have the best education system in the world. It also seems like a big part of the Finnish youth lacks faith in the future. Purpose

and meaning of life, hope for the future and quality of life are all parameters that have deteriorated, according to surveys, while anxiety and depression are increasing. The same trend is visible throughout the Nordic countries and the whole Western world. That indicates that it is global stressors that cause this negative trend, not local stressors [6–13].

In this review, it is a conscious choice to use a couple of quotes from both Nordic students and Finnish teachers. The quotes are not in any way representative of all teachers and youth, but they nuance the theoretical knowledge with practical, subjective knowledge and provide an increased understanding of an individual teacher's or young person's subjective experience of situations, which enriches the review in a qualitative way. The following quote is a child's voice from the qualitative report "The way back—from school absence to school attendance" [14]:

"I'm sorry I want to be like the others. Feeling bad in my stomach and chest. But I can't stand it. I don't want any more". [14] (p. 11)

This is a heartrending quote from a child that unlikely leaves anyone untouched. This quote really describes how bad it is when you feel bad about being at school, and it gives an indication of how deep these feelings go and an understanding of the fact that there is no easy solution. Finnish researchers have interviewed teachers [5] to obtain a picture of their interpretations of the situation of children and young people and of society more generally. For example, inequality and poverty in families with children arouse strong feelings of concern among the interviewed teachers. Their overview [5] reveals that there are teachers in Finland who believe that primary school does not sufficiently support children and young people who are mentally ill or who struggle with learning difficulties. The students' unequal conditions for learning exacerbate the problems. Also, societal or socio-economic problems exist, and to some, are even visible, as this teacher reveals in a research interview:

"Children are pretty much abandoned, and they have a lot of problems getting by in everyday life. This is easily seen in the consumption of food on Mondays. And I have tried that Friday would not be porridge day, so that the children would have their stomachs full, but it has not yet come through". [5]

To find solutions for an improvement in well-being among children and youth, we first and foremost need to find out why children and adolescents are not feeling well. What factors have triggered this development, and what can be done to reverse the situation?

As traditional literature reviews seek to provide an overview of existing research and contextualize a foundation for new studies, the present study is performed as a general literature review with the aim of providing an overview of the most important and critical aspects of current knowledge on the subject. The purpose of the review is to recognize factors that affect well-being among youth and children and to contextualize a new approach to preventing unhealthiness.

Mental health is a resource, a part of health and important for the well-being and functioning of individuals. Well-being and mental health promotion aim to increase the number of reinforcing and protective factors.

This review has adopted a Nordic perspective first and foremost regarding the educational system, as the educational systems are very different in different countries and each has a unique historical development. However, according to the literature in the review, most of the identified societal problems that have implications for well-being among youth are not local but global.

## 2. Why Is Young People's Well-Being Deteriorating?

As we now actually live in a time surrounded by abundance [15], reading reports on the increasing problems with mental illness among children and youth raises many questions. As the well-being of youth is reported to decrease worldwide, according to Marselle et al. [16], who argue that mental illness is now considered to be the most common non-communicable disease in both America and Europe, it appears like there must be at least one global stressor. But is it due to an individualized society and societal factors, or

is there a possibility that something called “nature-deficit disorder”, meaning negative effects appear when children do not spend enough time in nature [17], has become real? The “nature-deficit disorder” concept is characterized by both mental health and physical symptoms, including anxiety, depression and ADHD, that are caused or made worse by a lack of time spent outdoors, according to Richard Louv [17]. Louv coined the concept in the early 2000s, at a time when the concept felt somewhat excessive, but as the problems have escalated, it must be considered to contain some possible factors that are causing the negative trend in mental health among youth and children today.

According to several studies, it is especially in high-income countries such as the United Kingdom, the U.S., Finland, Norway and Sweden that adolescent mental well-being has deteriorated significantly since the beginning of the 21st century [11,18]. Interesting research [19] to put in relation to this claims that the IQ gains of the 20th century have faltered, and data from Scandinavia suggest that there has been an IQ decline in some of the advanced nations, which began in about 1995. Research suggests that the factors that caused the earlier gains in IQ in Scandinavia exhausted their potency in the mid-1990s. In these countries, the educational system is characterized as more advanced, and one hypothesis suggests that at a certain point, a country’s education might reach a limit in terms of producing more graduates with mental abilities that give high scores on IQ tests. This means that more-developed welfare states that provide good education for all have reached all the different socioeconomic classes, which makes everyone more equal and lessens class divisions [19].

The Public Health Authority in Sweden has investigated [20] which factors may have influenced the increase in mental illness among children and young people in Sweden based on different areas: factors within a family and the socio-economic conditions of a family, school and learning, and overall societal changes.

### 2.1. Societal Factors

At the same time, as IQs seem to have decreased in some welfare countries and there is an identified trend of declining psychological well-being, there are also indications of increasing school stress that seem to be particularly evident in high-income countries. According to research, this could be linked to both changes in schools and the surrounding society [9,18,21].

As research indicates that both mental well-being among youth and IQs have deteriorated since the mid-1990s in Scandinavia, it appears interesting to have a look at what happened in society in Scandinavia around the time when traces of the decline emerged. In the beginning of the 1990s, a deep recession hit large parts of the Western world, with the deepest parts in about 1991–1993, causing a significant proportion of bankruptcies, and this led to large amounts of unemployment in many countries [22–24].

There are those who argue that the recession traumatized the most vulnerable part of the population and probably caused lifelong damage for a generation [25]. This has not been the focus of any comprehensive study to consolidate in Finland, but Kim and Hagquist [22] published an article with results from repeated cross-sectional data which were collected between 1988 and 2008 in Sweden. Their study examined if economic factors at the societal level (municipality unemployment rate) and at the individual level (worry about family finances) could explain a secular trend in mental health problems. Kim and Hagquist’s study [22] indicated that the “individual-level predictor (worry about family finances) significantly explained the increasing rates of adolescents’ psychosomatic problems” [22] (p. 101). And this was particularly found to be the case during the severe recession in the mid-1990s in Sweden, which was characterized by high unemployment rates.

This indicates that it might be possible that the deep and widespread recession may have caused such stress to some young people in the West that their mental capacity was later insufficient to cope adequately with, for example, IQ tests.

As the recession gradually turned and both Finland and Sweden were just emerging from the deep recession that had hit the country in the early 1990s, the internet became

widely available, and a more general use of the internet entered Europe and Scandinavia in the early 1990s. In 1993, the first website was published in Sweden, and in 1996, an internet package became the Christmas present of the year in Sweden [26]. In Finland, internet connections to be used via the wired telephone network began to be sold to homes in 1993 [23,27].

The entire 1990s were characterized by unrest and war in many parts of Europe and the Middle East, and the internet allowed news to spread faster than ever before. The deep recession turned gradually into an enormous economic IT boom, and from 1996 to 2000, the US Nasdaq index rose by over 700%. Large multinational companies accounted for about half of all world trade in the 1990s, leading to a boom at the end of the decade. But this was not to last, and in spring 2000, the IT bubble suddenly burst, leading to a new financial crisis. The situation eventually stabilized, but in the fall of 2008, the internal banking market collapsed, and the financial institution Lehman Brothers went bankrupt. This was the beginning of a new global financial crisis that spread across the world. World history has been marked by recurring economic crises. Almost every decade has alternated between booms and recession [24].

Another characteristic of the 1990s, which may also have had an impact on young people's well-being, is that it is when the sharp increase in school shootings began [28,29], and in the beginning of the 21st century, the world was stunned by the attacks on the World Trade Center, with subsequent unrest, and after that, news was broadcasted like never before through the internet. Then, 2007 saw the launch of the first smartphone, and a few years later, the market had exploded, and screens were everywhere [30].

The range of choices for young people has never been so wide as today, but this seems to come with a price. Various assessments of well-being reveal that increased choice and increased affluence have been accompanied by a decrease in well-being [31]. A Czech study conducted by psychologists from Masaryk University over a five-year period argues that it is the almost limitless choices youths face today that seem to make them both uncertain and confused. Adolescents today are often unfairly accused of laziness or lacking responsibility when in fact might be a struggle to choose right [32].

Modern society has given its members a new kind of freedom of choice, as we can now actually choose who to be [33]. Identity is nowadays much less something that people "inherit" than before, even though we are all brought into this world with baggage from our ancestral past. This is due to the fact that most of us have the ability to transcend, for example, inherited social and economic class [33]. This possibility is, in its foundation, something positive: we have the possibility to choose another pathway in our lives. But erasing your cultural heritage might have other costs. In a brief report from the UK National Commission for UNESCO [34], it is highlighted that neither heritage nor culture are recognized to any great extent as important elements for mental health and well-being, but according to the key insights of the report, "Heritage is inextricably linked to mental health and well-being, often generating positive emotions and a sense of connection. . ." [34] (p. 1). This highlights the importance of knowing your heritage, but it is also important to remember and notice that heritage can also, in some cases, trigger negative memories if we have been exposed to any kind of trauma [34].

"Heritage contributes to individuals' and communities' collective memory, sense of belonging, cultural identity, and social cohesion—all elements strongly interconnected with mental health and well-being. These aspects can promote a positive sense of self, social support, solidarity/unity, and resilience, but also adverse feelings and a sense of oppression". [34] (p. 1)

The development of society in the 1990s, with the technological revolution as a major driving force, may have had a negative effect on socializing abilities and on the connection or sense of belonging that knowing your cultural heritage gives. But the technological revolution and the rise of the internet might also have affected other factors that determine both our learning and well-being.



## 2.2. Internet, Social Media, Well-Being and Physical Activity—How Are They Connected?

One interesting question is: why the measures indicate a decline in IQ? The suggestion that education has reached some kind of peak is acceptable reasoning, but this does not explain a decline. And how is the decline in IQ connected to the decrease in well-being among youth? One interpretation is that poorer mental well-being affects a person's ability to carry out such tests as an IQ test, but we have yet another worrying parameter which, through research, has been shown to affect both our performance and our well-being, namely physical activity [35–41]. There is a constant stream of new worrying reports of a drastic decline in children and young people's physical activity [42–44] and an increase in sedentary behavior among young people, as argued by Louv [17] in the early 2000s. The WHO released the "Global status report on physical activity" [43] in October 2022, revealing that today, more than 80% of adolescents and 27% of adults do not meet the WHO's recommended levels of physical activity. So the first question emerging from this is, why are we not physically active anymore?

A British study shows that young people aged 13 to 16 years old show poorer well-being as a result of spending a lot of time on social media. And this applies mainly to girls. The reasons include cyberbullying, poorer sleep and reduced physical activity [45].

There are also studies showing a significant positive correlation between depression or anxiety and the use of smartphones or similar technological devices [46–48]. Twenge [49] refers to large studies that have found a correlation between lower well-being among adolescents and more frequent use of digital media, but the correlation is not easy to determine in all cases regarding which factor is the cause and which is the effect. Some studies point out that it might be a poorer well-being that leads to more frequent use of digital media, while other studies find that it might be a more frequent use of digital media that leads to a poorer well-being. However, it seems certain that there is a relationship between the two factors. According to Twenge [49] and Twenge et al. [50], there are some experimental and longitudinal studies revealing that at least some of the link between the factors is due to the fact that digital media use causes lower well-being. Some possible effects of more frequent digital media use listed in Twenge's article [49] include sleep disruption, a possible displacement of social interaction in real life and a reduction in physical activity. Social comparison and cyberbullying are also listed as possible negative effects of the more frequent use of digital media.

In a study that followed thousands of teenagers over a five-year period to investigate the use of screens and their impact on physical and mental health, it was shown that more screen time increased mental health problems and caused a decrease in physical activity. During a follow-up study, the researchers looked at what happened after they asked participants to trade one hour of screen time for one hour of physical activity. Their experiment showed that exchanging one hour of social media use for one hour of exercise was associated with improved mental health, especially among girls [51].

A research review [52] indicates that multi-tasking with mobile phones distracts school students' learning in different ways, i.e., concentration and working memory are deteriorated from multi-tasking. Ward, Duke, Gneezy and Bos [53] also found, through an experimental study, that the mere presence of an owner's smartphone can adversely affect his or her cognitive capacity and available working memory capacity. Something that many researchers now seem to agree on is the need to be careful with mobile phone use in classrooms and during lectures, as evidence indicates that a phone's mere presence affects a students' cognitive capacity and can make it more difficult to concentrate long enough to create long-term memories that are needed for us to remember and learn things [52,54,55].

In her book *iGen*, Twenge [56] focuses on the impact of smartphones on the generation she calls *iGen*, i.e., the first generation that grew up with smartphones naturally present in everyday life. Twenge claims that the *iGen* generation differs from previous generations on several levels. This generation spends more time on social media than hanging out with friends, which is a change that Twenge [56] says may explain why people in this generation are increasingly feeling depressed and lonely. Doom et al. [57] published a review covering

the literature on resilience factors that promote positive mental health in youth published during the COVID-19 pandemic. The authors state that psychosocial stress is a primary contributor to mental health problems, and the pandemic introduced several stressors affecting youth in different ways, for example, social distancing. According to Doom et al. [57], research has focused on individual and family-related factors, but they argue that there is too little research on factors promoting resilience, e.g., neighborhood connection and school cohesion, which might also play an important role for youth. Japanese research reveals the effect of screen time on small children [58]. Their research indicated that outdoor play mitigated the association between higher screen time and suboptimal neurodevelopment.

There is a word in the Cambridge dictionary [59], phubbing, meaning “the act of ignoring someone you are with and giving attention to your mobile phone instead”. Chotpitayasunondh and Douglas [60,61] argue that the phenomenon affects individuals negatively, mainly because it is a threat to our four fundamental needs: a sense of belonging, self-esteem, a sense of being important and a sense of control. These needs are not met when a person is subjected to phubbing, and then the person experiences feelings of being excluded, rejected and not being important. And when a person is exposed to phubbing, the person is more likely to start directing attention to their own phone than to direct attention to something else. In the long term, this leads to the phenomenon becoming a normative behavior [60].

There is a growing and convincing evidence base in research on the use of mobile phones, primarily social media, and its connection to lower psychological well-being. Anxiety and depression show a significant connection to high-level use of screen media. High-level screen users also show an inability to finish tasks, show signs of lower curiosity, and have more difficulty with social relations and communication. At the same time, there are indications that the use of mobile phones affects our cognitive functions and might affect learning in a negative way. Less physical activity and more sedentary activity are also linked to the use of technical devices, which in turn has a negative impact on well-being, as there is very strong evidence that physical activity has a reducing effect on depression and anxiety [15,49,50,52,54,55,62–64].

### 3. What Does the Situation Look Like in Finland, Known for Its Excellent Educational System?

In May 2023, there were headlines in the Finnish news [65] about an increasing number of Finns who never enter the workforce and do not even appear as unemployed in the statistics. According to an interview with an Under-Secretary of State at the Ministry of Employment and the Economy in 2023, this number right now is 140,000 Finns. Calculations on how much one lost career in a low-wage occupation costs society in lost taxes and increased health and social costs are around two million euros, according to Pylkkänen [65]. Sahlberg, professor of education policy at the University of New South Wales in Sydney, Australia, and a former Finnish education expert [66], arrives at roughly a similar sum (USD 1.5 million) in his reasoning on the costs of a person’s lost career. Sahlberg [66] highlights that students leaving or not even applying to secondary school has become a political and social problem in Finland, which is an overwhelming surprise, as Finland, during the beginning of the 2000s, became world-famous regarding the country’s remarkable educational system.

#### 3.1. The Renewal of the Finnish Educational System

The history of the remarkable educational system of Finland begins in the 1970’s, when Finland reformed its educational system [21,66] with the intention of building an equal and just educational system, giving every citizen the opportunity to participate in upper secondary school [66]. This reform turned out to give excellent results, and Finland gained attention internationally in the year 2000 due to exceptional results in the PISA (program for international student assessment) measurements [66–68], among others. As the Finnish PISA results in 2003, 2006 and 2009 were high-level with low variation between

schools and within schools, it was obvious that education in Finland was shown to be equal, with very few low performers and mostly average performers [66,67]. This proves that the educational system in Finland has succeeded in providing a just and equal education regardless of socioeconomic background [66,67].

But already in 2011, Pasi Sahlberg [69] highlighted a worrying development regarding the renewal of the Finnish education system. He argued that as the results of PISA became evidence of how successfully the education reforms in Finland had been carried out since the 1970s, this had created a worrying development regarding the continuous renewal of the Finnish education system, which had become much more difficult than before. A Finnish study comparing learning outcomes in Finland from 2001 to 2012 revealed that there had been a significant drop in “learning to learn” skills among 15-year-old students, and skills in reading and mathematics were no longer what they used to be [66]. In 2012, there was a decline in the Finnish PISA results, and the decline continued in 2015 and 2018 [66]. Due to the COVID-19 pandemic, the measurements for 2021 have not yet been finished and analyzed [70].

According to measurements in 2015, indications revealed that there was a growing number of low-performing students and a growing gap between the results of girls and boys, where the Finnish girls turned out to perform higher [66]. Here, it is interesting to consider the idea that the system might have served its purpose and that the system might reach some kind of tipping point when it has equalized all differences and so cannot produce more high-performing students than it already does [19]. According to Sahlberg [66] and Read et al. [21], there were different measurements in 2011 and 2012, indicating a concerning low level of engagement and motivation among Finnish students. In 2012, there were measurements ranking Finnish students (15 years old) 61st out of 65 countries according to how happy they feel at school, and later on, there were an increasing number of students in Finnish secondary schools reporting school burnout [21]. A recent Finnish study (ibid) with the purpose of identifying changes in school burnout for Finnish adolescents in lower (grades 8–9) and upper secondary schools (grades 10–11) during the years 2006–2019 revealed that there has been an intensified increase in school burnout among girls at the secondary school level since 2011. The authors also conclude that the increase in girls’ school burnout seemed to worsen in alignment with the school budget cuts after 2011 [21].

Sahlberg [66] raises the question: if something went wrong in schools, affecting the teaching negatively, or is it possible that Finland has made wrong choices regarding education policies since 2010 that have affected teaching and learning in a way that caused the outcomes of PISA measurements to decrease? He is answering his own question with the fact that there has been too little research or systematic analyses to answer these questions, but he highlights three possible factors that might affect students learning and engagement in school. The first factor he mentions is the global financial crisis in 2008, which might have been a societal factor affecting socioeconomic status and budget cuts in schools, leading to increased class sizes and less support from assistants in the classroom. As a second factor, Sahlberg [66] mentions a new policy implementation regarding special education in Finnish schools. And the third factor is a common phenomenon and global stressor worldwide: the overall increasing time spent connected to digital devices. The habit of spending time on technical devices takes time from other activities such as physical activity, reading and sleeping.

### 3.2. Societal Factors and Digital Media as Global Stressors

During recent decades, changes in society have been continuously unfolding. In Finland, the economy improved significantly in the late 1980s, and growth rates were among the highest in Europe. Unemployment was just below 3%. The economic boom during most of the 1980s led to over-indebtedness and an overheating of the economy. This caused a deep economic crisis in the early 1990s, which led to bankruptcy among many companies in Finland. At the same time, subsidies were cut, which affected the welfare of those who



were already on a tight budget, leading to increased poverty. About 500,000 Finns became unemployed, and several hundred thousand became over-indebted for many decades to come. The fiscal policy of the 1980s was the cause of the so-called “lama”. The Finnish economy recovered and stabilized eventually from the deep recession, and by the end of the 1990s, the world economy turned gradually into an enormous economic IT boom lasting from 1996 to 2000. Then, the IT bubble burst, and the financial market became uncertain again for a while. Next, the economic crisis in Finland in 2008–2009 had several causes, but a central cause was the American mortgage loans that were granted lightly. It resulted in several major banks going bankrupt, which in turn sent the global economy into a tailspin [23,24].

All these fluctuations may, of course, have affected the rising generation in different ways and most probably caused a feeling of uncertainty and perhaps led to symptoms of anxiety over time among youth. It is clear that the purpose and meaning of life, hope for the future and quality of life are all parameters that are deteriorating according to surveys among Finnish adolescents, and anxiety and depression are increasing in alignment with the global trend [9,71].

### 3.3. *Physical Activity a Scarce Commodity among Finnish Youth*

As there is a strong evidence base that physical activity is an important promoter for both physiological and mental well-being for children, youth and adults [15,62,64,72–76], among others, it deserves some attention.

Worrying calculations reveal that the proportion of people participating in the labor market is lower in Finland than in other Nordic countries, and this is due to things like poor fitness, gambling addiction and over-indebtedness [65]. In addition, 20,000 people stop working every year due to physical or mental problems [65]. A study shows that young people’s physical fitness is now deteriorating [44], and Pylkkänen [65] claims that 40% have such severe physical problems that they may not be able to work six-hour days in the future. She is referring to a study [44] on the physical fitness of children and young people revealing that for about 40 percent of students in grades 5 and 8, their physical ability to function is at a level that can make it more difficult to cope in everyday life.

The results of the Move! surveys [77] show that the lifestyles of children and young people and society itself have changed over the past decades. Children and young people are moving less, and their amount of physically passive time has increased, which has reduced the functional capacity of children and young people. The physical functioning of children and young people already affects and will continue to affect the well-being of individuals and society as a whole [44,78].

According to a Finnish survey, Health in School 2023 [10], approximately one in four pupils in grades 8 and 9 and first- and second-year students at upper secondary schools or vocational training institutions feel that their health status is average or poor. The survey is conducted every other year, and students in grades 4 and 5 in primary school, students in grades 8 and 9 in primary school, first and second year students at upper secondary schools and first and second year students at vocational education institutions participate in the survey. Through this reoccurring survey, the Institute for Health and Welfare gathers information about young people’s living conditions, school conditions, perceived health, health habits and pupil and student health care. A worrying finding from the survey [10] is that more and more young people state that they feel physical pain in various places in the body. Pain in the head, neck, shoulders and legs was most common among students in primary school. The Institute for Health and Welfare finds this alarming and argues that this trend needs to be reversed as quickly as possible, as research has shown that pain in youth heralds chronic pain, affective problems and poor functional capacity in adulthood [10].

Another fairly recent study [79] among university students in Finland reveals that university students sit an alarming amount, as 41 percent sit for at least 12 h on weekdays. Excessive sitting increases the risk of, among other things, obesity, sleep difficulties and

mental disorders. Even just a small movement, such as standing up and walking briefly while studying, has a positive effect on attention and memory. Other results from the same survey [80] among the same population show that every third university student has symptoms of anxiety or depression, and the tendency to assume that these factors influence each other is quite high.

Regarding physical fitness among young men in Finland, there are annually recurring measurements that give a good and fairly comprehensive picture of the current average fitness level of young men aged 19. The statistics on the fitness of new conscripts (annually about 20,000 people) in Finland have been followed up since 1975, and in terms of public health, the fitness surveys produce important information about changes in the body composition and physical fitness of young Finnish men. Unfortunately, these measurements show that the endurance and muscle fitness of young men have declined for decades and weight has increased, and this trend looks set to continue like the worrying trend seen in the Move! measurements among students in basic education [44,81].

According to professor Tommi Vasankari [44], chief of the UKK Institute—Centre for Health Promotion Research in Finland, these are discouraging results, as an increase in body weight (by about ten percent among the conscripts), together with a deterioration in physical condition, is inevitably leading to a growing disease burden (such as type 2 diabetes, cardiovascular diseases and problems with mental health) and to challenges in everyday life. This will have consequences for the future, such as an increasing incapacity for work and an increase in social and economic costs. At present, the costs of insufficient physical activity amount to at least three billion euros per year in Finland [44,81].

These studies indicate that there is, in Finland, an urgent need for action to encourage children and young people to be more physically active in order to feel better in the long run and to reduce the now-escalating burden of disease on health services and costs for society.

In Sweden, Folkhälsomyndigheten [82] states in a fairly new report (2023) that there is a need to increase opportunities for young people to be physically active and spend time in nature, as being physically active and/or spending time in nature is highlighted by young people as a strategy to feel better. The report [82] also highlights the importance of knowledge about the positive impact of outdoor life and nature on young people's mental health for staff who meet young people in leisure activities. This is important so they can help ensure that young people have the opportunity to spend time in nature.

Taking this a step further, it should be taken into consideration if it is not a necessity to bring this mindset into basic education as a way to reach and interact with the majority of children and youth. That is why it is of utmost importance to communicate and highlight the known facts about the importance of nature in promoting well-being.

#### 4. Growing Resilience through Interaction with Nature?

The question of how nature affects children and youth in terms of their development, well-being and learning has been a topic in which many claims have been made, but the evidence has been weak until recently [83]. In recent decades, the field has evolved, and empirical research is now starting to form a large body of convincing, strong evidence proving the health benefits humans obtain from their connection to nature [16,62,83]. The understanding of the cause-and-effect relationship between nature contact and learning has also deepened. Research reveals the role of nature in facilitating recovery from stress and treating depression [16,83–86].

According to Marselle, Warber and Irvine [16], this indicates that nature could be an important resource for fostering resilience. Resilience means the process by which people successfully adapt to challenges [57] or have the ability to “bounce back” from adversity [16]. It is claimed that interactions between youth and their families, friends, education providers and other service providers play a crucial role in promoting resilience [87]. Several researchers suggest that to facilitate resilience, it is evident that protective factors are required that buffer the impacts of adversity, making the ability to “bounce back” more likely. Researchers, e.g., [88–90], claim that there are three levels at which these

protective factors occur: the individual, family, and community levels. This could to some extent be connected to both the theory around which factors can increase the risk of absenteeism [66,91–93] and the theory presented by Kim and Hagquist [22] suggesting that economic factors at the societal level (municipality unemployment rate) and at the individual level (worry about family finances) could explain the secular trend in mental health problems.

According to Marselle et al. [16], natural environments are also proving to be potential community-level protective factors that facilitate resilience. There is now empirical evidence, evidence from observational large sample studies, experimental studies among patient populations and diverse community-level interventions that support and substantiate the claim concerning mental health benefits from nature contact [64,83,94–97]. There is also a wide range of studies that, with strong evidence, suggest that nature experiences promote academic learning, personal development and environmental awareness [83].

There are several reasons why nature promotes learning; for example, there is evidence indicating that nature affects stress levels, attention, self-discipline, physical activity and the enjoyment of learning. Studies reveal that nature-based education outperforms traditional education in academic contexts. A wide range of reports reveal that nature contact affects endurance, resilience, teamwork, critical thinking and problem-solving skills. And according to Kuo et al. [83], we need to take the fact that nature is a resource for learning seriously for all, but especially for those who, for some reason, are not effectively reached by traditional education.

Grahn et al. [64] highlight that there is a high degree of evidence proving the health effects of outdoor activities, especially regarding the importance of daylight, fresh air and green spaces and their effects on stress-related illness. The stress-reducing effects of nature have been documented in adults in a large body of controlled experiments [83], and the available evidence also points to a similar effect in children [83]. Grahn [98] also claims that there is a moderate-to-high level of evidence that nature-based interventions have a good effect on children with behavioral problems and cognitive problems such as ADHD. According to Kuo et al. [83], utilizing the benefits of nature-based instruction can be of great benefit to all children, as available evidence supports the theory that nature experiences can help children gain the skills, attitudes and behaviors most needed in the 21st century. Among these non-cognitive factors are self-efficacy, social skills, resilience and communication skills, which are very important skills in a rapidly changing world for life beyond school. According to Kuo et al. [83], the skills of environmental stewardship may be as important as any academic knowledge in the future, concluding that it is time to start taking nature seriously as a resource for both learning and development.

A systematic review published in 2022 [99] searched publications between 2000 and 2020 in nine academic databases for evidence of the socio-emotional and academic benefits of nature-specific outdoor learning in school-aged educational settings. The review found evidence that nature-specific outdoor learning has measurable socio-emotional, academic and well-being benefits. The authors claim that this kind of nature-specific outdoor learning needs to be incorporated into all children's school experiences.

Doom et al. [57] refer to multiple studies reporting that youths who had more access to green spaces and spent more time in nature reported better general mental health and better subjective well-being during the COVID-19 pandemic. It is also evident that youths who engaged in sports and physical activity showed lower symptoms of anxiety and depression during the pandemic. Also, Jackson et al. [96] conclude their findings with a claim that there is an indication that it is possible to reverse declines in adolescent mental well-being through increased participation in outdoor activities, which in turn encourages the development of a connection to nature. Findings from Bowers et al. [94] highlight significant associations between nature-based experiences and positive youth development, which proves the importance of youths' access to nature-based recreation opportunities. In a qualitative study by Birch, Rishbeth and Payne [100], youths described how they experienced green spaces as offering a stronger sense of self; feelings of escape; and

connection and care with the human and non-human world. Zamora et al. [97] collected data from a nationwide sample of US youths, revealing that the participants generally reported that they felt physically and mentally better when they were spending time in nature, and the results indicated that they wanted to spend more time in nature. Actively supporting time spent outside and eliminating barriers for outdoor activity are important tasks for public health policies and should be put forward as an acceptable practice to promote overall well-being among youth [97].

Nature-based interventions can also contribute to students' health in other ways. For example, there is experimental research [101] revealing that students who were exposed to therapy dogs during a period of final examinations had a better mood than those who were not exposed. Therapy dogs on campus can be an effective way to improve students' mental health during stressful periods within the university environment [101].

There is also an ongoing research project in Sweden, 2022–2024 [102], where the Swedish University of Agricultural Sciences, in collaboration with Uppsala University and the Swedish Therapy Dog School, is aiming to investigate whether students with more than 20% absence from school in the last term can regain motivation to go to school with the help of a team consisting of a resource educator or teacher and a trained school dog [103].

## 5. How Schools Could Help Children Thrive

A wise voice from a 14-year-old student describes how she think schools could help children thrive: “When I think about going to school, I want to feel motivated and think positively about what the day will look like. . .going to school should not feel heavy or difficult. We students are in school to learn; it is important that we get the education we need. But it is also equally important that you feel welcome among your schoolmates. That you feel safe and, for example, dare to stand out in class. What I mean is that the atmosphere in school is at least as important for us students as the teaching itself. Unfortunately, there are many who do not feel welcome among their schoolmates. There are students who have no one to hang out with and therefore don't look forward to the school day at all. . .Everyone has different ways of learning. So maybe teachers could try different learning techniques and not always have students work in the same way. It gets quite boring after a while, and you lose motivation—especially if that technique doesn't work for you. Also, teachers should definitely treat all students equally, but make sure that those who need more help get the necessary assistance. . .This would mean that everyone gets the help they need, not that everyone gets exactly the same help. . .School will never be everyone's favorite place, but everyone should at least get a chance to enjoy themselves, and of course learn” [104] (p. 7).

Today, academic achievement is a school's primary goal. This highlights the importance of education and puts children and adolescents under pressure [91,105,106]. Perhaps the decline in well-being among children and adolescents could be linked to this achievement-oriented culture [11]. Passing school and receiving grades may contribute to further studies, better jobs and better living conditions. Not least, self-esteem, trust and mental health are benefited, and there is a reduced risk of crime, violence and ill-health [107–109].

Alanko et al. [108] have analyzed time trends in school absenteeism in Finland over two decades and state that during the study period 2000–2015, reported absenteeism changed significantly. In 2020, the Finnish National Agency for Education [110] claimed that in the higher grades of basic education in Finland, there are at least 4000 students (about 2–3 percent of all students in the higher grades) whose absence from school affects schooling so noticeably that the school has had to take special measures. Schools in Finland have called for models for how to intervene in absenteeism, which has recently resulted in more attention being paid to the increasing problematic school absences in Finland. New action plans have been designed for how to deal with school absences. The idea is to start intervening at an early stage, and if it turns out to be worrying absences from

school, the underlying reasons for why the student is absent should be found out. However, implementing this in practice is perhaps not so easy [111].

In Swedish municipalities, there are school attendance teams that serve the entire municipality. Their task is to work with students who do not come to school. If a student has been at home for a long time, they go to their home to make a comprehensive survey of the factors that caused their absence from school [112]. The now ongoing research project in Sweden [102], investigating whether students with more than a 20% absence from school can regain motivation to go to school with the help of a team consisting of a resource educator or teacher and a trained school dog, will soon have interesting results to share.

The best thing would, of course, be if we could learn how to prevent as much absence from school as possible. Research regarding school attendance problems identifies several factors which can increase the risk of absenteeism. These factors can be grouped into individual factors, family factors, school factors and community factors [66,91–93]. Individual factors encompass mental health problems, which makes it crucial to reverse the trend of a decline in mental health among youth and adolescents to prevent increasing absenteeism. Therefore, a proportionally large part of this article touches on the psychological well-being of young people, what in society seems to affect it negatively and which factors have a positive impact.

As information nowadays can be obtained easily in other ways than during a lesson, Sahlberg [113] hopes that in the future we will move away from the now traditional way of teaching things and instead focus on problem solving and community. Sahlberg [105] argues that we might need to re-think beyond the limiting notion that the primary task of schools is academic achievement. Sahlberg and his colleague [105,106] suggest that a shift in the core purpose of school is necessary to build a healthy foundation for lifelong success. This shift they describe would be a necessary shift from schools' primary focus on academic intelligence to equally focusing on learning, well-being and health to optimize the development of each child.

According to Sahlberg [113], schools need to do more to help each child find their passion, their creativity and their strengths. What schools need to do is support each student in finding their own thing and what they want to do in life. Sahlberg [113] expresses concern that measurements reveal that a lot of young people feel that they are not good at something specific and that they do not know what they want to do with their life. The most important role of the school should be to awaken children's curiosity and help them have a good start in life.

Professor Katariina Salmela-Aro [114] argues that life will always contain setbacks, and it is important that students learn how to deal with emotions associated with failure, especially if they have not learned from their parents. This socio-emotional skill can be connected to the Finnish concept of "sisu", which is a concept that includes endurance, toughness and strength. "Sisu" is a power resource that Katariina Salmela-Aro [114] highlights as important and that has often been associated with the Finns. Salmela-Aro argues that schools need to promote "sisu" because measuring the presence of skills reminiscent of "sisu" in ten major cities revealed that Helsinki, the capital of Finland, had the lowest results [114,115]. Perhaps it is time, just as Kuo et al. [83] claim, "to bring nature and nature-based pedagogy into formal education—to expand existing, isolated efforts into increasingly mainstream practices". There is a call for more action research which should assess the benefits of green schoolyards, school gardens and green walls in classrooms. There is a need for principals and school boards to support, not discourage, teachers' efforts to hold classes outdoors [83]. Teacher pre-service and in-service education needs to include a focus on how natural settings can be used effectively for learning [99].

Clearly, there further research is needed to clarify the conditions under which specific forms of outdoor learning are most efficacious for various target outcomes. There is also research needed concerning how to prevent school absences and how to develop the school's atmosphere into an inviting, safe place where everyone wants to be.



## 6. Some Concluding Remarks

Research reveals that mental well-being among children and adolescents has decreased during the 21st century. At the same time, surveys show that Finnish schoolchildren, youth and adolescence move too little; physical fitness has deteriorated and body weight has increased. This is probably due to many different factors, but changed lifestyles from the 1990s onwards, global financial uncertainty and the technological development that has led to an unprecedented use of mobile devices with less outdoor time as a consequence might be some contributors to the decrease in health and well-being that is seen.

As increased physical activity, reduced sedentary time and spending time in nature have been shown to be effective in preventing mental illness and other serious disorders, there are indications that perhaps education needs to focus less on academic achievement and instead develop socio-emotional skills, promote physical activity to prevent anxiety and other diseases and give the students an opportunity to experience outdoor air and daylight, which is crucial for the well-being of humans, to, in the long run, bring about better, but perhaps different, learning. In a world constantly changing, the educational system must have the courage to keep up and evolve, both for the benefit of individuals and society.

**Funding:** This research received no external funding.

**Conflicts of Interest:** The author declares no conflict of interest.

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