3 COVID-19 and children's well-being

On 5 May 2023, after more than three years, the World Health Organization (WHO) declared an end to the global Public Health Emergency for COVID-19. The research conducted during and after this crisis period means we are now beginning to piece together what the new normal looks like for children. This chapter draws on the Questionnaire (2022) and the research literature to map out what is known about three key enablers of child empowerment: Emotional well-being, physical activity and schools as social hubs. Across all three themes, pandemic measures disproportionally affected the vulnerable. Investing in children's well-being in a comprehensive manner, by not only tackling the issue at hand but addressing the background trends and larger barriers, is a crucial piece for policy makers.

Introduction

Schools are part of the social fabric of our lives. Education delivers not just academic learning, it also supports communities and develops and sustains physical and emotional well-being for students. COVID-19 led to school closures in most countries around the world and interrupted the school attendance of at least 1.5 billion students in 2020 and 2021 (Vincent-Lancrin, Cobo Romaní and Reimers, 2022[1]). Data from the 2022 Programme for International Student Assessment (PISA) suggests that this exacerbated long-term academic performance and well-being issues in many countries' education systems (Schleicher, 2022[2]). Answering how and why these trends accelerated is crucial if we are to attempt to slow (or reverse) them.

Although the rush to remote learning highlighted the immense opportunities of the digital environment, school closures also reminded us of the power and importance of the physical world (Burns and Gottschalk, 2020[3]). Physical interaction with others, who have different opinions, backgrounds, and personalities, remains essential to cultivate a future society in which people are curious and compassionate to the needs of others (Vincent-Lancrin, Cobo Romaní and Reimers, 2022[1]). Many of the learning continuity programmes initiated during COVID-19 had a strong focus on social and emotional skills. These programmes attempted to assuage students' possible anxiety and allow them to feel heard (Vincent-Lancrin, Cobo Romaní and Reimers, 2022[1]). However, when schools were closed, PISA 2022 results for OECD countries show that education staff focused more on curriculum goals than on students' well-being (OECD, 2023[4]). Analysing the impact of school closures on students is complex. Many other factors impacted students, for example the quality of remote teaching and levels of support received by struggling students (Schleicher, 2022[2]). The topic of each of the sections in this chapter was selected for three reasons. Firstly, the Questionnaire (2022) revealed that each topic is an area of significant concern for many OECD countries, due to trends staying flat or heading in the wrong direction.

Secondly, each theme offers huge scope to empower children if a sufficient baseline is reached. The literature contained in this chapter reveals that emotional well-being positively impacts an individuals' self-confidence, self-regulation and sociability and helps them accomplish their goals. It also finds that being physically active is associated with a lower risk of overweight, better overall health, working memory, emotional well-being and academic outcomes. Furthermore, the research shows that high quality social relations can motivate children to engage in both in- and out-of-class activities, perform to the best of their abilities and enhance their enthusiasm for learning.

Thirdly, if there is any silver lining presented by the COVID-19 pandemic, it is that the disruption to each of the themes provides a unique opportunity to reimagine the role of education, rather than reverting to a (sub-optimal) status quo. The crisis period of COVID-19 was a watershed moment for the home environment. As Sheldrick et al. (2022[5]) put it, during the lockdowns the home became an "everything space". This laid bare the stark contrasts between different children's experiences of childhood. In many ways, COVID-19 reminds us of what was already known; that variables such as geographical location, age and socio-economic background give each child a unique emotional, physical and educational positioning that impacts how they see the world and how the world sees them.

The pandemic also served to highlight the commonalities across education systems regarding what is needed from policy and practice. More robust data and monitoring of trends is essential, as is building the skills of policy makers, practitioners, caregivers and others to understand this data and use it to take action. Ensuring well-resourced, long-term and meaningful partnerships between schools, external actors, parents, communities and students remains a challenge. More research into effective interventions, covering both school and non-school settings, is needed. This must be accompanied by high quality training for the practitioners who are tasked with implementing multi-dimensional interventions.

Emotional well-being

Emotional well-being refers to the quality of an individual's emotions and experiences and is generally seen as a core component of positive mental health (for a detailed definition, see (Burns and Gottschalk, 2019, p. 54[6])). Even before the COVID-19 pandemic, empirical studies observed an increasing trend in depression and anxiety among children in OECD countries (Burns and Gottschalk, 2019[6]). Childhood is an important phase of life for emotional well-being. Positive subjective well-being is an enabling condition for psychological empowerment (i.e. an individual's belief that they can accomplish and/or fulfil their goals) and affects self-confidence, self-regulation and sociability (Diener and Biswas-Diener, 2005[7]). Insufficient awareness of, or support for, mental health during this developmental period may negatively affect life satisfaction and educational achievement, both during childhood and in later stages of life (Burns and Gottschalk, 2019[6]; Choi, 2018[8]).

Although children faced a lower risk of COVID-19 mortality, the pandemic had serious implications for their mental health. Children had to adapt to new educational arrangements, such as virtual schooling, and were often isolated from their peers and communities. For them, the pandemic and the resulting lockdowns were associated with outcomes such as increased symptoms of depression and anxiety, and decreased subjective well-being and life satisfaction (Suresh, Alam and Karkossa, 2021[9]; Steinmayr, Paschke and Wirthwein, 2022[10]; Wolf and Schmitz, 2023[11]). Beyond the immediate implications of the lockdown restrictions, the uncertainty surrounding the pandemic also negatively impacted children's mental health and was associated with increased anxiety (OECD, 2020[12]). A meta-analysis of 29 studies indicates that the rate of anxiety symptoms in children and adolescents may have doubled during the pandemic, affecting up to one in five individuals (Racine et al., 2021[13]). More recent research conducted in various OECD countries also finds increases in children's anxiety symptoms during the pandemic (Hawes et al., 2022[14]; Ravens-Sieberer et al., 2022[15]; Shoshani, 2023[16]). Children from lower socio-economic backgrounds, with limited space at home, existing physical or mental health issues, or belonging to ethnic and racial minorities and marginalised groups were disproportionally affected (OECD, 2021[17]; OECD, 2023[18]; Sonu, Marvin and Moore, 2021[19]; Wolf and Schmitz, 2023[11]).

Anxiety is high on the education policy agenda

According to the Questionnaire (2022) results, children's anxiety is an important issue for education policy makers across OECD education systems. Of the 21 systems reporting internalising mental health conditions (such as depression and anxiety) as a challenge, 13 signalled that this was a pressing challenge. Moreover, 17 systems reported that school-related anxiety/ stress pose a challenge, with eight systems highlighting it as a pressing challenge.

Some Questionnaire (2022) respondents, such as Denmark and Norway, highlighted that girls may experience higher school-related stress and anxiety than boys. PISA 2015 results found, on average, a 16.7 percentage point difference between girls and boys who felt anxious for a test they had prepared for; the difference in Denmark and Norway was 23 and 26 percentage points, respectively (OECD, 2017[20]). More recent literature suggests that mathematics anxiety could act as a mediating factor between gender and mathematical performance (Vos et al., 2023[21]). In New Zealand, the most recent edition of the Youth19 survey, funded by the Health Research Council, indicated that girls had lower levels of overall emotional well-being, higher prevalence of depressive symptoms and a higher rate of suicide attempts in 2019 (Fleming et al., 2020[22]). According to PISA 2018 results, girls also expressed lower life satisfaction and sense of meaning in life, as well as greater fear of failure (OECD, 2019[23]). The OECD Survey on Social and Emotional Skills (SSES) 2023 finds that on average girls report lower levels of all health and well-being outcomes than boys. These include life satisfaction, current psychological well-being, satisfaction with their relationships, body image, and test and class anxiety (OECD, 2024[24]). They also report lower levels of emotional regulation skills (stress-resistance, emotional regulation and optimism), trust and energy than boys (OECD, 2024[24]). These skills are those most strongly linked to students' health

and well-being outcomes, such as life satisfaction (OECD, 2024[24]). Japan reported in the Questionnaire (2022) that the number of child suicides during COVID-19 increased significantly compared to the previous year. In response, the government has increased suicide prevention education, expanded the assignment of school counsellors and school social workers, and developed consultation services by phone and social media.

Box 3.1. Green minds, strong hearts: Climate anxiety and empowerment

In addition to stressors like COVID-19, social isolation and school-related pressures, climate change and its adverse effects have become a salient issue in recent years that contributes to anxiety in children. Climate change can be a stressor that negatively impacts children's mental health (Hickman et al., 2021[25]). Children and adolescents may be more vulnerable to climate change, and its adverse effects can create a sense of hopelessness and powerlessness as well as feelings of anxiety (Sanson, Van Hoorn and Burke, 2019[26]). A survey of 10 000 children from 10 countries found that 84% reported they were moderately, very or extremely worried about climate change and more than 60% reported they felt anxious about climate change (Hickman et al., 2021[25]).

Ojala et al. (2021[27]) characterise climate anxiety as related to uncertainty. Due to the intergenerational characteristics of climate change and the limited financial and physical means of children, climate anxiety remains a salient problem for children, even for those who do not directly experience natural disasters associated with climate change. Air pollution from wildfires and the loss of biodiversity could negatively affect mental health, while access to green spaces may be protective of mental health (OECD, 2023[18]). Literature also notes the limited amount of research on children's climate anxiety compared to that of adults and suggests further exploration from a child-centred point of view is needed (Léger-Goodes et al., 2022[28]).

According to PISA 2018 results, 79% of students in OECD countries are aware of climate change and global warming but only 57% of students think they can do something about it (OECD, 2020[29]). The discrepancy may show a lack of self-confidence to act and tackle climate issues. For addressing climate anxiety and the sense of powerlessness, and helping children become engaged and empowered actors, the literature emphasises using coping techniques, which invoke beliefs, values and goals to elicit positive emotions, positive appraisal and increased trust in different actors and solutions against climate change and children's constructive engagement (Ojala, 2012[30]; Ojala et al., 2021[27]).

Education and schooling can help manage feelings of anxiety by promoting climate action (Sanson, Van Hoorn and Burke, 2019[26]). Children need to understand climate matters accurately to be empowered, as a misconception of issues at stake could lead to confusion and a lack of action (Crandon et al., 2022[31]). Moreover, youth activism may help children deal with future-related anxiety by channelling their feelings into action as well as providing them with skills for personal development and future engagement (Sanson, Van Hoorn and Burke, 2019[26]).

Poor mental health and symptoms of anxiety can negatively affect academic performance, and in severe cases can be associated with emotionally-based school avoidance (OECD, 2023[18]), which was also highlighted in the Questionnaire (2022). Research on adolescents in France, for instance, shows significant symptoms of anxiety-related school avoidance and burnout (Simoës-Perlant, Barreau and Vezilier, 2023[32]). A survey undertaken in in the United Kingdom (UK), suggests that lower levels of emotional well-being contributed to a surge in school absenteeism after the crisis phase of COVID-19 (Stem4, 2024[33]). In the United States (US), during the pandemic, absenteeism was found to increase with online schooling, and was higher for low-income households, and ethnic and racial minorities (Delgado et al., 2022[34]; Gee, Asmundson and Vang, 2023[35]). Literature also notes that absenteeism may be associated with students'

social-emotional and mental health functioning, limiting students' access to care and negatively impacting academic achievement (Kearney et al., 2023[36]; OECD, 2023[4]).

Literature tends to support the view that school closures may have been harmful for children's well-being (Viner et al., 2022[37]). Questionnaire (2022) respondents also reported that school closures and returning to school after lockdowns may have contributed to additional anxiety. PISA 2022 found that during school closures, 46.6% of students across OECD countries agreed or strongly agreed that they felt anxious about schoolwork (OECD, 2023[4]). However, the approach schools take appears to make a difference. Students who reported getting more support from their schools during closures reported greater well-being and life satisfaction, and less mathematics anxiety (OECD, 2023[4]).

Building resilience and coping mechanisms through education

Forming coping strategies and building resilience against challenges is important in supporting and maintaining emotional well-being (OECD, 2021[38]). Masten and Motti-Stefanidi (2020[39]) argue that an effective way of building resilience is to work with children for COVID-19 recovery efforts. Psychological skills and community-based support are some of the factors that may contribute to positive adaptation in a disaster context. The authors give the example of the Federal Emergency Management Administration's (FEMA) Youth Preparedness Council in the United States and its ability to involve young people in disaster responses during Hurricane Katrina, which was empowering for them and gave them hope in the face of a disaster.

Schools can give children the tools to anticipate adversities and develop coping mechanisms that can be empowering. This can be done for example, by granting access to non-academic support such as providing mental health assistance (Hoffman and Miller, 2020[40]). Capurso et al. (2020[41]) argue that post-lockdown re-entry programmes can support children to make sense of the rapid changes around them to emotionally and cognitively process what has happened in a safe and trusted environment and build resilience for future crises. They propose a programme which adapts established crisis-related intervention principles for educational settings, such as facilitated classroom discussions, structured opportunities for children to reconnect socially and with the school environment, sessions to shift attention away from stressful memories towards an awareness of coping and presentation of relevant facts and information. When paired with a teacher training component, the programme was positively evaluated in the Italian context, however the absence of a large scale trial with a control group remains a limitation (Capurso et al., 2021[42])

Empowerment is not only about building resilience and coping mechanisms. One of education's core roles is to support children to fulfil their dreams and flourish. Students who possess a "growth mindset", namely those who believe that intelligence is not fixed but improvable through effort, feel more empowered and have a greater sense of agency (OECD, 2022[43]). PISA 2022 results suggest that having a growth mindset enables students to get out of their comfort zones and take on challenges, as well as overcome performance-related anxiety and perform better in mathematics (OECD, 2023[44]). A randomised controlled trial in the Netherlands found that students with a growth mindset were more resilient against mental health setbacks during COVID-19 (Janssen and van Atteveldt, 2023[45]).

Interventions and partnerships can support children's well-being

OECD education systems use different approaches to devise policies to promote children's emotional well-being. Policy frameworks that tackle well-being comprehensively should look at both prevention and response (Burns and Gottschalk, 2019[6]). For instance, response interventions could include cognitive-behavioural therapy (CBT), whereas programmes aiming to build social and emotional skills are more preventative.

Table 3.1 shows a selection of such policies and interventions collected through the Questionnaire (2022). Some approaches entail new legislation or updated curricula, whereas others seek to gather data on emotional well-being to tackle it more effectively.

Despite the priority given to the topic of mental health and emotional well-being, potential challenges and gaps in the knowledge base remain. Rather than the current abundance of definitions and concepts related to well-being, a more widely accepted well-being framework is necessary to provide holistic measurement to inform policy and practice (Burns and Gottschalk, 2019[6]). Literature also notes the limited information on children younger than 12 in emotional well-being and mental health research as well as the dearth of comprehensive long-term cross-country data and longitudinal studies (Choi, 2018[8]).

Table 3.1. Policies and practices to support emotional well-being

Type of policy or practice	Country	Description
Curricular / Legislative	Iceland	The 2021 Act on the Integration of Services in the Interest of Children's Prosperity considers the best interests of children in every decision. The Act calls for provision of co-operative tools and proposals for mental health support for students, defining it as a special subject for upper-secondary level curriculum.
	Ireland	Social, Personal and Health Education (SPHE) is a programme organised for different levels of schooling, focusing on improving well-being and confidence.
	Ontario (Canada)	Mathematics, and health and physical education curricula are designed to encompass social-emotional learning skills to foster well-being and build resilience. This is intended to help students cope with school-related anxiety and build healthy relationships.
Guidance / Professional	Mexico	*Construye T* programme: conferences and workshops targeting bullying, stress and anxiety. This programme aims to improve emotional well-being through both didactic and leisure activities.
	Sweden	State grants are provided to employ staff specialised in student health and special education in schools, including doctors, nurses, counsellors, psychologists or special education teachers.
Toolkits / Online support	Estonia	*Teeviit* is an online youth information portal tackling different topics each month, including mental health. *Teeviit* provides podcasts, discussions with specialists, tips and tools for seeking help for young people.
	Netherlands	Extra budget for schools to spend on interventions from a pre-approved list, including those focused on well-being and cultural activities to develop students' social-emotional and physical development.
Data collection	Denmark	An annual well-being survey completed by students from pre-school to the end of secondary school.
	Spain	State Observatory of School Co-existence collects data to improve school climate and devises measures promoting co-existence.

Source: Questionnaire (2022)

Partnerships with external actors can be important for supporting positive health and well-being outcomes (Burns and Gottschalk, 2020[3]). Countries can become more effective in their policy approaches to child well-being by prioritising partnerships and co-ordination with actors such as civil society organisations or allied health professions (OECD, 2023[46]). Several barriers to mental health provision exist at the school level, such as staff turnover, leadership and staff capacity (March et al., 2022[47]).

Partnerships with external actors can help alleviate some of these barriers. There are successful programmes for mental health provision at schools through partnerships, such as Te Rito Toi[1] in New Zealand. In collaboration with the University of Auckland, this art-based pedagogical tool, designed for returning to school after lockdowns or other possible disruptions, allows students to express themselves and their own narratives of the pandemic. This programme provides teachers and principals with simple and clear lesson plans, requiring minimal preparation (Vincent-Lancrin, Cobo Romaní and Reimers, 2022[1]). Upon the students' return to school following the lifting of COVID-19 lockdowns, this programme aimed to support children to explore their emotions, and give educators the chance to prioritise children's well-being (O'Connor and Estellés, 2021[48]).

Table 3.2 shows a range of partnerships with external actors to promote children's emotional well-being, some of which were implemented during the pandemic. Although involving medical and mental health-

related institutions can help ensure comprehensive and coherent policies to promote emotional well-being (Burns and Gottschalk, 2019[6]), they are far from being the only important actors in this space. International organisations and ministries at national or regional levels can fund projects, provide expertise, and devise and enforce policies thereby adding value and enabling change. Local communities can be instrumental in supporting school initiatives.

Table 3.2. Partnerships with external actors for child well-being

Country / countries	Explanation of the partnership	Type of external actor
Belgium (Flemish community)	The Institute for Healthy Living developed a package, Geluk in de klas[2], to support schools. When the first edition was released more than 3 000 teachers registered for training related to this package.	Expertise centre for health promotion and disease prevention
Belgium (French community)	Psycho-medico-social centres in schools worked actively during the pandemic to identify students' needs including for mental health.	Medical institutions
Latvia	A programme by the Children's Clinical University Hospital and the Adolescent Resource Centre for youth aged 11-18 to tackle depression, anxiety and self-harm. There is also a focus on neurodivergent youth and preventative/early intervention.	Medical institutions, mental health centres
Luxembourg	"What if it were you?" is a resource toolkit and a film, tackling (cyber)bullying, suicide, loneliness, marginalisation and violence, with working groups providing trainings to students.	Mental health centres (*Centre psycho-social et d'accompagnement scolaires*)
New Zealand	The Mana Ake programme promotes well-being and positive mental health in youth, through which almost 200 000 children receive support throughout the Canterbury region. Local organisations support the initiative.	Local community
Québec (Canada)	The "Inter-ministerial action plan for mental health" promotes mental health in schools and works on anxiety prevention and partnerships with community organisations.	Provincial ministries, local community
Türkiye	Inclusion of behavioural and social performance in the end-of-term student report cards through a partnership with United Nations Children's Fund (UNICEF), allowing a more consistent and precise assessment of social and emotional skills.	International organisations

Source: Questionnaire (2022)

Looking to the future

As the world unpacks the effects of COVID-19, it is prudent to prepare responses and devise suitable mitigation strategies for countering the adverse effects of new pandemics, or similar challenges. Research suggests these events may be more likely in the future (Marani et al., 2021[49]; Tollefson, 2020[50]). Effective prevention programmes that aim to bolster students' social and emotional skills could help to address mental health concerns, including symptoms of anxiety (Choi, 2018[8]; OECD, 2023[18]). Skills such as self-control, emotional intelligence and social problem-solving are among the key mental health predictors in the current research literature, although more evidence would be beneficial (Steponavičius, Gress-Wright and Linzarini, 2023[51]). Moreover, interventions that promote the development of social relationships, self-esteem and self-regulation skills can support resilience (Llistosella et al., 2022[52]).

Policy makers, educators and communities should intervene as early as possible. Most mental health concerns emerge during adolescence, but often it takes until adulthood to act upon them. By that time, the required investment in treatments is more substantial. One of the reasons for this is that children's mental health concerns, including anxiety, may get more severe and chronic as they grow up (Choi, 2018[8]). Policy makers could collaborate with other state/local institutions to devise "integrated policy plans" for a holistic well-being approach and more coherent well-being policies (OECD, 2023, p. 1[46]). For those OECD countries that already have such plans, they can be made more effective by focusing them on a smaller number of concrete cross-cutting issues (OECD, 2023[46]). As the COVID-19 lockdowns and school closures already affected vulnerable children disproportionally, investing in their well-being in a comprehensive manner, by not only tackling the issue at hand but addressing the background and larger barriers is crucial to reduce inequalities (OECD, 2021[17]).

Physical activity

Over the last half-century, there have been a number of improvements to the physical health of children. For example, on average across the OECD, there has been a reduction of rates of accidental death and injury and decline of alcohol consumption (Burns and Gottschalk, 2020[3]). However, decreasing physical activity rates and rising rates of obesity continue to be a challenge. The World Health Organization (WHO) defines physical activity as "any bodily movement produced by skeletal muscles that requires energy expenditure." It refers to all movement, including during leisure time, transportation time, the workday or the school day (World Health Organization, 2022[53]). In the Questionnaire (2022), lack of physical activity was identified by education systems as one of the most pressing challenges regarding children's physical health. This section seeks to understand the data on children's physical activity before, during and after the immediate crisis period of the COVID-19 pandemic.

Moving more can empower children

There is robust and longstanding evidence that children who are physically active have greater overall well-being and are better able to seize life's opportunities. Being physically active is associated with a lower risk of overweight, better overall health, working memory, emotional well-being and academic outcomes (Aston, 2018[54]; World Health Organization, 2022[53]). Meeting these key enabling conditions can support children in exercising their agency, engaging in processes of constructing meaning in their lives and acting on issues that are important to them. Being physically active has also been positively associated with pro-social behaviour, more positive self-perceptions of emotional regulation, and greater perceived capability to sense how others are feeling and to respond empathetically (Parise, Pagani and Cremasco, 2015[55]; Wan, Zhao and Song, 2021[56]). More specifically, participation in sport has many psychological and social health benefits for children, with the most common being improved self-esteem, social interaction and fewer depressive symptoms (Eime et al., 2013[57]; Pearce et al., 2022[58]). Some research even suggests that physical activity may be a promising alternative to conventional treatments for children with both clinical and non-clinical depression (Wegner et al., 2020[59]).

Box 3.2. Promoting healthy journeys through active travel: A chain reaction?

Initiatives and policies can promote more widespread active travel as a way of empowering children. In Denmark, there are generally high levels of active transport for children thanks to campaigns, safe routes to school programmes and a decentralised education system where children live relatively close to their schools (Aubert et al., 2022[60]). Active travel in Denmark is also supported by dedicated funding.

Funded by the Ministry of Transport, Cykelpuljen[3] is a call for proposals that runs annually since 2009 and funds cycling-related community projects under the 2035 Danish infrastructure plan. For example, in 2021, the "Students as traffic experts[4]", project was delivered by the social enterprise *Trafik i Børnehøjde*. It worked with schools and directly asked students to use their experience and problem-solving skills to come up with viable traffic solutions in four municipalities, as well as learning opportunities and inspirational material for teachers to encourage active travel to and from school. Evaluation of the project showed positive perceptions from schools and children. In 2022, DKK 200 million was used to co-finance such projects.

In addition to the positive correlates, physical activity can directly empower children when it leads them to acquire new skills, explore their talents, make friends, and reach goals in a chosen activity or sport (Fenton et al., 2017[61]). For example, there are a positive cascade of social, emotional and health benefits that start with children learning to ride a bicycle, including being less fearful, more motivated to try other physical activities, development of relational and emotional skills and exploration of the environment which enables

greater independence (Mercê et al., 2021[62]). Active travel (Box 3.2) encompasses walking, cycling and other modes of engineless transport. For most children it is financially accessible and has physical, as well as social and mental health benefits (Buttazzoni, Nelson Ferguson and Gilliland, 2023[63]; Ikeda et al., 2020[64]). Several factors may act as barriers to more widespread use of active travel: a poorly maintained or unsuitable built environment, poor traffic safety, low perception of neighbourhood safety and community trust, longer distances to school, dominant local driving culture and poor perception of self-efficacy, among others (Aranda-Balboa et al., 2020[65]; Buttazzoni, Nelson Ferguson and Gilliland, 2023[63]; Nyström et al., 2023[66]; Wangzom, White and Paay, 2023[67]).

By encouraging children to be physically active, education systems, and other actors, are supporting them to take ownership for their learning and well-being, as well giving them opportunities to forge relationships and find roles in local and wider communities, while still allowing them to be children and learn by making mistakes. All these benefits make different forms of physical activity a powerful asset for children as they grow, learn and develop.

The state of play

Even before the pandemic, the picture of physical activity in childhood was stark. Our second volume reviewed the research on physical activity and concluded that 21st century children "move less and weigh more" (Burns and Gottschalk, 2020, p. 24[3]). A review of eight intercontinental initiatives measuring physical activity levels of children found that, although there are substantial inconsistencies across and within monitoring initiatives, three findings were consistent across all eight initiatives: insufficient level of physical activity of children and adolescents across the globe, lower levels of physical activity among girls and attenuation of physical activity levels with age (Aubert et al., 2021[68]).

In terms of the available data, the Global Matrix 4.0[5] represents the largest synthesis of children's and adolescents' physical activity indicators to date, using the best available data from 59 countries. The analysis concluded that 66%-73% of children and adolescents in participating countries are currently not meeting the Global Recommendations on overall Physical Activity for Health[6] per day (Aubert et al., 2022[60]). These data were lowest in Chinese Taipei, Ethiopia, Hungary, Indonesia, Philippines, United Arab Emirates, Uruguay, Viet Nam, and Wales (United Kingdom), where more than 80% of children are failing to reach the recommended level of activity. By contrast, Finland and Slovenia performed highest, with only around 20% of children failing to meet the recommended levels.

The Questionnaire (2022) asked systems to provide brief descriptions of the physical activity challenge in their respective contexts. Systems tended to differ in the extent to which they saw low levels of physical activity as an emerging, stable or growing issue. England (United Kingdom) and Latvia, for example, described low levels of physical activity levels as a stable trend, whereas Ireland and Norway reported that their national survey data tracked decreasing activity. Many systems emphasised the connections between physical activity and healthy diet, as well as awareness of positive correlates such as higher emotional well-being and better life outcomes into adulthood. Italy and the Netherlands both explicitly mentioned equity and the goal of increasing opportunities for physical activity among marginalised students.

Many systems monitor physical activity through national surveys (Box 3.3). Some also reported having initiated policy structures to support data use in physical activity policies. For example, Spain convenes a ministerial working group, which gathers representatives of the regional governments of the Autonomous Communities and monitors physical activity levels. Although national and international monitoring of physical activity among children and adolescents has increased in recent years, there is still a global lack of data (Aubert et al., 2022[60]).

> **Box 3.3. Monitoring physical activity levels through surveys: Three country examples**
>
> The Physical Activity, Sedentarism and Obesity of Spanish youth (PASOS) Study in Spain was a landmark study that became the driving force behind the Spanish government's first-ever nationwide plan to address childhood obesity[7] in 2022. It was a representative survey of 3 887 children aged 8-16 in 247 schools, collected in the months of April, May and June 2019.
>
> The Irish Sports Monitor[8] (ISM) is a large population study undertaken biennially in order to provide trends in participation in sport and physical activity in Ireland. Data collection is done by telephone among a representative sample of the population aged 16 and older. The 'Life skills[9]' survey is a data collection tool covering physical activity in primary and post-secondary education. Reports were released in 2012 and 2015.
>
> In Canada, ways of measuring of proposed measures vary across provinces and territories. For example, the Enquête québécoise sur l'activité physique et le sport[10] (Québec survey on physical activity and sport, EQAPS) is organised by the Québec Statistics Institute. Aimed at children aged 6-17 as well as adults, it uncovered both the barriers and motivations behind physical activity in the region, publishing reports in 2022.
>
> Although they are cost-effective, self-report surveys about physical activity levels are subject to biases and inaccuracies (Do et al., 2022[69]). There is a need for more device-based physical activity data among children and adolescents (Aubert et al., 2021[68]), for example by using accelerometers, as in a study by Salway et al. (2022[70]).
>
> Source: Questionnaire (2022)

Impact of the COVID-19 pandemic

Unsurprisingly, the impact of COVID-19 on levels of physical activity was mentioned as a source of concern by several OECD countries. In terms of empirical data, although some studies find evidence of increased physical activity for certain clusters of children during and after COVID-19 (e.g. (Nathan et al., 2021[71]; Moore et al., 2020[72])), these findings are in the minority (Do et al., 2022[69]). Estimates on the scale of the decreases in physical activity during COVID-19 vary depending on the study sample, scope and method, ranging from declines of 91 minutes per day, to declines of eight minutes per day (Neville et al., 2022[73]; Salway et al., 2022[70]; Rossi, Behme and Breuer, 2021[74]). Overall, the impact of COVID-19 on children's physical activity is likely to be specific to the severity and length of each COVID-19 outbreak and restrictions on a particular geographical population (Nathan et al., 2021[71]). A systematic review by Kharel and colleagues (2022[75]) found that children and adolescents living under stricter lockdowns, for example in Brazil and Spain, saw the biggest declines in physical activity, while those in less-strict lockdowns, such as Western Australia and Germany, saw smaller declines.

An important protective factor appears to have been opportunities to take part in active play. Active play "may involve symbolic activity or games with or without clearly defined rules; the activity may be unstructured/unorganized, social or solitary, but the distinguishing features are a playful context, combined with activity that is significantly above resting metabolic rate. Active play tends to occur sporadically, with frequent rest periods, which makes it difficult to record." (Aubert et al., 2022, p. 702[60]). Despite challenges with gathering the data, findings suggest many younger children engaged in more physical activity during COVID-19, or at least experienced less of a decrease, compared to older children (Moore et al., 2020[72]; Do et al., 2022[69]; Okely et al., 2021[76]; van de Pas et al., 2022[77]). Scholars hypothesise that these age differences may be due to school and sports-based programmes being a greater source of daily physical activity for older children, compared to younger children, where active play tends to be a greater source of

daily activity (Do et al., 2022[69]). A study by Nathan and colleagues (2021[71]) in Western Australia suggests evidence of a compensation effect among younger children, who may have been replacing time lost in organised physical activity with more active play.

The physical environment is a well-known determinant of physical activity levels in both children and adolescents. Beyond active play, better accessibility to existing and new infrastructure for walking, cycling, and public transportation, as well as lower population density, higher public transportation density, better connectivity of streets, access and availability of public open spaces, and quality sports facilities are associated with increased overall physical activity levels (Aubert et al., 2022[60]). These factors also played a role during COVID-19, as closures and restrictions meant the opportunities presented by the home environment took on special importance. For some children, being in rural areas with more space, compared to cities, may have been a protective factor (Okely et al., 2021[76]). Multiple studies found that children living in apartments had greater declines in physical activity (Nathan et al., 2021[71]; Sanmiguel-Rodríguez et al., 2022[78]). For adolescents, living in low-density housing was found to increase the likelihood of outdoor activities, as did living in high-density housing provided there was access to parks (Moore et al., 2020[72]). It is important to note that socio-economic inequalities in physical activity levels were already increasing substantially in many countries in the decade prior to COVID-19 (Reilly et al., 2022[79]). The role played by environmental factors during the pandemic may have increased physical activity inequalities between those children with access to suitable outdoor spaces and those without (Rossi, Behme and Breuer, 2021[74]).

The roles played by the home environment, family members and peers are complex. During the pandemic, research in the UK concluded that the home environment was more conducive to electronic media pursuits than physical activity (Sheldrick et al., 2022[5]). For instance, the amount of media equipment in the home increased by 10% and 17% fewer parents enforced a limit on screen-time (Sheldrick et al., 2022[5]). Many parents in this study also placed more importance on having electronic media equipment at home and in the child's bedroom. Role modelling, co-participation and general support for physical activity are often found to be important when it comes to the physical activity levels of children (Aubert et al., 2022[60]; Rhodes et al., 2020[80]; Petersen et al., 2020[81]). This is also emphasised in the COVID-19 literature, where different caregiver attributes can act as barriers and facilitators to children's level of physical activity. A comparative study of European and Latin American Countries found that children whose parents had higher educational level also had higher levels of physical activity during COVID-19 (Sanmiguel-Rodríguez et al., 2022[78]). Many parents supported and encouraged their children's physical activity, for instance by co-ordinating family activities (e.g. bike rides, hikes and walks) (Perez et al., 2021[82]). In some studies though, parental restrictions were found to have inhibited physical activity through parental time restraints, safety concerns, time and costs constraints (Nally et al., 2022[83]).

Although many important correlates are already known to researchers and policy makers, physical activity as a behaviour is complex and multi-dimensional and the influence of one single individual variable (for example parental physical activity levels) may still be relatively weak (Petersen et al., 2020[81]). To respond to this complexity, parents, schools, public health professionals, communities and businesses must actively collaborate to promote physical activity wherever possible, especially for vulnerable groups (Ng et al., 2020[84]).

Policies and practices

School policies and curricula have the potential to provide opportunities for physical activity through physical education, breaks, in-class and out-of-class physical activities, active travel initiatives, practitioner role modelling and health literacy (Woods et al., 2021[85]; Gelius et al., 2020[86]; World Health Organization, 2022[87]). In the majority of countries and economies that participated in PISA 2015, most students took at least one physical education class per week, on average (OECD, 2017[20]). Students who participated in at least two physical education classes per week exercised about 0.5 days more than students who did

not take physical education classes (OECD, 2019[88]). Importantly, many children enjoy physical activity at school and recognise the benefits. For instance, in PISA 2022, 50% of all students reported that they missed sports and other physical activities organised by their school during COVID-19 school closures (OECD, 2023[4]). Yet, estimates across 59 countries suggest that over 40% of schools are currently not sufficiently supportive of children's physical activity (Aubert et al., 2022[60]). Slovenia (Box 3.4) is one of the top performers internationally when it comes to physical activity of children, with over 80% of children estimated to be reaching the WHO-recommended daily levels (Morrison and Sember, 2021[89]).

Box 3.4. Physical education in Slovenia

The physical education system in Slovenia is highly regulated and children grow up with a tradition of receiving quality physical education. In terms of instruction, attention is paid to developing dedicated teacher capacity and the law states that, from late primary through to secondary school, 100% of physical education classes are taught by teachers with a university degree (Jurak, Starc and Kovac, 2020[90]). The national education regulations also set high standards for facilities and equipment. Every primary school and secondary school must have at least one fully equipped sports hall, including additional outdoor facilities. The regulatory framework promotes accountability, and all schools in Slovenia have written, publicly accessible physical activity policies (Jurak, Starc and Kovac, 2020[90]; Morrison and Sember, 2021[89]).

Schools offer the most effective avenue to increase physical activity among adolescents. Despite longstanding evidence on effective design of physical health interventions (Aston, 2018[54]), school-based interventions are often not sustained for long enough, do not feature multi-component programmes and lack context-specific support for schools to ensure effective implementation (van Sluijs et al., 2021[91]).

In Finland, the role of physical activity in supporting growth, development, and learning of children and adolescents of different ages has been taken into consideration in numerous documents that guide education and teaching. Finland has seen positive developments in physical activity since policies began to emerge in the 2000s. In 2019, government funding allocated to enhance physical activity and sport totalled EUR 159.3 million (Active Healthy Kids Global Alliance, 2022[92]). The proportion of children and adolescents who meet physical activity recommendations has risen consistently since 2002 and the share of those who are less physically active has fallen (Active Healthy Kids Global Alliance, 2022[92]). National promotion programmes aim to foster a culture of physical activity in educational institutions (Box 3.5).

Box 3.5. Co-ordinated multi-component programmes in Finland

The On the Move programme[11], comprising sub-programmes *Families on the Move*, *Joy in Motion*, *Schools on the Move*, *Students on the Move*, *Adults on the Move* and *On the Move in Perpetuity* are the national promotion programmes for physical activity and physical exercise. The aim is to promote a physically active lifestyle for different age and demographic groups. Sports policy is managed across administrative sectors by the co-ordination body for sport policy (LIPOKO), providing inter-ministerial co-ordination and co-operation. The programmes are funded by the Ministry of Education and Culture. At present, more than 90% of Finnish schools participate in the programme.

The Finnish Model for Leisure Activities[12] is another project that aims to enable every child and young person to have a leisure activity that they enjoy in connection with the school day, free of charge. This model combines consultation of children and adolescents, co-ordination of existing good practices, and co-operation between schools and actors in leisure activities.

Schools as a space to create and support relationships

On a typical school day, the time most children spend with their school friends and teachers often exceeds the time they spend with their families (Cemalcilar, 2010[93]; Parinduri, 2014[94]). Thus, while schools' primary aim is to educate, they also serve as an integral part of the social fabric in children's lives, contributing to their psychological, social and academic development (Burns and Gottschalk, 2020[3]). Positive relationships are good for all people, laying part of the foundation for a fulfilling and healthy life (Burns and Gottschalk, 2019[6]; Holt-Lunstad, 2018[95]). Supportive social relations can be empowering for children, motivating them to engage in both in- and out-of-class activities, perform to the best of their abilities and enhance their enthusiasm for learning. These relationships can encourage good health practices and can serve as a buffer against many of life's challenges (Denham, 2007[96]; Gadermann et al., 2015[97]). The absence of healthy social connections is associated with feelings of unhappiness and loneliness, potentially contributing to mental health and socio-economic risks that can persist into adulthood (Asher and Paquette, 2003[98]; OECD, 2021[99]).

Navigating social connections in a COVID-19 affected world

The COVID-19 pandemic and subsequent lockdowns marked the first time in decades when most children worldwide were physically separated from their primary socialisation contexts. These sudden changes were associated with increases in feelings of loneliness, mental health issues and 'touch-hunger' (the feeling individuals experience when lacking physical contact with others) (Bussières et al., 2021[100]; Golaya, 2021[101]; Serafini et al., 2020[102]). Despite opportunities for digital interactions, some adolescents reported negative impacts from a lack of in-person interactions during COVID-19, including reduced emotional connections (Rogers, Ha and Ockey, 2021[103]). Research after the peak of the pandemic suggests that some students continue to grapple with social anxiety and face-to-face interaction, which can be detrimental for social, academic and personal development of individuals (Ni and Jia, 2023[104]).

The OECD measured the social and emotional skills of 10- and 15-year-olds before (2019) and after (2023) the COVID-19 emergency in two cities (Helsinki, Finland and Bogota, Colombia) (OECD, 2024[24]). In both cities, 10- and 15-year-olds reported lower levels of most skills in 2023 compared to 2019. This was particularly the case for skills such as tolerance, creativity and curiosity but also for responsibility, self-control, trust and sociability (OECD, 2024[24]).

Positive interaction and physical presence of both teachers and peers in school is important for children's developmental well-being and life satisfaction (Ansari, Hofkens and Pianta, 2020[105]; Bambaeeroo and Shokrpour, 2017[106]; OECD, 2023[4]). Physical contact can provide people with reassurance and comfort in times of distress and has positive effects on their mental health. Conversely, a lack of physical contact has been associated with symptoms of anxiety, depression or even self-injurious behaviour (Durkin, Jackson and Usher, 2021[107]). This highlights the importance of schools as physical spaces that facilitate personal connections and relationships, including long-lasting friendships and interactions between students and teachers (Ni and Jia, 2023[104]).

Making friends is a life changer

Friendships represent a form of social relationship that is essential to the development of children. Friends occupy a significant portion of their time and attention, while providing social, emotional and functional support (Burns and Gottschalk, 2019[6]). Furthermore, friends hold a crucial role as influencers on children's behaviours, goals and attitudes, whether through modelling or peer pressure (Poulin and Chan, 2010[108]; Rambaran et al., 2016[109]). For instance, during early childhood, friends play a crucial role in fostering social skills such as turn-taking, sharing, conflict resolution and interpreting social cues (Kemple, 2005[110]). The positive influence from these friendships may contribute to higher attendance rates and greater

happiness in schools, ultimately impacting a child's overall well-being (Berndt, 1999[111]; Ng-Knight et al., 2018[112]).

Friendship patterns evolve as a child grows up (Carter, 2021[113]). Friendships during early childhood often centre around shared activities and characteristics, such as playing certain games or using equipment (Dunn, 2004[114]). In early childhood, belonging to a peer group is less significant, but as children grow older, they become increasingly aware and concerned about peer acceptance, and peer rejection is linked to feelings of loneliness in childhood (Qualter et al., 2015[115]). During early adolescence, factors such as identity concerns and peer status gain prominence (Echols and Ivanich, 2021[116]). Concepts of reciprocity, loyalty and problem-solving skills emerge, leading to a more mature and selective understanding of friendship (Poulin and Chan, 2010[108]).

Facetime or face-to-face time: Friendships during the pandemic

Prior to the COVID-19 pandemic, the digital environment had already become crucial for children forming and consolidating friendships. Activities such as liking pictures and chatting online had become a routine part of many children's lives (Burns and Gottschalk, 2019[6]). During the COVID-19 lockdowns, the digital environment continued to play a significant role in the realm of friendships, including with friends made offline, as they could connect with each other at anytime from anywhere (Scott, Stuart and Barber, 2021[117]). Research suggests that having communicated with friends and feeling supported by friends was one way that helped children to manage pandemic-related challenges (Espinoza and Hernandez, 2022[118]). However, the quality of friendship did matter. A two-year longitudinal study conducted among 250 adolescents (aged 11-16) in the Netherlands suggested that overall internalising problems increased but adolescents with higher friendship quality had fewer internalising problems during the COVID-19 lockdowns and could maintain social ties via digital tools (Koele et al., 2023[119]).

Schools play an important role in establishing relationships through face-to-face opportunities. In a qualitative study of children aged 5-14 in Québec (Canada), school emerged as the element most missed by children during the pandemic (Larivière-Bastien et al., 2022[120]). Over two-thirds of the participants expressed their eagerness to return to school, with about half of them citing the social aspects (e.g. wanting to see their friends and/or reconnect with teachers) as the primary reason for this. Older children in particular noted that school enables them to socialise beyond their families. These findings underscore the key role schools play in being a social space outside the family. Parents also value the friendships and connections formed through the school that add to the life opportunities of children (McGrath, 2023[121]).

Box 3.6. Charting the loneliness labyrinth

Loneliness is a subjective emotional state characterised by a longing for human connection (Perlman and Peplau, 1982[122]; Weiss, 1973[123]).The Questionnaire (2022) revealed that around three-quarters of respondent systems identified loneliness and isolation as a challenge. These concerns are supported by research. For instance, a survey conducted with 1 143 parents of children aged 3 to 18 in Italy and Spain revealed that parents reported noticeable changes in their child's emotions and behaviour during the COVID-19 lockdowns. Of those surveyed, 31.3% reported an increase in feelings of loneliness among their children (Orgilés et al., 2020[124]). The absence of friends is associated with children being excluded from social activities and potentially feeling estranged from their peers. This exclusion from social activities is closely linked to social isolation, which poses a risk to children's mental health and overall social and emotional well-being due to potential lasting effects on the developing brain (Brandt et al., 2022[125]).

While occasional loneliness is a universal experience, it is most prevalent during adolescence, early adulthood and old age (OECD, 2021[99]). In adolescence, the need for social approval intensifies as

---

adolescents seek both close friendships and broader peer group acceptance. Factors such as a lack of friends, poor friendship quality, peer rejection and victimisation can predict feelings of loneliness (Qualter et al., 2015[115]). Next to individual factors for loneliness, the school environment is likely to be the most significant socio-environmental context for adolescents and feeling lonely. Therefore, it might be unsurprising that research found an increase in feelings of loneliness for most individuals during the COVID-19 pandemic (findings did vary depending on context and method used) (Ernst et al., 2022[126]; Farrell et al., 2023[127]). PISA 2003 found that 8% of 15-year olds felt lonely while at school (OECD, 2004[128]), in PISA 2018 this figure was 15% (OECD, 2019[23]). PISA 2022 reported that 16% of students felt lonely while at school, however 40% of students reported feeling lonely when schools were closed (OECD, 2023[4]). These data point to the crucial social role played by schools for students.

More teacher support, a co-operative atmosphere at school and social support from peers are associated with a lower risk of loneliness (Morin, 2020[129]; Schnepf, Boldrini and Blaskó, 2023[130]). For instance, teaching children how to initiate, maintain, and end interactions, along with providing conflict resolution and social problem-solving skills, can mitigate loneliness (OECD, 2021[99]). Such intentional efforts to encourage co-operation, enhance self-esteem, and develop relational skills can contribute to a warmer and more inclusive school environment.

The importance of positive connections between teachers and students

Teachers occupy an important role as adult figures within the school environment and in fostering children's empowerment. Establishing positive teacher-student relationships (TSRs) characterised by mutual respect, support and care, has been strongly correlated to various positive outcomes. These include increased academic motivation and autonomy, fostering positive attitudes towards schooling, boosting self-esteem and encouraging pro-social behaviours (Li, Bergin and Olsen, 2022[131]; OECD, 2021[132]; Quin, 2017[133]; Thapa et al., 2013[134]). Moreover, PISA 2022 results show that students who reported more support from teachers and a better disciplinary climate in mathematics lessons reported higher levels of well-being (OECD, 2023[4]).

One potential explanation for the positive relationship between TSRs and student engagement and achievement is rooted in self-determination theory. According to this theory, caring relationships fulfil a fundamental, innate need for connection or a sense of belonging with others (Ryan and Deci, 2017[135]). When this need for connection is met within a specific context, such as the classroom, children tend to display higher motivation to engage in adaptive behaviours, actively participate in tasks, demonstrate persistence in the face of challenges, and respond creatively to obstacles encountered within that environment (Li, Bergin and Olsen, 2022[131]; Niemiec and Ryan, 2009[136]). It is important to acknowledge that TSRs differ between primary and secondary schools. In primary school, students typically form a close relationship with one primary classroom teacher, while at the secondary level students often interact with multiple teachers throughout the day (Quin, 2017[133]). Consequently, the roles and dynamics of TSRs are likely to differ between primary and secondary school settings.

Zoom(ed) in: Teacher-student relationships and COVID-19

The COVID-19 restrictions led to online education becoming the norm for most students during this time (OECD, 2020[137]). This transition had both positive and negative consequences for TSRs. On the one hand, during the pandemic some teachers reported that the new educational landscape allowed for more efficient and effective interactions with their students, utilising tools such as chat groups, video meetings and document sharing (Pham and Phan, 2022[138]; World Economic Forum, 2020[139]). Likewise, some students found it more convenient to contact their teachers using digital platforms. On the other hand, online classes led to limited daily physical and emotional interaction, which was associated with increased loneliness and decreased motivation for students (Mazrekaj and De Witte, 2023[140]; Tiwari et al., 2021[141]).

One explanation for this is that positive TSRs are often more effective in a physical classroom setting, where teachers can closely observe and monitor each student, thereby providing better assistance (Li, Bergin and Olsen, 2022[131]). OECD data from the 2023 Survey on Social and Emotional Skills finds that, on average, around 15% of surveyed students are not satisfied with the relationships they have with their classmates and teachers (OECD, 2024[24]). However, students with higher levels of social and emotional skills are generally more satisfied with their relationships (OECD, 2024[24]).

Box 3.7. Traditional bullying and cyberbullying

For almost 90% of respondent systems in the Questionnaire (2022), bullying and cyberbullying were reported as key challenges regarding children's emotional well-being. Traditional bullying and cyberbullying are negatively associated with emotional well-being in children, including symptoms of depression and anxiety, and low self-esteem (Gottschalk, 2022[142]; Vaillancourt et al., 2023[143]; Wolke and Lereya, 2015[144]). As per PISA 2022, 20% of students in OECD countries indicated experiencing bullying at least a few times a month (OECD, 2023[4]). This marks a very small improvement from the PISA 2018 findings, where 23% of students reported similar experiences of being bullied regularly (OECD, 2019[23]).

According to Vaillancourt and colleagues (2023[143]), several studies have shown notable decline in the incidence of bullying during the COVID-19 pandemic, both being victimised and perpetrating bullying, particularly when schools adopted online learning (Bacher-Hicks et al., 2022[145]; Repo, Herkama and Salmivalli, 2022[146]; Vaillancourt et al., 2021[147]; Yang et al., 2021[148]). However, in countries with fewer social restrictions, some studies reported an increase in bullying rates during the pandemic (Forsberg and Thorvaldsen, 2022[149]; Patchin and Hinduja, 2022[150]; Xie et al., 2023[151]).

Relationships are key factors in mitigating the effects of traditional and cyberbullying on children (Gottschalk, 2022[142]; Kendrick, Jutengren and Stattin, 2012[152]). Positive TSRs are associated with a reduced risk of traditional and cyberbullying as teachers are more motivated to assist and develop effective coping and conflict management skills, fostering a positive classroom climate (Longobardi et al., 2021[153]). Additionally, peer support plays a crucial role as a protective measure against victimisation. It can also moderate the relationship between being cyberbullied and subjective health complaints (Gottschalk, 2022[142]; Hellfeldt, López-Romero and Andershed, 2019[154]). Nurturing these relationships should form part of a whole-school approach involving policy, practice and external actors.

Shaping empowering school environments: Initiatives in OECD countries

The Questionnaire (2022) revealed that many OECD countries are actively working to improve social skills and create secure, empowering environments for students and teachers by implementing policies aimed at creating safe and inclusive school communities. One example is the "Warme scholen[13]" (*Warm Schools*) project in the Flemish Community of Belgium. This project aims to create an inclusive school environment, prioritising student well-being and development of social skills. By providing schools with established building blocks, steppingstones and tools, Warme Scholen offers the necessary support and guidance for schools to begin creating a more harmonious and inclusive learning environment. Participating schools have reported more specific help for each child, increased overall well-being, and better relations between students and teachers, ultimately leading to a more inclusive learning environment.

In Canada, the Government of Newfoundland and Labrador has adopted the Responsive Teaching and Learning Policy[14], which underscores the Department of Education's commitment to guiding education in creating a secure, inclusive and healthy school community. This policy provides opportunities for both students and teachers to engage in collaborative inquiry cycles, facilitating continuous improvement in teaching practices and pro-active responses to student learning needs. Also in Canada, the "ÉKIP[15]"

programme in Québec, jointly developed by the Ministry of Education, Ministry of Health and Social Services and the National Institute of Public Health Québec, actively promotes the development of personal and social skills, with a particular focus on enhancing pro-social behaviours. It constitutes a comprehensive intervention approach designed to support action planning in schools, with co-ordination among stakeholders in the health and social services networks, education, as well as engagement with families and the broader community.

Some OECD countries have also collaborated to learn from each other. The "Learning to Be[16]" project was an experimental initiative funded by the European Union through Erasmus+, spanning from 2017 to 2020. It brought together education authorities, teachers and researchers from Finland, Italy, Latvia, Lithuania, Portugal, Slovenia and Spain. The primary focus of the project was the development of assessment methods and toolkits designed to facilitate the recognition of social and emotional skills within education systems. For example, the research design included pre- and post-intervention surveys assessing the social and emotional skills, beliefs and relationships of teachers and students (between the ages 9-10 and 13-14 years old) in the 200 participating schools. These efforts served as a foundation for further development of education policies and practices integrated into national curricula in participating systems. The project's overarching goals were to enhance the quality of social and emotional skills education, promote social cohesion and strengthen students' social and emotional skills within general education.

The Netherlands Youth Institute[17] (Nederlands Jeugdinstituut) is the national knowledge centre that collects, enriches, interprets and shares up-to-date knowledge about childhood and youth. It maintains a list of 334 proven effective interventions on different youth topics to promote evidence-based programmes that aim to create a safe social environment in schools. One such programme is KiVa[18], originally from Finland and now adopted in many Dutch schools. It is a preventive multi-component anti-bullying programme. The programme targets social skills such as emotion recognition, empathy, pro-social behaviour and how to behave in bullying situations. At the school level, the entire staff receives KiVa training. At the classroom level, KiVa offers support for adequate classroom management and positive social group formation, which is done through lessons on themes such as peer pressure, communication, respect and bullying. At the student level, social and emotional development is stimulated.

Learning from experience

The COVID-19 pandemic reaffirmed the crucial role that schools play in the holistic development, well-being and empowerment of children globally. As physical spaces for social connections, they are key focal points for educational policies targeting social well-being. Intervention and educational policies targeting loneliness reduction should address bullying in schools, encourage a more co-operative climate between student's peers and should advocate for increased teacher support for students within the school setting (Schnepf, Boldrini and Blaskó, 2023[130]). Additionally, the pandemic has accelerated the digital transformation of relationships. This brings fresh emphasis onto the need for balanced social skills development both online and offline, which had already been well-established in the research literature before the crisis (Mesch, 2019[155]).

The research supports the importance of relationships for a supportive school climate and the role of school climate in reducing disrupting issues such as loneliness and bullying (traditional and cyber) among students. However, numerous studies concentrate solely on one or two areas of school climate. This makes it difficult to determine which domains, dimensions, or combinations of dimensions have the most influence on different types of student outcomes. For instance, there is limited understanding of the impact of academic climate on emotional well-being, and even less is known about the influence of institutional features such as levels of school autonomy or teacher working conditions. Further studies are needed to explore the unique contributions of each dimension and the interactions between dimensions in shaping psychological and long-term outcomes for children (Wang and Degol, 2015[156]).

COVID-19 and children's well-being – Reflection tool

The pandemic exacerbated long term well-being issues in many countries' education systems.

Even before COVID-19, empirical studies observed increasing trends in depression and anxiety among children in OECD countries. They also observed insufficient levels of physical activity of children across the globe, especially among girls and older children.

Half of all students in PISA reported that they missed sports and other physical activities while schools were closed. Younger children were better able to compensate with more active play, compared to older children.

The pandemic has accelerated the digital transformation of relationships, highlighting the significance of balancing social skill development both online and offline.

Lockdowns reaffirmed the crucial role that schools play in the holistic development, well-being and empowerment of children.

In addition to individual factors, the school environment is likely to be the most significant socio-environmental context affecting whether adolescents feel lonely.

Schools play a key role in being a social space outside the family and positive teacher student relationships are often more effective in a physical classroom setting.

Students who reported getting more support from their schools during closures reported greater well-being, life satisfaction and less mathematics anxiety.

Children's COVID experiences highlight pre-existing psychological, social, environmental and global protective and risk factors for well-being.

Children from lower socio-economic backgrounds, with limited space at home, with existing physical or mental health issues, belonging to ethnic minorities, with an immigrant background or belonging to a marginalised group were more likely to report an increase in anxiety symptoms during the pandemic.

Better accessibility to infrastructure for walking, cycling, and public transportation, lower population density, better connectivity of streets, access and availability of public spaces, and quality sports facilities are associated with increased physical activity levels in children.

Students who possess a "growth mindset" feel more empowered, have a greater sense of agency and may be more emotionally resilient.

OECD countries are already actively working to improve social skills and create secure, empowering environments but these efforts can be reinforced.

As the lockdowns and school closures already affected vulnerable children disproportionally, investing in children's well-being in a comprehensive manner, by not only tackling the issue at hand but addressing the background and larger barriers is crucial to reduce inequalities.

Incorporating children into planning COVID-19 recovery efforts may help build resilience to future crises by encouraging the development of psychological skills and providing community-based support.

Many education systems use surveys to monitor the well-being of children. Although cost-effective, self-reported surveys are subject to biases and inaccuracies. There is a need for more robust data among children and adolescents. For example, using accelerometers to measure physical activity levels.
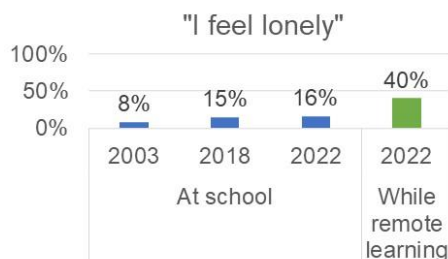
Reflecting on COVID-19 and well-being

DATA & TRENDS

Levels of depression, anxiety and loneliness were already increasing before the pandemic. Levels of physical activity were low for most children.

Research suggests that these trends accelerated for many children during the pandemic.

"I feel lonely"

	2003	2018	2022	2022
	8%	15%	16%	40%
	At school			While remote learning

Source: OECD, PISA 2003/2018/ 2022 Databases.

EMPOWERMENT

Opportunities

Multi-component interventions working at the school, classroom and student level have been shown to be effective.

The pause from the pandemic offers an opportunity to involve children in reimagining what well-being policies in schools could look like.

Challenges

A more widely accepted well-being framework is necessary to provide holistic measurement and research-informed policy and practice.

Resources are often scarce and effective interventions require significant investment.

What can governments do?

Emotional well-being
- ❑ Prioritise **partnerships and co-ordination** with external actors and community and experts to increase the efficiency and quality of intervention delivery.
- ❑ Ensure **a repository of evidence-based effective practices** is accessible to practitioners, adapted to their context and provide capacity building for its use.
- ❑ Build **overall student resilience** by cultivating positive psychological habits, such as a growth mindset.

Physical Activity
- ❑ Coordinate a set of programmes that **target the whole of society**, including adults.
- ❑ **Incorporate more physical activity into the school day** through breaks, physical education and extracurricular activities.
- ❑ **Enhance accessibility and quality of school outdoor spaces** that encourage exercise and play.

Schools as a social space
- ❑ **Meaningfully engage** students, parents and teachers to better understand how to promote and use schools as social hubs.
- ❑ Implement **anti-bullying programmes** to create a safe and supportive school culture.
- ❑ Provide **resources and training** for teachers to create inclusive classrooms.

Why not organise a collegial consultation to talk about COVID-19 and well-being?

Principal Rodriguez leads a mid-sized primary school in a major city. The student population of the school is mixed and includes several refugee students. Pondering on the worrying results of a national survey about the impact of the pandemic on student emotional well-being, physical activity levels and teacher/ peer relationships, Principal Rodriguez recognises some of the findings in her own school context and wants to understand what can be done. She recalls a conversation with a colleague at a conference about a method called Collegial Consultation (Cain, 2018[157]). The approach seeks to solve concrete issues by combining professional knowledge and research evidence. She decides to organise such a consultation with her teaching staff and drafts an invitation, outlining the aims, agenda and the following reflection questions in the email:

- How have you observed COVID-19 impacting our students' emotional well-being, physical activity and relationships?
- What strategies have you implemented to counter negative changes among students?
- Which additional resources or research could provide valuable insights?

The day of the consultation arrives, and the teaching staff gather in the school's conference room. Principal Rodriguez asks participants to split into groups of 5-10 and assigns one member of staff to each group as a facilitator to lead them through the following agenda:

1. Each member of the group writes down an actual problem they have in their professional practice relating to students' emotional well-being, physical activity and/ or relationships. The group democratically chooses one problem for inquiry (no time limit).
2. The owner of the problem describes it in as much detail as possible (3 minutes).
3. Each person in the group then asks one question, to which the owner responds (no time limit).
4. The owner of the problem steps slightly away and takes no further part in the discussion but listens and takes notes as the other group members discuss the problem and bring in relevant research that might help (10-30 minutes).
5. Each group member then writes down a message to the owner of the problem (3 minutes).
6. The group members read this message aloud in turn, resisting the urge to expand on what they have written. The owner of the problem then reflects on all they have heard and responds to these messages, asking themselves:
   a) Does this collegial knowledge reflect my own experiences? How does it differ?
   b) How do colleagues' messages relate to what I already do? What could I change?

The teaching staff then return to plenary format (1 hour) to present the challenges and draft a school-level action plan to address them. Principal Rodriguez facilitates the process, asking:

- What research-informed, actionable steps can we take to prioritise students' quality relationships and well-being in our school?
- How can we leverage existing resources, partnerships and professional development?
- How will we measure the effectiveness of the action plan?
- What further evidence do we need before intervening and where might we find it?
- How can we meaningfully involve students in developing and implementing the plan?

References

Active Healthy Kids Global Alliance (2022), *Finland's Report Card 2022: Physical Activity of Children and Youth*, JAMK University of Applied Sciences., https://www.activehealthykids.org/wp-content/uploads/2022/03/Finland-report-card-long-form-2022.pdf (accessed on 25 Janaury 2024). [92]

Ansari, A., T. Hofkens and R. Pianta (2020), "Teacher-student relationships across the first seven years of education and adolescent outcomes", *Journal of Applied Developmental Psychology*, Vol. 71/101200, pp. 1-12, https://doi.org/10.1016/j.appdev.2020.101200. [105]

Aranda-Balboa, M. et al. (2020), "Parental barriers to active transport to school: a systematic review", *International Journal of Public Health*, Vol. 65/1, pp. 87-98, https://doi.org/10.1007/s00038-019-01313-1. [65]

Asher, S. and J. Paquette (2003), "Loneliness and Peer Relations in Childhood", *Current Directions in Psychological Science*, Vol. 12/3, pp. 75-78, https://doi.org/10.1111/1467-8721.01233. [98]

Aston, R. (2018), "Physical health and well-being in children and youth: Review of the literature", *OECD Education Working Papers*, No. 170, OECD Publishing, Paris, https://doi.org/10.1787/102456c7-en. [54]

Aubert, S. et al. (2022), "Global Matrix 4.0 Physical Activity Report Card Grades for Children and Adolescents: Results and Analyses From 57 Countries", *Journal of Physical Activity and Health*, Vol. 19/11, pp. 700-728, https://doi.org/10.1123/jpah.2022-0456. [60]

Aubert, S. et al. (2021), "Global prevalence of physical activity for children and adolescents; inconsistencies, research gaps, and recommendations: a narrative review", *International Journal of Behavioral Nutrition and Physical Activity*, Vol. 18/1, https://doi.org/10.1186/s12966-021-01155-2. [68]

Bacher-Hicks, A. et al. (2022), "The COVID-19 Pandemic Disrupted Both School Bullying and Cyberbullying", *American Economic Review: Insights*, Vol. 4/3, pp. 353-370, https://doi.org/10.1257/aeri.20210456. [145]

Bambaeeroo, F. and N. Shokrpour (2017), "The Impact of the Teachers' non-verbal Communication on Success in Teaching", *J Adv Med Educ Prof.*, Vol. 5/2, pp. 51-59, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5346168/pdf/JAMP-5-51.pdf. [106]

Berndt, T. (1999), "Friends' influence on students' adjustment to school", *Educational Psychologist*, Vol. 34/1, pp. 15-28, https://doi.org/10.1207/s15326985ep3401_2. [111]

Brandt, L. et al. (2022), "The effects of social isolation stress and discrimination on mental health", *Translational Psychiatry*, Vol. 12/1, pp. 1-11, https://doi.org/10.1038/s41398-022-02178-4. [125]

Burns, T. and F. Gottschalk (eds.) (2020), *Education in the Digital Age: Healthy and Happy Children*, Educational Research and Innovation, OECD Publishing, Paris, https://doi.org/10.1787/1209166a-en. [3]

Burns, T. and F. Gottschalk (eds.) (2019), *Educating 21st Century Children: Emotional Well-being in the Digital Age*, Educational Research and Innovation, OECD Publishing, Paris, https://doi.org/10.1787/b7f33425-en. [6]

Bussières, E. et al. (2021), "Consequences of the COVID-19 Pandemic on Children's Mental Health: A Meta-Analysis", *Frontiers in Psychiatry*, Vol. 12/691659, pp. 1-10, https://doi.org/10.3389/fpsyt.2021.691659. [100]

Buttazzoni, A., K. Nelson Ferguson and J. Gilliland (2023), "Barriers to and facilitators of active travel from the youth perspective: A qualitative meta-synthesis", *SSM - Population Health*, Vol. 22, p. 101369, https://doi.org/10.1016/j.ssmph.2023.101369. [63]

Cain, T. (ed.) (2018), *Becoming a Research-Informed School*, Routledge, https://doi.org/10.4324/9781315143033. [157]

Capurso, M. et al. (2021), "Student and Teacher Evaluation of a School Re-entry Program Following the Initial Covid19 Lockdown", *Canadian Journal of School Psychology*, Vol. 36/4, pp. 376-393, https://doi.org/10.1177/08295735211037805. [42]

Capurso, M. et al. (2020), "Empowering Children Through School Re-Entry Activities After the COVID-19 Pandemic", *Continuity in Education*, Vol. 1/1, p. 64, https://doi.org/10.5334/cie.17. [41]

Carter, C. (2021), "Navigating young children's friendship selection: implications for practice", *International Journal of Early Years Education*, Vol. 31/2, pp. 519-534, https://doi.org/10.1080/09669760.2021.1892600. [113]

Cemalcilar, Z. (2010), "Schools as Socialisation Contexts: Understanding the Impact of School Climate Factors on Students' Sense of School Belonging", *Applied Psychology*, Vol. 59/2, pp. 243-272, https://doi.org/10.1111/j.1464-0597.2009.00389.x. [93]

Choi, A. (2018), "Emotional well-being of children and adolescents: Recent trends and relevant factors"*, OECD Education Working Papers*, No. 169, OECD Publishing, Paris, https://doi.org/10.1787/41576fb2-en. [8]

Crandon, T. et al. (2022), "A social–ecological perspective on climate anxiety in children and adolescents", *Nature Climate Change*, Vol. 12/2, pp. 123-131, https://doi.org/10.1038/s41558-021-01251-y. [31]

Delgado, A. et al. (2022), "The Importance of In Person School Activities Despite COVID-19: A Review of the Literature", *Medical Research Archives*, Vol. 10/5, https://doi.org/10.18103/mra.v10i5.2784. [34]

Denham, S. (2007), "Dealing with Feelings: How Children Negotiate the Worlds of Emotions and Social Relationships", *Romanian Association for Cognitive Science: Cognition, Brain, Behavior*, Vol. 11/1, pp. 1-48, https://thegreenwill.org/wp-content/uploads/2015/05/dealing-with-feelings.pdf. [96]

Do, B. et al. (2022), "Youth physical activity and the COVID-19 pandemic: A systematic review", *Preventive Medicine Reports*, Vol. 29, p. 101959, https://doi.org/10.1016/j.pmedr.2022.101959. [69]

Dunn, J. (2004), *Children's Friendships: The Beginning of Intimacy*, Blackwell Publishing, Oxford. [114]

Durkin, J., D. Jackson and K. Usher (2021), "Touch in times of COVID-19: Touch hunger hurts", *Journal of Clinical Nursing*, Vol. 30/e4-e5, pp. 1-2, https://doi.org/10.1111/jocn.15488. [107]

Echols, L. and J. Ivanich (2021), "From "Fast Friends" to True Friends: Can a Contact Intervention Promote Friendships in Middle School?", *Journal of Research on Adolescence*, Vol. 31/4, pp. 1152-1171, https://doi.org/10.1111/jora.12622. [116]

Eime, R. et al. (2013), "A systematic review of the psychological and social benefits of participation in sport for children and adolescents: informing development of a conceptual model of health through sport", *International Journal of Behavioral Nutrition and Physical Activity*, Vol. 10/1, p. 98, https://doi.org/10.1186/1479-5868-10-98. [57]

Ernst, M. et al. (2022), "Loneliness before and during the COVID-19 pandemic: A systematic review with meta-analysis.", *American Psychologist*, Vol. 77/5, pp. 660-677, https://doi.org/10.1037/amp0001005. [126]

Espinoza, G. and H. Hernandez (2022), "Adolescent loneliness, stress and depressive symptoms during the COVID-19 pandemic: The protective role of friends", *Infant and Child Development*, Vol. 31/3, pp. 1-13, https://doi.org/10.1002/icd.2305. [118]

Farrell, A. et al. (2023), "Loneliness and Well-Being in Children and Adolescents during the COVID-19 Pandemic: A Systematic Review", *Children*, Vol. 10/2, pp. 1-31, https://doi.org/10.3390/children10020279. [127]

Fenton, S. et al. (2017), "Empowering youth sport environments: Implications for daily moderate-to-vigorous physical activity and adiposity", *Journal of Sport and Health Science*, Vol. 6/4, pp. 423-433, https://doi.org/10.1016/j.jshs.2016.03.006. [61]

Fleming, T. et al. (2020), *Youth19 Rangatahi Smart Survey, Initial Findings: Hauora Hinengaro / Emotional and Mental Health*, The Youth19 Research Group, The University of Auckland and Victoria University of Wellington, New Zealand, https://www.fmhs.auckland.ac.nz/assets/fmhs/faculty/ahrg/docs/2020/Youth19-Initial-Findings-Intro-and-Method.pdf (accessed on 23 February 2024). [22]

Forsberg, J. and S. Thorvaldsen (2022), "The severe impact of the COVID-19 pandemic on bullying victimization, mental health indicators and quality of life", *Scientific Reports*, Vol. 12/22634, pp. 1-11, https://doi.org/10.1038/s41598-022-27274-9. [149]

Gadermann, A. et al. (2015), "A Population-Based Study of Children's Well-Being and Health: The Relative Importance of Social Relationships, Health-Related Activities, and Income", *Journal of Happiness Studies*, Vol. 17/5, pp. 1847-1872, https://doi.org/10.1007/s10902-015-9673-1. [97]

Gee, K., V. Asmundson and T. Vang (2023), *Educational impacts of the COVID-19 pandemic in the United States: Inequities by race, ethnicity, and socioeconomic status*, https://doi.org/10.1016/j.copsyc.2023.101643. [35]

Gelius, P. et al. (2020), "What are effective policies for promoting physical activity? A systematic review of reviews", *Preventive Medicine Reports*, Vol. 18, p. 101095, https://doi.org/10.1016/j.pmedr.2020.101095. [86]

Golaya, S. (2021), "Touch-Hunger: An Unexplored Consequence of the COVID-19 Pandemic", *Indian Journal of Psychological Medicine*, Vol. 43/4, pp. 362-363, https://doi.org/10.1177/02537176211014469. [101]

Gottschalk, F. (2022), "Cyberbullying: An overview of research and policy in OECD countries", *OECD Education Working Papers*, No. 270, OECD Publishing, Paris, https://doi.org/10.1787/f60b492b-en. [142]

Hawes, M. et al. (2022), "Increases in depression and anxiety symptoms in adolescents and young adults during the COVID-19 pandemic", *Psychological Medicine*, Vol. 52/14, pp. 3222-3230, https://doi.org/10.1017/S0033291720005358. [14]

Hellfeldt, K., L. López-Romero and H. Andershed (2019), "Cyberbullying and Psychological Well-being in Young Adolescence: The Potential Protective Mediation Effects of Social Support from Family, Friends, and Teachers", *International Journal of Environmental Research and Public Health*, Vol. 17/1, p. 45, https://doi.org/10.3390/ijerph17010045. [154]

Hickman, C. et al. (2021), "Climate anxiety in children and young people and their beliefs about government responses to climate change: a global survey", *The Lancet Planetary Health*, Vol. 5/12, pp. e863-e873, https://doi.org/10.1016/s2542-5196(21)00278-3. [25]

Hoffman, J. and E. Miller (2020), "Addressing the Consequences of School Closure Due to COVID-19 on Children's Physical and Mental Well-Being", *World Medical & Health Policy*, Vol. 12/3, pp. 300-310, https://doi.org/10.1002/wmh3.365. [40]

Holt-Lunstad, J. (2018), "Why Social Relationships Are Important for Physical Health: A Systems Approach to Understanding and Modifying Risk and Protection", *Annual Review of Psychology*, Vol. 69/1, pp. 437-458, https://doi.org/10.1146/annurev-psych-122216-011902. [95]

Ikeda, E. et al. (2020), "Keeping kids safe for active travel to school: A mixed method examination of school policies and practices and children's school travel behaviour", *Travel Behaviour and Society*, Vol. 21, pp. 57-68, https://doi.org/10.1016/j.tbs.2020.05.008. [64]

Janssen, T. and N. van Atteveldt (2023), "Coping styles mediate the relation between mindset and academic resilience in adolescents during the COVID-19 pandemic: a randomized controlled trial", *Scientific Reports*, Vol. 13/1, https://doi.org/10.1038/s41598-023-33392-9. [45]

Kearney, C. et al. (2023), "School attendance problems and absenteeism as early warning signals: review and implications for health-based protocols and school-based practices", *Frontiers in Education*, Vol. 8, https://doi.org/10.3389/feduc.2023.1253595. [36]

Kemple, K. (2005), *Let's Be Friends. Peer Competence and Social Inclusion in Early Childhood Programs*, Teachers College Press, New York. [110]

Kendrick, K., G. Jutengren and H. Stattin (2012), "The protective role of supportive friends against bullying perpetration and victimization", *Journal of Adolescence*, Vol. 35/4, pp. 1069-1080, https://doi.org/10.1016/j.adolescence.2012.02.014. [152]

Kharel, M. et al. (2022), "Impact of COVID-19 pandemic lockdown on movement behaviours of children and adolescents: a systematic review", *BMJ Global Health*, Vol. 7/1, p. e007190, https://doi.org/10.1136/bmjgh-2021-007190. [75]

Koele, I. et al. (2023), "Adolescents' Friendship Quality, Internalizing Problems, and Academic Achievement during the COVID-19 Pandemic: A Longitudinal Study", *Research Square Platform LLC*, pp. 1-23, https://doi.org/10.21203/rs.3.rs-2653418/v1. [119]

Larivière-Bastien, D. et al. (2022), "Children's perspectives on friendships and socialization during the COVID-19 pandemic: A qualitative approach", *Child: Care, Health and Development*, Vol. 48/6, pp. 1017-1030, https://doi.org/10.1111/cch.12998. [120]

Léger-Goodes, T. et al. (2022), "Eco-anxiety in children: A scoping review of the mental health impacts of the awareness of climate change", *Frontiers in Psychology*, Vol. 13, https://doi.org/10.3389/fpsyg.2022.872544. [28]

Li, X., C. Bergin and A. Olsen (2022), "Positive teacher-student relationships may lead to better teaching", *Learning and Instruction*, Vol. 80/101581, pp. 1-10, https://doi.org/10.1016/j.learninstruc.2022.101581. [131]

Llistosella, M. et al. (2022), "Development of the Individual and Environmental Resilience Model among children, adolescents and young adults using the empirical evidence: An integrative systematic review", *Health & Social Care in the Community*, Vol. 30/6, https://doi.org/10.1111/hsc.13899. [52]

Longobardi, C. et al. (2021), "The links between students' relationships with teachers, likeability among peers, and bullying victimization: the intervening role of teacher responsiveness", *European Journal of Psychology of Education*, Vol. 37/2, pp. 489-506, https://doi.org/10.1007/s10212-021-00535-3. [153]

MacIntosh, B. et al. (2021), "What Is Moderate to Vigorous Exercise Intensity?", *Frontiers in Physiology*, Vol. 12, https://doi.org/10.3389/fphys.2021.682233. [158]

Marani, M. et al. (2021), "Intensity and frequency of extreme novel epidemics", *Proceedings of the National Academy of Sciences*, Vol. 118/35, https://doi.org/10.1073/pnas.2105482118. [49]

March, A. et al. (2022), "Barriers and Facilitators to Sustaining School-Based Mental Health and Wellbeing Interventions: A Systematic Review", *International Journal of Environmental Research and Public Health*, Vol. 19/6, p. 3587, https://doi.org/10.3390/ijerph19063587. [47]

Masten, A. and F. Motti-Stefanidi (2020), "Multisystem Resilience for Children and Youth in Disaster: Reflections in the Context of COVID-19", *Adversity and Resilience Science*, Vol. 1/2, pp. 95-106, https://doi.org/10.1007/s42844-020-00010-w. [39]

Mazrekaj, D. and K. De Witte (2023), "The Impact of School Closures on Learning and Mental Health of Children: Lessons From the COVID-19 Pandemic", *Perspectives on Psychological Science*, pp. 1-8, https://doi.org/10.1177/17456916231181108. [140]

McGrath, J. (2023), "What systematic connections should we have around schools to support the work of teachers?: Global lessons and the potential of ambition loops", *OECD Education Working Papers*, No. 296, OECD Publishing, Paris, https://doi.org/10.1787/77de597c-en. [121]

Mercê, C. et al. (2021), "Training programmes to learn how to ride a bicycle independently for children and youths: a systematic review", *Physical Education and Sport Pedagogy*, Vol. 28/5, pp. 530-545, https://doi.org/10.1080/17408989.2021.2005014. [62]

Mesch, G. (2019), "Online and offline relationships", in *Educating 21st Century Children: Emotional Well-being in the Digital Age*, OECD Publishing, Paris, https://doi.org/10.1787/11f6c5b4-en. [155]

Moore, S. et al. (2020), "Impact of the COVID-19 virus outbreak on movement and play behaviours of Canadian children and youth: a national survey", *International Journal of Behavioral Nutrition and Physical Activity*, Vol. 17/1, https://doi.org/10.1186/s12966-020-00987-8.

[72]

Morin, A. (2020), "Teacher support and the social classroom environment as predictors of student loneliness", *Social Psychology of Education*, Vol. 23/6, pp. 1687-1707, https://doi.org/10.1007/s11218-020-09600-z.

[129]

Morrison, S. and V. Sember (2021), *The Republic of Slovenia 2021 Report Card: Physical Activity for Children and Youth*, https://www.activehealthykids.org/wp-content/uploads/2022/09/Slovenia-report-card-long-form-2021.pdf (accessed on 20 December 2023).

[89]

Nally, S. et al. (2022), ""When You Move You Have Fun": Perceived Barriers, and Facilitators of Physical Activity From a Child's Perspective", *Frontiers in Sports and Active Living*, Vol. 4, https://doi.org/10.3389/fspor.2022.789259.

[83]

Narayan, D. (ed.) (2005), *Measuring Empowerment: Cross-disciplinary Perspectives*, World Bank.

[7]

Nathan, A. et al. (2021), "Impact of COVID-19 Restrictions on Western Australian Children's Physical Activity and Screen Time", *International Journal of Environmental Research and Public Health*, Vol. 18/5, p. 2583, https://doi.org/10.3390/ijerph18052583.

[71]

Naul, R. and C. Scheuer (eds.) (2020), *Physical education and school sport in Slovenia*, Meyer & Meyer, Aachen.

[90]

Neville, R. et al. (2022), "Global Changes in Child and Adolescent Physical Activity During the COVID-19 Pandemic", *JAMA Pediatrics*, https://doi.org/10.1001/jamapediatrics.2022.2313.

[73]

Ng, K. et al. (2020), "Barriers and facilitators to changes in adolescent physical activity during COVID-19", *BMJ Open Sport & Exercise Medicine*, Vol. 6/1, p. e000919, https://doi.org/10.1136/bmjsem-2020-000919.

[84]

Ng-Knight, T. et al. (2018), "'Best friends forever'? Friendship stability across school transition and associations with mental health and educational attainment", *British Journal of Educational Psychology*, Vol. 89/4, pp. 585-599, https://doi.org/10.1111/bjep.12246.

[112]

Niemiec, C. and R. Ryan (2009), "Autonomy, competence, and relatedness in the classroom", *Theory and Research in Education*, Vol. 7/2, pp. 133-144, https://doi.org/10.1177/1477878509104318.

[136]

Ni, Y. and F. Jia (2023), "Promoting Positive Social Interactions: Recommendation for a Post-Pandemic School-Based Intervention for Social Anxiety", *Children*, Vol. 10/491, pp. 1-13, https://doi.org/10.3390/children10030491.

[104]

Nyström, M. et al. (2023), "Making the right decision for our children's future: Parents' perceptions of active school travel in disadvantaged neighborhoods", *Journal of Transport & Health*, Vol. 30, p. 101617, https://doi.org/10.1016/j.jth.2023.101617.

[66]

O'Connor, P. and M. Estellés (2021), *Seeding Possibilities with the Arts: Te Rito Toi In Schools During COVID-19*, The University of Auckland, Auckland.

[48]

OECD (2024), *Social and Emotional Skills for Better Lives: Findings from the OECD Survey on Social and Emotional Skills 2023*, OECD Publishing, Paris, https://doi.org/10.1787/35ca7b7c-en. [24]

OECD (2023), *How to Make Societies Thrive? Coordinating Approaches to Promote Well-being and Mental Health*, OECD Publishing, Paris, https://doi.org/10.1787/fc6b9844-en. [18]

OECD (2023), *PISA 2022 Results (Volume I): The State of Learning and Equity in Education*, PISA, OECD Publishing, Paris, https://doi.org/10.1787/53f23881-en. [44]

OECD (2023), *PISA 2022 Results (Volume II): Learning During – and From – Disruption*, PISA, OECD Publishing, Paris, https://doi.org/10.1787/a97db61c-en. [4]

OECD (2023), "Policy integration and child well-being: What can countries do to become more effective?"*, OECD Policy Insights on Well-being, Inclusion and Equal Opportunity*, No. 10, OECD Publishing, Paris, https://doi.org/10.1787/ec01dcc6-en. [46]

OECD (2022), *Are Students Ready to Take on Environmental Challenges?*, PISA, OECD Publishing, Paris, https://doi.org/10.1787/8abe655c-en. [43]

OECD (2021), "All the lonely people: Education and loneliness"*, Trends Shaping Education Spotlights*, No. 23, OECD Publishing, Paris, https://doi.org/10.1787/23ac0e25-en. [99]

OECD (2021), *COVID-19 and Well-being: Life in the Pandemic*, OECD Publishing, Paris, https://doi.org/10.1787/1e1ecb53-en. [17]

OECD (2021), *Measuring What Matters for Child Well-being and Policies*, OECD Publishing, Paris, https://doi.org/10.1787/e82fded1-en. [38]

OECD (2021), *Teachers Getting the Best out of Their Students: From Primary to Upper Secondary Education*, OECD Publishing, Paris, https://doi.org/10.1787/5bc5cd4e-en. [132]

OECD (2020), "Combatting COVID-19's effect on children"*, OECD Policy Responses to Coronavirus (COVID-19)*, OECD Publishing, Paris, https://doi.org/10.1787/2e1f3b2f-en. [12]

OECD (2020), *PISA 2018 Results (Volume VI): Are Students Ready to Thrive in an Interconnected World?*, PISA, OECD Publishing, Paris, https://doi.org/10.1787/d5f68679-en. [29]

OECD (2020), "Remote online exams in higher education during the COVID-19 crisis"*, OECD Education Policy Perspectives*, No. 6, OECD Publishing, Paris, https://doi.org/10.1787/f53e2177-en. [137]

OECD (2019), *Making Physical Education Dynamic and Inclusive for 2030*, OECD Publishing, Paris, https://www.oecd.org/education/2030-project/contact/Making_Physical_Education_Dynamic_and_Inclusive_for_2030.pdf (accessed on 13 December 2023). [88]

OECD (2019), *PISA 2018 Results (Volume III): What School Life Means for Students' Lives*, PISA, OECD Publishing, Paris, https://doi.org/10.1787/acd78851-en. [23]

OECD (2017), *PISA 2015 Results (Volume III): Students' Well-Being*, PISA, OECD Publishing, Paris, https://doi.org/10.1787/9789264273856-en. [20]

OECD (2004), *Learning for Tomorrow's World: First Results from PISA 2003*, PISA, OECD Publishing, Paris, https://doi.org/10.1787/9789264006416-en. [128]

Ojala, M. (2012), "How do children cope with global climate change? Coping strategies, engagement, and well-being", *Journal of Environmental Psychology*, Vol. 32/3, pp. 225-233, https://doi.org/10.1016/j.jenvp.2012.02.004. [30]

Ojala, M. et al. (2021), "Anxiety, Worry, and Grief in a Time of Environmental and Climate Crisis: A Narrative Review", *Annual Review of Environment and Resources*, Vol. 46, pp. 35-58, https://doi.org/10.1146/annurev-environ-012220-022716. [27]

Okely, A. et al. (2021), "Global effect of COVID-19 pandemic on physical activity, sedentary behaviour and sleep among 3- to 5-year-old children: a longitudinal study of 14 countries", *BMC Public Health*, Vol. 21/1, https://doi.org/10.1186/s12889-021-10852-3. [76]

Orgilés, M. et al. (2020), "Immediate psychological effects of the COVID-19 quarantine in youth from Italy and Spain", *Frontiers in Psychology*, Vol. 11/579038, pp. 1-10, https://doi.org/10.31234/osf.io/5bpfz. [124]

Parinduri, R. (2014), "Do children spend too much time in schools? Evidence from a longer school year in Indonesia", *Economics of Education Review*, Vol. 41, pp. 89-104, https://doi.org/10.1016/j.econedurev.2014.05.001. [94]

Parise, M., A. Pagani and V. Cremasco (2015), "Rugby, Self Perception and Pro Social Behaviour: Evidence from the Italian "Rugby Project for Schools"", *Revista iberoamericana de psicología del ejercicio y el deporte*, Vol. 10/1, pp. 56-61. [55]

Patchin, J. and S. Hinduja (2022), "Cyberbullying Among Asian American Youth Before and During the COVID-19 Pandemic", *Journal of School Health*, Vol. 93/1, pp. 82-87, https://doi.org/10.1111/josh.13249. [150]

Pearce, M. et al. (2022), "Association Between Physical Activity and Risk of Depression", *JAMA Psychiatry*, Vol. 79/6, p. 550, https://doi.org/10.1001/jamapsychiatry.2022.0609. [58]

Peplau, L. and D. Perlman (eds.) (1982), *Theoretical approaches to loneliness*, John Wiley & Sons, New York. [122]

Perez, D. et al. (2021), "Nowhere to Go: Parents' Descriptions of Children's Physical Activity During a Global Pandemic", *Frontiers in Public Health*, Vol. 9, https://doi.org/10.3389/fpubh.2021.642932. [82]

Petersen, T. et al. (2020), "Association between parent and child physical activity: a systematic review", *International Journal of Behavioral Nutrition and Physical Activity*, Vol. 17/1, https://doi.org/10.1186/s12966-020-00966-z. [81]

Pham, L. and A. Phan (2022), "Whilst COVID-19: The Educational Migration to Online Platforms and Lessons Learned", *The Clearing House: A Journal of Educational Strategies, Issues and Ideas*, Vol. 95/4, pp. 159-165, https://doi.org/10.1080/00098655.2022.2065230. [138]

Poulin, F. and A. Chan (2010), "Friendship stability and change in childhood and adolescence", *Developmental Review*, Vol. 30/3, pp. 257-272, https://doi.org/10.1016/j.dr.2009.01.001. [108]

Qualter, P. et al. (2015), "Loneliness Across the Life Span", *Perspectives on Psychological Science*, Vol. 10/2, pp. 250-264, https://doi.org/10.1177/1745691615568999. [115]

Quin, D. (2017), "Longitudinal and Contextual Associations Between Teacher-Student Relationships and Student Engagment: A Systematic Review", *Review of Educational Research*, Vol. 87/2, pp. 345-387, https://www.jstor.org/stable/44667659.

[133]

Racine, N. et al. (2021), "Global Prevalence of Depressive and Anxiety Symptoms in Children and Adolescents During COVID-19", *JAMA Pediatrics*, Vol. 175/11, p. 1142, https://doi.org/10.1001/jamapediatrics.2021.2482.

[13]

Rambaran, J. et al. (2016), "Academic Functioning and Peer Influences: A Short-Term Longitudinal Study of Network–Behavior Dynamics in Middle Adolescence", *Child Development*, Vol. 88/2, pp. 523-543, https://doi.org/10.1111/cdev.12611.

[109]

Ravens-Sieberer, U. et al. (2022), "Child and Adolescent Mental Health During the COVID-19 Pandemic: Results of the Three-Wave Longitudinal COPSY Study", *Journal of Adolescent Health*, Vol. 71/5, pp. 570-578, https://doi.org/10.1016/j.jadohealth.2022.06.022.

[15]

Reilly, J. et al. (2022), "Recent Secular Trends in Child and Adolescent Physical Activity and Sedentary Behavior Internationally: Analyses of Active Healthy Kids Global Alliance Global Matrices 1.0 to 4.0", *Journal of Physical Activity and Health*, Vol. 19/11, pp. 729-736, https://doi.org/10.1123/jpah.2022-0312.

[79]

Repo, J., S. Herkama and C. Salmivalli (2022), "Bullying Interrupted: Victimized Students in Remote Schooling During the COVID-19 Pandemic", *International Journal of Bullying Prevention*, Vol. 5/3, pp. 181-193, https://doi.org/10.1007/s42380-022-00146-6.

[146]

Rhodes, R. et al. (2020), "Development of a consensus statement on the role of the family in the physical activity, sedentary, and sleep behaviours of children and youth", *International Journal of Behavioral Nutrition and Physical Activity*, Vol. 17/1, https://doi.org/10.1186/s12966-020-00973-0.

[80]

Rogers, A., T. Ha and S. Ockey (2021), "Adolescents' Perceived Socio-Emotional Impact of COVID-19 and Implications for Mental Health: Results From a U.S.-Based Mixed-Methods Study", *Journal of Adolescent Health*, Vol. 68/1, pp. 43-52, https://doi.org/10.1016/j.jadohealth.2020.09.039.

[103]

Rossi, L., N. Behme and C. Breuer (2021), "Physical Activity of Children and Adolescents during the COVID-19 Pandemic—A Scoping Review", *International Journal of Environmental Research and Public Health*, Vol. 18/21, p. 11440, https://doi.org/10.3390/ijerph182111440.

[74]

Ryan, R. and E. Deci (2017), *Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness*, The Guilford Press, New York, https://doi.org/10.1521/978.14625/28806.

[135]

Salway, R. et al. (2022), "Accelerometer-measured physical activity and sedentary time among children and their parents in the UK before and after COVID-19 lockdowns: a natural experiment", *International Journal of Behavioral Nutrition and Physical Activity*, Vol. 19/1, https://doi.org/10.1186/s12966-022-01290-4.

[70]

Sanmiguel-Rodríguez, A. et al. (2022), "On What Tasks Did Children between the Ages of 3 and 12 Years Spend Their Time during the COVID-19 Pandemic? An International Comparative Study between Ibero-America and Europe", *Children*, Vol. 9/7, p. 971, https://doi.org/10.3390/children9070971.

[78]

Sanson, A., J. Van Hoorn and S. Burke (2019), "Responding to the Impacts of the Climate Crisis on Children and Youth", *Child Development Perspectives*, Vol. 13/4, pp. 201-207, https://doi.org/10.1111/cdep.12342. [26]

Schleicher, A. (2022), *PISA 2022 Insights and Interpretations*, OECD Publishing, Paris, https://www.oecd.org/pisa/PISA%202022%20Insights%20and%20Interpretations.pdf (accessed on 9 January 2024). [2]

Schnepf, S., M. Boldrini and Z. Blaskó (2023), "Adolescents' loneliness in European schools: a multilevel exploration of school environment and individual factors", *BMC Public Health*, Vol. 23/1, pp. 1-12, https://doi.org/10.1186/s12889-023-16797-z. [130]

Scott, R., J. Stuart and B. Barber (2021), "Contemporary friendships and social vulnerability among youth: Understanding the role of online and offline contexts of interaction in friendship quality", *Journal of Social and Personal Relationships*, Vol. 38/12, pp. 3451-3471, https://doi.org/10.1177/02654075211029384. [117]

Serafini, G. et al. (2020), "The psychological impact of COVID-19 on the mental health in the general population", *QJM: An International Journal of Medicine*, Vol. 113/8, pp. 531-537, https://doi.org/10.1093/qjmed/hcaa201. [102]

Sheldrick, M. et al. (2022), "Homes became the "everything space" during COVID-19: impact of changes to the home environment on children's physical activity and sitting", *International Journal of Behavioral Nutrition and Physical Activity*, Vol. 19/1, https://doi.org/10.1186/s12966-022-01346-5. [5]

Shoshani, A. (2023), "Longitudinal changes in children's and adolescents' mental health and well-being and associated protective factors during the COVID-19 pandemic.", *Psychological Trauma: Theory, Research, Practice, and Policy*, https://doi.org/10.1037/tra0001556. [16]

Simoës-Perlant, A., M. Barreau and C. Vezilier (2023), "Stress, Anxiety, and School Burnout Post COVID-19: A Study of French Adolescents", *Mind, Brain, and Education*, Vol. 17/2, pp. 98-106, https://doi.org/10.1111/MBE.12346. [32]

Sonu, S., D. Marvin and C. Moore (2021), "The Intersection and Dynamics between COVID-19, Health Disparities, and Adverse Childhood Experiences: "Intersection/Dynamics between COVID-19, Health Disparities, and ACEs"", *Journal of Child and Adolescent Trauma*, Vol. 14/4, https://doi.org/10.1007/s40653-021-00363-z. [19]

Steinmayr, R., P. Paschke and L. Wirthwein (2022), "Elementary School Students' Subjective Well-Being Before and During the COVID-19 Pandemic: A Longitudinal Study", *Journal of Happiness Studies*, Vol. 23/6, pp. 2985-3005, https://doi.org/10.1007/s10902-022-00537-y. [10]

Stem4 (2024), *Children and young people more worried than ever about going to school*, https://stem4.org.uk/children-and-young-people-more-worried-than-ever-about-going-to-school-feb-24-press-release/ (accessed on 21 February 2024). [33]

Steponavičius, M., C. Gress-Wright and A. Linzarini (2023), "Social and emotional skills: Latest evidence on teachability and impact on life outcomes", *OECD Education Working Papers*, No. 304, OECD Publishing, Paris, https://doi.org/10.1787/ba34f086-en. [51]

Suresh, R., A. Alam and Z. Karkossa (2021), "Using Peer Support to Strengthen Mental Health During the COVID-19 Pandemic: A Review", *Frontiers in Psychiatry*, Vol. 12/12, p. 714181, https://doi.org/10.3389/fpsyt.2021.714181. [9]

Thapa, A. et al. (2013), "A Review of School Climate Research", *Review of Educational Research*, Vol. 83/3, pp. 357-385, https://doi.org/10.3102/0034654313483907. [134]

Tiwari, G. et al. (2021), "Understanding the perceived psychological distress and health outcomes of children during COVID-19 pandemic", *Educational and Developmental Psychologist*, Vol. 40/1, pp. 103-114, https://doi.org/10.1080/20590776.2021.1899749. [141]

Tollefson, J. (2020), "Why deforestation and extinctions make pandemics more likely", *Nature*, Vol. 584/7820, pp. 175-176, https://doi.org/10.1038/d41586-020-02341-1. [50]

Vaillancourt, T. et al. (2021), "School bullying before and during COVID-19: Results from a population-based randomized design", *Aggressive Behavior*, Vol. 47/5, pp. 557-569, https://doi.org/10.1002/ab.21986. [147]

Vaillancourt, T. et al. (2023), "Bullying before and during the COVID-19 pandemic", *Current Opinion in Psychology*, Vol. 53/101689, pp. 1-7, https://doi.org/10.1016/j.copsyc.2023.101689. [143]

van de Pas, K. et al. (2022), "The Impact of the COVID-19 Pandemic on Lifestyle and Wellbeing of Children, Adolescents and Their Parents: A Qualitative Study", *Children*, Vol. 9/12, p. 1929, https://doi.org/10.3390/children9121929. [77]

van Sluijs, E. et al. (2021), "Physical activity behaviours in adolescence: current evidence and opportunities for intervention", *The Lancet*, Vol. 398/10298, pp. 429-442, https://doi.org/10.1016/s0140-6736(21)01259-9. [91]

Vincent-Lancrin, S., C. Cobo Romaní and F. Reimers (eds.) (2022), *How Learning Continued during the COVID-19 Pandemic: Global Lessons from Initiatives to Support Learners and Teachers*, OECD Publishing, Paris, https://doi.org/10.1787/bbeca162-en. [1]

Viner, R. et al. (2022), "School Closures during Social Lockdown and Mental Health, Health Behaviors, and Well-being among Children and Adolescents during the First COVID-19 Wave: A Systematic Review", *JAMA Pediatr.*, Vol. 176/4, pp. 400-409, https://doi.org/10.1001/jamapediatrics.2021.5840. [37]

Vos, H. et al. (2023), "Gender differences in young adults' mathematical performance: Examining the contribution of working memory, math anxiety and gender-related stereotypes", *Learning and Individual Differences*, Vol. 102, p. 102255, https://doi.org/10.1016/j.lindif.2022.102255. [21]

Wang, M. and J. Degol (2015), "School Climate: a Review of the Construct, Measurement, and Impact on Student Outcomes", *Educational Psychology Review*, Vol. 28/2, pp. 315-352, https://doi.org/10.1007/s10648-015-9319-1. [156]

Wangzom, D., M. White and J. Paay (2023), "Perceived Safety Influencing Active Travel to School—A Built Environment Perspective", *International Journal of Environmental Research and Public Health*, Vol. 20/2, p. 1026, https://doi.org/10.3390/ijerph20021026. [67]

Wan, Y., Y. Zhao and H. Song (2021), "Effects of Physical Exercise on Prosocial Behavior of Junior High School Students", *Children*, Vol. 8/12, p. 1199, https://doi.org/10.3390/children8121199. [56]

Wegner, M. et al. (2020), "Systematic Review of Meta-Analyses: Exercise Effects on Depression in Children and Adolescents", *Frontiers in Psychiatry*, Vol. 11, https://doi.org/10.3389/fpsyt.2020.00081. [59]

Weiss, R. (1973), *Loneliness: the experience of emotional and social isolation*, The MIT Press, MA. [123]

Wolf, K. and J. Schmitz (2023), "Scoping review: longitudinal effects of the COVID-19 pandemic on child and adolescent mental health", *European Child & Adolescent Psychiatry*, https://doi.org/10.1007/s00787-023-02206-8. [11]

Wolke, D. and S. Lereya (2015), "Long-term effects of bullying", *Archives of Disease in Childhood*, Vol. 100/9, pp. 879-885, https://doi.org/10.1136/archdischild-2014-306667. [144]

Woods, C. et al. (2021), "The evidence for the impact of policy on physical activity outcomes within the school setting: A systematic review", *Journal of Sport and Health Science*, Vol. 10/3, pp. 263-276, https://doi.org/10.1016/j.jshs.2021.01.006. [85]

World Economic Forum (2020), "The COVID-19 pandemic has changed education forever. This is how", *World Economic Forum Agenda Article*, https://www.weforum.org/agenda/2020/04/coronavirus-education-global-covid19-online-digital-learning/ (accessed on 13 September 2023). [139]

World Health Organization (2022), *Factsheet on Physical Activity*, https://www.who.int/news-room/fact-sheets/detail/physical-activity (accessed on 20 July 2023). [53]

World Health Organization (2022), *Promoting Physical Activity through Schools: Policy Brief*, https://www.who.int/publications-detail-redirect/9789240049567 (accessed on 21 August 2023). [87]

Xie, L. et al. (2023), "A Cross-Sectional Survey of Different Types of School Bullying before and during COVID-19 in Shantou City, China", *International Journal of Environmental Research and Public Health*, Vol. 20/3, p. 2103, https://doi.org/10.3390/ijerph20032103. [151]

Yang, X. et al. (2021), "The Impact of COVID-19-Related Lockdown on Adolescent Mental Health in China: A Prospective Study", *SSRN Electronic Journal*, https://doi.org/10.2139/ssrn.3792956. [148]

Notes

[1] See: https://www.teritotoi.org/ (accessed on 06 May 2024).

[2] See: https://www.gezondleven.be/settings/gezonde-school/mentaal-welbevinden-op-school/gelukindeklas (accessed on 06 May 2024).

[3] See: https://www.vejdirektoratet.dk/side/administration-af-cykelpuljer (accessed on 06 May 2024).

[4] See: https://cyclingsolutions.info/students-as-traffic-experts/ (accessed on 06 May 2024).

[5] See: https://www.activehealthykids.org/4-0/ (accessed on 06 May 2024).

[6] WHO guidance states that, in a 24-hour period, children aged 1-5 years should spend at least 180 minutes in a variety of types of physical activities at any intensity. For children older than three, at least 60 minutes of this should be moderate-to-vigorous- physical activity (World Health Organization, 2022[53]). For children 5-17, an average of 60 minutes per day of moderate-to-vigorous physical activity is recommended as the minimum (World Health Organization, 2022[53]). Although some scholars argue that current definitions of moderate-to-vigorous exercise are unclear, examples of moderate activity often include brisk walking, dancing, and gardening, whereas vigorous activity includes jogging, running, fast cycling, fast swimming, and walking briskly up a hill (MacIntosh et al., 2021[158]).

[7] See : https://www.lamoncloa.gob.es/presidente/actividades/Documents/2022/100622-plan-estrategico-nacional-reduccion-obesidad-infantil_en-plan-bien.pdf (accessed on 06 May 2024).

[8] See : https://www.sportireland.ie/news/irish-sports-monitor-2022-mid-year-report (accessed on 06 May 2024).

[9] See : https://assets.gov.ie/24979/1a97aa08e3a04845b4e6c10bbfc17356.pdf (accessed on 06 May 2024).

[10] See: https://statistique.quebec.ca/fr/document/lactivite-physique-de-loisir-des-quebecois-en-2018-2019 (accessed on 06 May 2024).

[11] See : https://schoolsonthemove.fi/concept/ (accessed on 06 May 2024).

[12] See : http://www.harrastamisensuomenmalli.fi/ (accessed on 06 May 2024).

[13] See : https://www.warmescholen.net/inspiratie (accessed on 06 May 2024).

[14] See : https://www.gov.nl.ca/education/files/RTL-Policy.pdf (accessed on 06 May 2024).

[15] See : https://www.quebec.ca/education/prescolaire-primaire-et-secondaire/sante-bien-etre-jeunes/ekip (accessed on 06 May 2024).

[16] See : https://teachingtobe.eu/learning-to-be/ (accessed on 06 May 2024).

[17] See : https://www.nji.nl/ (accessed on 06 May 2024).

[18] See : https://www.kivaprogram.net/ (accessed on 06 May 2024).

From:

What Does Child Empowerment Mean Today?
Implications for Education and Well-being

Access the complete publication at:
https://doi.org/10.1787/8f80ce38-en