DIPARTIMENTO DI
ECONOMIA POLITICA
E STATISTICA
— DEPS

unisi

QUADERNI DEPS 940/2026

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February 2026

UNIVERSITÀ
DI SIENA
1240

Working Paper Series of the Department of Economics and Statistics of the University of Siena
Piazza San Francesco 7-8, 53100, Siena | Italy
deps.unisi.it

ISSN: 17209668

Structural Causes of the Youth Well-being Crisis: A Call for Radical Reforms

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Abstract

Although global data on subjective well-being (SWB) among children and adolescents remain limited, evidence from high-income countries highlights a mounting crisis in youth well-being and mental health. In recent years, there has been growing global interest in the study of children's well-being, particularly during and after the COVID-19 pandemic. However, available time-series evidence suggests that the youth well-being crisis began long before the pandemic. To date, research has primarily concentrated on the intrinsic mechanisms influencing children's well-being, as well as on the family, social, and cultural factors that may shape it (Xu et al., 2024). Despite this, there is limited understanding of how broader structural dynamics affect children's well-being. In this work, first we provide a review of the evidence on the youth well-being and mental health crisis. Second, we argue that youth have experienced a revolution in their time use and living environment in HICs since the 1980s. Children's daily lives have shifted away from unstructured play and peer-based face-to-face interactions, toward home-centered, screen-based and adult-supervised activities. Moreover, over time, kids, and teens have faced more commercial and performance pressure, and have lost autonomy. Third, we review the literature on the impact of these changes on youth' well-being. . We then discuss the policy reforms needed to address these structural changes. In particular, we argue that urban planning, education systems, advertising, and the climate crisis play a critical role in shaping children's social experiences and well-being. We conclude by emphasizing the need for ambitious reforms in these areas to restore youth time, expand opportunities for independent experiences, and safeguard its social lives and well-being.

Keywords: Youth well-being, subjective well-being, mental health, time use, High income countries, structural change.

JEL codes: I31, I18, I20, I38

Sommario

Introduction

In high-income countries (HICs), public alarm and concern about the well-being and mental health of young people are intensifying. The U.S. Surgeon General has described the youth mental health crisis as "the defining public health challenge of our time" (Haslett, 2024). There is a growing body of data supporting the widespread perception that youth are experiencing a crisis. For instance, using pre-pandemic data from 2019), a recent UNICEF (2024) report on the state of children in the European Union indicates that about 13% of children and young people under the age of 19 were affected by mental health disorders, and that suicide is among the leading causes of death in this age group. Evidence from Anglo-Saxon countries seems even more disquieting (Haidt, 2024). Public debate now concerns the causes and solutions of the youth crisis, not its existence.

Drawing on multiple strands of literature, we address three questions. First, when did the youth crisis begin? Second, what went wrong? Third, how can it be fixed? Our answer to the first question is that this is a long-standing crisis. The evidence we review suggests that young people's mental health has been deteriorating since at least the 1980s, and possibly even earlier in HICs.

The long duration, high stability, and broad geographical scope of these trends suggest that something structural has gone wrong in the way HICs raise and integrate their young citizens. Understanding this failure is crucial, not only because ill-being is a major contributor to premature death through both physical illness and suicide (McGorry et al., 2024), but also because it jeopardizes life trajectories. A large body of research shows that childhood well-being significantly shapes adult outcomes, including life satisfaction, career success, physical health, and the quality of intimate and social relationships (Clark et al., 2018). Yet it is not only the future of today's unhappy young people that is at risk. The future of society as a whole is endangered if it rests in the hands of generations burdened by widespread psychological fragility. Although they represent a declining share of the population, young people still represent 100% of the future.

To date, research has primarily focused on individual-level mechanisms shaping children's well-being, as well as on the family, social, and cultural environments in which they develop (Xu et al., 2024). However, comprehensive structural explanations of the youth crisis remain scarce (McGorry et al., 2024). Some scholars emphasize the growing salience of climate change

concerns (Fava & Baker, 2023; Hickman et al., 2021) and the increasing precarisation of youth in HICs (Bessant, 2018). Yet the negative trends in youth well-being appear to predate both the rise of climate anxiety and the 2008 global financial crisis, suggesting that these factors alone cannot account for the long-run patterns observed.

The most comprehensive explanation is offered by Haidt in its bestselling book *The Anxious Generation*, which attributes much of the crisis to the rise of smartphones and social media. Accordingly, he advocates prohibiting access to social media platforms under the age of 16, a measure that has already been taken in Australia, while several European countries are actively legislating or debating age-based bans or strict age verification.

However, the decline in youth well-being predates the widespread diffusion of social media in the early 2010s by at least three decades. Moreover, empirical evidence on the relationship between social media use and well-being remains mixed: while some studies document harmful effects, others identify potential benefits (Pearson, 2025). Social media may thus contribute both positively and negatively to well-being and are unlikely to provide a complete explanation for a broader, decades-long decline.

Haidt also emphasizes the long-term decline of free play as a central driver of the crisis. Such play is essential for the development of fundamental social, emotional, physical, and cognitive skills. Our review supports this view. Time devoted to intrinsically motivated interactions with peers has increasingly been displaced by extrinsically motivated activities, such as homework or shopping, and growing exposure to screens. An activity is intrinsically motivated when its reward is the activity itself (e.g. free play). By contrast, an activity is extrinsically motivated when it is pursued primarily to obtain separable outcomes, such as recognition, status, or the avoidance of sanctions. Highly structured and performance-oriented activities, such as sports, are more likely to shift the motivational center toward external evaluation, competition, and adult expectations.

Haidt is also likely correct in underscoring the negative contribution of screens to the youth crisis. What Haidt overlooks, however, is the broader context of the pervasive commercialization of childhood within which both the crisis of free play and the triumph of social media are framed. Neglecting this context may lead to policy responses with adverse consequences. Over recent decades, children and adolescents have become increasingly exposed to commercial pressures from advertising and to performance pressures from the

adult world, including schools and parental expectations. At the same time, they report greater loneliness and more strained relationships with their parents, while facing fewer opportunities to engage in unsupervised peer interaction. The growing dominance of cars in public spaces and the proliferation of overprotected playgrounds have further contributed to the erosion of autonomous outdoor play. As a result, children have progressively lost autonomy, and their daily lives have become increasingly structured around adult-supervised and performance-oriented activities.

This revolution in time use and in the social experience of young age has produced a devastating mix of loneliness, commercial and competitive pressure, and impoverished social experience. Young people's lives have been progressively colonized by extrinsic motivations. Our review suggests that the crisis we are witnessing reflects the failure of the transition to a childhood increasingly dominated by extrinsic rather than intrinsic motivations.

The main policy implication of our analysis is that it is necessary to reconstruct the physical and mental spaces in which young people can meet, interact, and develop autonomously. We argue that reforms in urban planning, schooling, and advertising regulation are essential to this goal. Without a large-scale de-commercialization of youth, a ban on social media may amount to a deprivation of virtual relationships which adds to a deprivation of in-person ones. The risk is that such a measure would not make young people happier, but lonelier.

This is not to downplay the role of social media, which has likely made a substantial contribution to the worsening of the youth crisis (Haidt, 2024). The crucial point, however, is that social media is an evolutionary step within a screen-based childhood that was already well established before the rise of social media (Schor, 2004). Television had become a pervasive presence in children's lives as early as the 1980s and 1990s. Recognizing the responsibility of social media therefore does not automatically imply that banning them could benefit youth. A ban can only be truly effective if credible and attractive alternatives are created.

In this review, we adopt a broad definition of youth, focusing primarily on school-aged children (6–15 years), encompassing middle childhood (6–12 years) and early adolescence (13–15 years), while also extending the discussion to young adults aged 16–25. Our focus is on HICs, particularly European countries and North America, as most of the available evidence on the youth crisis and its determinants has been collected in Western, educated, industrialized, rich, and democratic (WEIRD) societies (McGorry et al., 2024; Haidt, 2024; Marquez et al., 2024; Xu

et al., 2024). While specific institutional and cultural features of WEIRD societies likely play a role in the observed decline, we do not exclude that similar dynamics may be affecting youth globally, including in low- and middle-income countries, partly as a result of globalization.

The remainder of the article is structured as follows. In Section 1, we review evidence on trends in youth well-being and mental health in HICs over the past half century. Section 2 examines how competitive and commercial pressures on young people and their use of time have evolved over decades. Section 3 analyzes the relationship between these transformations and youth well-being. Section 4 highlights the dysfunctional character of this youth "revolution." Section 5 discusses policy responses capable of addressing these structural challenges. Section 6 concludes.

1. The evolution of youth well-being over the last decades

In recent years, youth well-being has received increasing scholarly and policy attention, especially following the COVID-19 pandemic, across disciplines including psychology, psychiatry, sociology, and public health. Yet, the conceptual frameworks used to define youth well-being differ substantially across these fields, and no unified definition has yet emerged.

The measurement of youth well-being is broad and encompasses a wide range of dimensions, including subjective well-being (SWB), mental health, material conditions, physical health, cognitive development, and educational outcomes. In its report Measuring What Matters for Child Well-being and Policies, the OECD (2021) reviews recent efforts to measure child well-being across OECD countries (e.g., the United States, Ireland, Australia, the United Kingdom, New Zealand, and Finland). Most countries adopt a multidimensional approach and rely on multiple indicators. The OECD (2021) proposes a conceptual framework grounded in several key principles: adopting a multidimensional perspective; reflecting children's lives both in the present and the future; ensuring age-sensitive measurement; incorporating children's own perspectives; and capturing the environments in which they grow up. At the first level of this framework, children's well-being outcomes, mental health status, mental disorders, and SWB represent only part of the broader social, emotional, and cultural dimension. The framework also includes material outcomes (e.g., housing, food, leisure), physical health outcomes, and cognitive and educational outcomes.

In reviewing the evidence on the decline in youth well-being, we use both subjective and objective indicators to assess youth well-being, with particular emphasis on SWB and mental health indicators. A growing body of research debates how students' mental health should be conceptualized and measured. Traditionally, many studies have adopted a one-dimensional approach, assessing mental health using either well-being or ill-being indicators alone (Morrison et al., 2023). This perspective is consistent with the bipolar model of mental health, which conceptualizes well-being and ill-being as opposite ends of a single continuum. However, more recent evidence suggests that young people can experience both well-being and ill-being simultaneously within a given reference period, and that these two dimensions may respond differently and independently to a range of individual and contextual factors. This emerging literature supports the dual-continua model of mental health, which treats well-being and ill-being as related but distinct constructs (Antaramian, 2015; Eklund et al., 2011; Kraiss et al., 2023; Macaskill & Denovan, 2014; Morrison et al., 2023; Renshaw & Cohen, 2014; Xiao et al., 2021). Accordingly, to capture changes in youth well-being over recent decades without losing relevant information, we retain both well-being and ill-being indicators.

One way to evaluate well-being is through SWB, used here as an umbrella term encompassing three dimensions (Diener et al., 2002). Cognitive well-being refers to individuals' evaluations of the extent to which their lives meet their aspirations and expectations and is commonly measured through life satisfaction. Affective well-being concerns the positive and negative emotions experienced by young people. Eudaimonic well-being relates to personal fulfillment, the satisfaction of fundamental psychological needs, and the realization of one's potential (Martela & Sheldon, 2019).

Ill-being among youth is primarily assessed through indicators of mental illness. We rely on the framework provided by the Lancet Psychiatry Commission on youth mental health, which defines mental illness as "an umbrella term that includes time-limited episodes of ill health with a need for care as well as more sustained, recurrent, and variably more disabling forms of ill health that the term mental illness tends to capture" (McGorry et al., 2024, p. 732). Consistent with this perspective, the literature typically documents trends in the prevalence of mental disorders, persistent feelings of sadness or hopelessness, and major depressive symptoms among young people.

1.1. The current state of youth well-being

According to UNICEF (2024), recent evidence from Europe highlights growing concerns regarding youth mental health. Suicide is one of the leading causes of death among young people aged 15 to 19 in the European Union. In addition, around 13% of children and adolescents under age 19 are estimated to experience a mental health condition, most commonly depression and anxiety disorders. Mental health conditions are more prevalent among boys than girls up to age 14, whereas among 15- to 19-year-olds prevalence is slightly higher among girls. In 2022, only 71% of 15-year-olds reported high life satisfaction (defined as a score above 5 out of 10), with higher rates among boys (78%) than girls (64%).

The current state of well-being among the older youth is even more concerning. The EU Youth Report (2024) estimates that 47 per cent of youth aged between 19 and 24 years old declared that they experienced emotional or psychological problems (e.g. feeling depressed or feeling anxious) in the past 12 months. However, the picture is different when we look at SWB indicators; most young people aged from 15 to 24 years report positive feelings as the top four answers; hopeful (42 per cent), motivated (37 per cent), confident (34 per cent) and calm (30 per cent). However, around one in three young people says they feel uncertain.

According to the EU Youth Report (2024), the average share of young people not in employment, education, or training (NEET) in the European Union is around 5% among those aged 15–19, 13% among those aged 20–24, and 15% among those aged 25–29. Overall, NEET rates are slightly higher among young women (13%) than among young men (10%).

1.2. Trends in youth subjective well-being

Using data from the Gallup World Poll, the World Happiness Report (Marquez et al., 2024) reports a decline in life satisfaction among 15- to 24-year-olds in North America and Western Europe between 2006 and 2022, with no significant differences between young men and women. Trends among younger adolescents are more difficult to assess due to the limited availability of SWB measures for those under age 15.

The only available data come from cross-sectional surveys: PISA for 15-year-olds (2015, 2018, and 2022) and the Health Behaviour in School-aged Children (HBSC) study for youth aged 11, 13, and 15 years (2002–2022). Both dataset reveal a significant decline in life satisfaction in HICs following the COVID-19 pandemic, particularly among female adolescents. Moreover, gender differences in life satisfaction emerge around age 12, with girls reporting lower levels

than boys. This gap widens at ages 13 and 15 and appears to have been further amplified by the pandemic. Evidence on pre-pandemic trends remains mixed.

PISA data for 15-year-olds point to a decline in life satisfaction across most countries between 2015 and 2018, including in high-income regions such as North America and Western Europe. By contrast, comparable pre-pandemic declines are not systematically observed in HBSC data for the 2013/14–2017/18 period. However, a closer country-level examination of the HBSC series reveals sustained downward trends in several countries. Ireland, the Netherlands, Switzerland, Scotland, Canada, the United States, and Iceland show significant declines in life satisfaction at age 15 over the longer period from 2001/02 to 2021/22. Similar patterns are observed at younger ages, with declines in Austria and the Netherlands at age 13 and in Austria, the Netherlands, and Sweden at age 11. Looking more specifically at the European countries, we observe a decrease in the level of life satisfaction between 2013 and 2023 in 8 countries among young people aged 16 to 24 (European Commission, 2024).

1.3. Trends in youth mental-illness

Towards the end of the century, early warnings on the worsening of youth's mental health over the last decades of the 20th century began to appear. Behavioral, emotional and social difficulties are identified by primary care practitioners in the US among children from 4- to 15 years increased from 7% in 1979 to 19% in 1996 (Kelleher et al., 2000). West & Sweeting (2003), using repeated cross-sectional surveys from 1987 to 1999, documented that UK females aged 15 exhibited an increase in psychological distress. Other studies suggested an increase in rates of depressive disorders from the mid-1960s up to the early 1990s in Western Europe and North America (Fombonne, 1995). Increasing in the incidence of suicide and in the risk of developing depression were also noticed to be on the rise from the 1960s-1970s through the late 1980s and early 1990s (Prosser & McArdle, 1996).

Further research on young Americans indicates that the deterioration in mental health began many decades ago. Twenge et al. (2010) document sizable cohort-based increases in psychopathology among American college students from 1938 to 2007 and among high school students from 1951 to 2002. Another study by Twenge (2015) finds that high school students in the 2010s reported more somatic symptoms, such as difficulties with sleep, thinking, and memory, as well as shortness of breath, than their counterparts in the 1980s. They were also about twice as likely to have consulted a mental health professional. Moreover, two cross-

temporal meta-analyses show substantial cohort-based increases in anxiety and neuroticism among young Americans between the 1950s and early 1990s. Anxiety levels rose by nearly one standard deviation over this period, and by the 1980s the average child reported higher anxiety than child psychiatric patients in the 1950s (Twenge, 2000).

More recently, Potrebny et al. (2017) showed that in 36 European countries psychosomatic health complaints of 10–19 years olds were on the rise between the 1980 and 2000s, with stronger increases among girls. Among Swedish 15–16 years olds, self-reported mental health problems increased over the period 1988–2008 (Kim & Hagquist, 2018). Evidence from many HICs in Europe, North America and Oceania indicates increasing rates of depression among children and adolescents from the 1980s onward (Maughan, Iervolino & Collishaw, 2005). Adolescent girls from Western Europe and Australia exhibited increasing symptoms of anxiety and depression over the period 1950s–1990s (Bor et al., 2014). In many European countries suicides rates between aged 15–24 grew over the period 1980–1999, particularly among young males (Mittendorfer-Rutz, 2006).

Another review of the literature on secular trends in child and adolescent mental health suggests substantial secular change in emotional problems and antisocial behaviour among youths in HICs from the 1980s to the 2000s (Collishaw, 2015). Moreover, Storrie et al., (2010) conducted a systematic review of the literature addressing emotional or mental health problems of university students worldwide. They find that the number of university students with a serious mental illness has risen significantly since the millennium.

Early warnings about the deterioration of youth mental health at the turn of the century were initially met with caution, due to concerns about changes in measurement and diagnosis. But as evidence of youth distress accumulated, the dominant narrative became more explicit. Currently, most discussions on this topic are framed in terms of a "youth mental health crisis." Recently, the flow of evidence on this crisis has intensified.

The most comprehensive analysis of trends in youth mental health in HICs is provided by the Lancet Psychiatry Commission on youth mental health (McGorry et al., 2024). The Commission presents evidence that youth mental health has been deteriorating over the last two decades, with this decline beginning well before the COVID-19 pandemic. In the UK, children born between 2000 and 2002 exhibited higher emotional problem scores than those in an earlier cohort born in 1991–92. Differences between cohorts began to emerge around ages 7 to 10 and

became most pronounced between ages 13 and 15. The increase was substantially larger among girls, particularly from early to mid-adolescence (Armitage et al., 2023). In Australia, the prevalence of diagnostic-level mental disorders among individuals aged 16–24 increased by around 50% between 2007 and 2020–2022, reaching annual prevalence rates of approximately 32% among young men and nearly 50% among young women. Findings from the HILDA survey also indicate a marked deterioration in self-reported mental health among Australians aged 15–24 between 2011 and 2020, with the most pronounced drop occurring after 2019 (Wilkins et al., 2022). Further analysis from Botha et al., (2023) highlights that deteriorating mental health among young Australians is particularly pronounced among millennials born in the 1990s, and to a lesser extent those born in the 1980s. Similar trends have been observed in New Zealand. The proportion of secondary school students reporting good well-being declined, while symptoms of depression, as well as past-year suicidal ideation and suicide attempts, increased between 2012 and 2019; in contrast, these indicators remained relatively stable from 2001 to 2012 (Sutcliffe et al., 2022). In England the probability of mental disorders between 17- to 19 years olds more than doubled between 2017 and 2022 (McGorry et al., 2024). A similar pattern is observed in Denmark, where the prevalence of poor mental health more than doubled between 2010 and 2021 (McGorry et al., 2024). A related trend can be seen in the United States for the persistent feelings of sadness or hopelessness among high school students between 2011 and 2021 in the USA.

2. The revolution in youth's life

In this section we describe the revolution over the half past century of the physical and social contexts in which youth live. This revolution is the combination of a dramatic change in youth time use and an increased competitive and commercial pressure from institutions and the market. Both have driven a radical transformation in the types of experiences children have access to. We will review in section 3 the changes in their well-being and development brought by such transformation.

2.1 The evolution of children's time use from the 1980s to the turn of the millennium

One factor that may explain the gradual decline in youth mental health and the rise of youth loneliness since the 1980s is the change in how young people use their time. Long-term evidence of these changes remains limited. Focusing on changes around the turn of the millennium, only three studies to our knowledge, examine the evolution of children's time use

in HICs: Italy (Carriero, 2006), the United States (Hofferth & Sandberg, 2001a; Sturm, 2004; Hofferth, 2009) and the United Kingdom (Mullan, 2019a).

Hofferth & Sandberg (2001a) and Sturm (2004) examine changes in children's time use in the United States between 1981 and 1997 for those aged 3 to 12 years. They find, first, that children's free or discretionary time, such as visiting friends or family, household conversations, and other forms of passive leisure, declined substantially over this period. This reduction was largely driven by increases in time spent in school, daycare, studying, and participation in after-school activities. Second, participation in structured activities, including sports and arts, rose. Third, time spent shopping increased significantly, while participation in youth groups and church attendance declined. The authors also document gender differences in time use. By 1997, girls spent more time than boys on household work, personal care, arts activities, and shopping, whereas boys were more likely to participate in sports.

Hofferth (2009) examines changes in the time use of U.S. children aged 6 to 12 between 1997 and 2003. The study finds that time spent in outdoor activities, passive leisure, conversations with household members, sports participation, and household work declined over this period, with the largest reductions observed in sports and outdoor activities. By contrast, time devoted to more structured activities, such as studying, art activities, religious attendance, and participation in youth groups, increased. The author also reports a rise in television viewing among children aged 9 to 12. Finally, the study documents gender differences in patterns of children's time use. Girls devoted more time on domestic tasks, personal care, shopping, outdoor and artistic activities, whereas boys devoted more time to sports and play. Although boys studied more than girls in 1997, this gap had closed by 2003. Overall, changes between 1997 and 2003 were broadly similar for both genders, with two main exceptions: participation in sports declined more sharply among boys, and play time decreased only for girls, remaining stable for boys.

Carriero (2006) analyzes changes in the time use of children aged 7 to 13 in Turin between 1979 and 2003. Over this period, homework time increased for most age groups, except among 13-year-olds, and participation in sports rose among children aged from 9 to 12 years. At the same time, social interaction at home, as well as time spent with friends declined, and time devoted to games and hobbies fell across all ages, alongside an increase in video game, computer and internet use. However, time spent watching television remained largely unchanged. Moreover,

he observed a significant gender gap in the evolution of certain time use variables. Across age groups, boys spent more time on sports than girls, and the gender gap in sport activity practice between boys and girls significantly increased between 1979 and 2003 for children aged from 9 to 13 years old.

Further evidence on changes in the time use of UK children aged from 8- to 16 years is provided by Mullan (2019a), drawing on data from three national time-use surveys conducted in 1975, 2000 and 2015. The findings indicate that by 2015 children were spending less time on play and hobbies and more time socialising and engaging in screen-based activities at home than in either 1975 or 2000. By contrast, there was no significant difference between 1975 and 2000 in the total time devoted to home- or indoor-based activities. The study also shows a decline in time spent in paid work and housework, alongside an increase in homework time in both 2000 and 2015 relative to 1975, highlighting the growing prominence of education within children's committed time. Moreover, between 1975 and 2000, time spent shopping increased while outdoor play declined, whereas participation in sport and civic activities rose. Overall, children's time appears to have shifted away from relatively unstructured and potentially unsupervised activities, such as informal play and socialising, towards more structured forms of physical activity (e.g. sport) and more supervised settings (e.g. shopping centres or civic participation), where adults are more likely to be present. The study also highlights that gender remains a significant determinant of children's time use in the UK. Although both boys and girls increased their time spent on homework, girls did so to a greater extent, leading to a significant gender gap in homework time that emerged in 2000 and persisted in 2015. At the same time, as girls became increasingly oriented towards their education, their time spent on housework declined more sharply than that of boys, even though they continued to devote more time to housework than boys in both 2000 and 2015. In terms of leisure, boys consistently spent more time on home- or indoor-based activities, particularly screen-based activities, than girls across all three years, and this gender gap widened markedly between 2000 and 2015. The trajectories of both age groups point to a broader reorganisation of childhood. Among older adolescents from 14– to 16 years, the period between 1975 and 2000 saw a shift towards more homework and screen-based, home-centred activities, at the expense of informal play and socialising. Younger children from 11– to 13 years also experienced a decline in outdoor play, but the increase in more structured and supervised activities, such as sport and homework, occurred mainly between 1975 and 2000. Overall, these patterns reflect a broader move towards more

institutionalised and adult-regulated uses of time across childhood, particularly during the transition from 1975 to 2000.

Overall, whereas these findings hold for specific geographic areas, we observe common trends in the change of time use of the children aged from 8 to 12 years old occurring around the turn of the millenium. First, children spend more time doing homework. Second, we observed a decline in outdoor unstructured activities (e.g., time spent with friends, outdoor play) and an increase of screen-based activities, and structured activities, such as religious and civic activities, and to some extent sport and shopping.

2.2. Trends in children's time use in the post-millennium period

A major post-millennium change in children's time use in HICs has been the rise in screen-based activities. This development reflects successive waves of technological diffusion: expanded access to television, computers, and the internet in the early 2000s (2000–2007), the rapid spread of smartphones between 2007 and 2014, and the growing dominance of social media platforms such as Facebook, Instagram, and TikTok since the early 2010s. Over the past two decades, household internet access in OECD countries has increased substantially. While only around 50% of households were connected in 2005, the share had risen to 92% by 2023, reflecting the near-universal diffusion of digital technology (OECD, 2025a). According to the OECD (2025a), access to digital technology was nearly universal among 15-year-olds in 2022, with 96% reporting access to devices at home. Smartphone ownership was also widespread, reaching 38% among 15-year-olds and approximately 70% among 10-year-olds. In most countries, at least half of 15-year-olds spend 30 or more hours per week on digital devices, and leisure screen time frequently surpasses the two-hour daily limit recommended by health organisations in countries such as Australia, Germany, and the United States. Overall, 95% of 15-year-olds report using the internet or social networks for entertainment, while large shares also use digital devices for communication and content sharing (88%), information seeking (84%), and gaming (83%). In addition, the OECD (2025b) reports that around one in eight girls and one in thirteen boys aged 11, 13, and 15 showed signs of problematic social media use, including difficulties managing time online, disruptions to daily activities, interpersonal conflicts, and dissatisfaction with their digital habits. The report also indicates that in 2022, on average across OECD countries, 8% of boys and 3% of girls reported gaming for at least seven hours on weekdays, with this proportion rising to 12% on

weekends. However, there are currently few studies on the evolution of screen-based activities and social media use among young people in the turn of the millennium.

A recent World Health Organization report (Boniel-Nissim et al., 2024) draws on HBSC data to examine social media use and gaming among adolescents aged 11, 13, and 15 across 44 countries and regions in Europe, Central Asia, and Canada between 2018 and 2021/22. In 2021/22, 36% of adolescents reported being in online contact through social media almost continuously throughout the day, with girls exhibiting a higher prevalence of constant online contact (44%); notably, this gender gap widened with age. Of greater concern, the prevalence of problematic use increased slightly from 2018 to 2021/22 (from 7% in 2018 to 11% in 2021/22) and was higher among girls and among 13-year-olds. Based on the same data and user classification, Boniel-Nissim et al. (2022) showed that problematic social media users had poorer mental health and social well-being and reported the highest levels of substance use. Additionally, intense and problematic social media users had less sleep, later bedtimes and more significant social jet lag than active social media users (Boniel-Nissin et al., 2023). In addition, 34% of adolescents reported gaming daily and 22% for at least four hours per day. Boys played more frequently and for longer periods than girls, and problematic gaming was more prevalent among boys (16% vs. 7%) and highest among 11-year-olds.

Mullan (2019b) tracks changes in children's time spent on screen-based activities in the UK among those aged 8 to 18 between 2000–01 and 2014–15. He finds that children's average time spent on total screen-based activities (i.e., television, computers, and video games), whether as a primary or secondary activity, increased by around 30 minutes per day over this period. More precisely, average time spent watching TV as a primary activity increased, while time spent watching TV as a secondary activity decreased, resulting in a net increase of 15 minutes per day. Meanwhile, children's time spent using computers and playing video games more than doubled. However, a more concerning trend is the amount of time children aged 8–18 spend using other digital devices throughout the day. Estimates indicate that they average around 1 hours and 16 minutes of other device use daily (e.g. smartphones and tablets). Thus in total children spent on average 4 hours and 45 minutes on screen based activities as a secondary or primary activity in 2015, resulting in an increase of 1 hour 45 minutes a day compared to 2000. The author also highlights significant gender differences in time spent on screen-based activities and in how these patterns have evolved over time. Boys spent more time than girls playing videogames, this gap largely widened between 2000 and 2015. However,

girls spent more time using smartphones or tablets as a secondary activity, likely for schoolwork or social media use.

Harvey et al. (2022) examine the evolution of self- reported personal computer, laptop and tablet use, mobile phone use, broadcast television viewing, online television viewing and games console using data from Global Web Index from 2012 to 2019 across 46 countries among adults aged 16-64, including young adults aged 16-24. The analysis reveals that daily screen time among young adults increased from approximately 10 hours per day in 2012 to around 12 hours per day in 2018. The highest levels of screen time were observed among young adults aged 16–24 and 25–34, with total screen time decreasing progressively with age. They further report that increases in screen use were more pronounced among individuals with higher levels of education and that, while no significant gender differences were found in trends, men reported higher overall levels of screen time than women. In addition, screen use rose more sharply in Latin America, whereas Europe and North America followed similar trends and maintained lower overall levels of screen time compared with other global regions. In the overall population, time spent using personal computers, laptops and tablets declined by around one hour per day between 2012 and 2019, while daily mobile phone use increased by approximately two hours over the same period. Traditional television viewing also decreased, while online television and games console use rose slightly.

2.2. Trends in school-related competition and time pressure

One piece of evidence linking changes in school-related pressure to changes in adolescent mental health comes from cross-national analyses based on repeated survey data. A recent study using data from the Health Behaviour in School-aged Children (HBSC) examined trends across 43 countries between 2002 and 2018. The authors documented a significant increase, at the national level, in the proportion of adolescents reporting high levels of schoolwork pressure over time. Importantly, increases in schoolwork pressure were statistically associated with contemporaneous increases in psychological complaints, including symptoms such as feeling low, irritability, and nervousness (Cosma et al., 2023). This study explicitly connects temporal trends in perceived academic pressure with parallel trends in adolescent mental health outcomes at the population level. Complementary evidence comes from national repeated cross-sectional studies. Using data collected between 2002 and 2021, research conducted in Wales documented an increase in perceived schoolwork

pressure among students aged 11–16 years. Over the same period, the prevalence of emotional problems also rose substantially (Armitage et al., 2025).

Further support for an upward trend in academic pressure is provided by a recent systematic review of the literature. Steare et al. (2023), reviewing 52 studies on academic pressure and adolescent mental health, note that several studies report increases in academic demands and perceived pressure over time, often discussed in parallel with rising rates of depression, anxiety, self-harm, and suicidal ideation. Indirect evidence also points to institutional changes that may contribute to rising school-related pressure. Research on high-stakes testing in European countries shows that educational systems characterized by exams with major consequences for student's future educational trajectories are associated with higher levels of student stress (Putwain et al., 2015). While such studies do not directly document time trends, they suggest that shifts toward more high-stakes testing regimes can plausibly amplify perceived pressure. To the extent that high-stakes assessment has expanded or intensified in some countries over time, this may represent an additional mechanism driving increases in schoolwork pressure.

Finally, time series on academic workload in the US suggest that time demands associated with schooling may have increased. Between the early 1980s and early 2000s students added, on average, approximately 7.5 hours per week to combined time spent in school and on homework, reflecting a substantial increase in academic workload (Hofferth & Sandberg, 2001b). However, such evidence is not uniform across countries, and international data compiled by the OECD show no consistent long-run increase in formal instructional hours across all industrialized nations. This suggests that perceived pressure may rise even in the absence of uniform increases in objectively measured school time.

A key limitation in this literature concerns measurement. Much of the evidence relies on self-reported schoolwork pressure, which may capture not only changes in academic demands but also shifts in cultural norms, expectations, or psychological sensitivity (OECD, 2017; West et al., 2010). Students' perception cannot be straightforwardly interpreted as evidence of rising objective workload or academic competition. This data simply indicates that students feel increasingly under pressure, not that they are. However, such feelings are an issue for them, as suggested by the next section.

2.3 Children lost their autonomy

It is completely new in human history for children and young people to live lonely sedentary lives. The transition was completed by the end of the 1980s. In a single generation, since the 1970s, the "radius of activity" of children, the area around their homes where they could move on their own, shrank by almost 90% (Gaster, 1991). Between 1969 and 2001, the percentage of students in the US who went to school autonomously fell from 40.7% to 12.9% (McDonald, 2007). The phenomenon is not exclusively American; children's mobility and independence have been affected all over the industrialised world. In 1971, 80% of children between 7 and 8 years of age in Great Britain walked to school, often alone or with friends. Twenty years later, less than 10% walked to school and almost all were taken in a motor vehicle by their parents (Hillman et al. 1990). Today, two out of three ten-year-olds have never been in a shop or a park alone (Moss, 2012). About one in every two adults consider that 14 years is the minimum age for children to be able to move about town alone (The Children's Society, 2007).

"Only one generation ago, a ten-year-old had more freedom than an adolescent has today" is the alarming conclusion of an English report on the condition of children (The Children's Society, 2007). This radical transformation of the life of children has a series of harmful effects, ranging from lack of contact with nature to an epidemic of obesity from an increasingly sedentary life. The prevalence of childhood obesity has tripled, a trend that has been linked to reductions in children's physical activity levels (Salmon & Timperio, 2007).

By limiting contact between them, these changes in children's lives translate above all into relational deprivation. When children played in the street, they formed groups. Involvement in interpersonal dynamics taught them social skills that were theirs for life. Once children experienced the world through people; now they do so through screens.

2.4 Commercial pressure

Commercial pressure on kids and teens has soared over the past few decades, as they have become the main target of advertising. In the early 2000s in the US, spending on advertising targeting children had already become 150 times larger than what was spent in 1983 (Schor, 2004).

The reason for this rampant surge is that advertising directed at children is particularly effective at promoting sales. Robinson (2001) an experimental study with third- and fourth-grade primary school children. The intervention group participated in an 18-lesson classroom curriculum delivered over six months, designed to reduce television, videotape, and video

game use. Over the course of the intervention, television viewing time declined, and children's requests for toys decreased by 70% compared with those in the control group.

Advertising is especially effective on children because it is easy to make them dissatisfied with what they have. One aim of advertising is to make people dissatisfied. A century ago at the dawn of advertising, a top manager of General Motors, Charles Kettering, said that the mission of business was the "organised creation of dissatisfaction" (through advertising). Creating dissatisfaction is easier with children than with adults, as explained by Nancy Shalek, a famous American expert in advertising for children. She claims that the key to advertising is to "make people feel that without a product you are a loser. This is easy to do with kids because they are the most emotionally vulnerable" (quoted in Schor 2004).

The digital era has made it easier for the advertising industry to target children. The unprecedented amount of time spent by children looking at screens offers extraordinary opportunities to capture their attention with entertainment on the internet, largely financed by commercial interests (Buckleitner, 2008). Online environments are stimulating (colours, music, amusement) and children interact with a brand for hours instead of for the few seconds of a TV ad. With the new media, the border between advertising and content is much vaguer than on TV. This is why firms are increasingly shifting their advertising budget online.

To spread its messages, the advertising industry exploits the revolution in how children pass their time. In the early 2000s, children's use of time had already made the transition to the new model. Time passed on screens had increased dramatically at the expense of time spent playing and being with others (Schor, 2004). "Children and adolescents now spend more time on the internet than at any other activity except sleeping" (Strasburger et al. 2010, p. 757). For the first time in history, children spend their free time principally at home in front of a screen instead of with people. On the internet children find the company that our cities no longer offer them.

2.5 The loneliness pandemic

The abrupt disruption of children and adolescents' daily relationships resulting from the COVID-19 pandemic mitigation measures, such as lockdowns and physical distancing practices, has drawn attention to youth loneliness and its consequences. For example, approximately 90% of the world's children and adolescents were impacted by school closures (UNESCO, 2021). But loneliness had already been alarming and on the rise well before the

pandemic. In a recent meta-analysis of pre-pandemic studies (i.e., studies conducted prior to the pandemic), the prevalence rates of loneliness among adolescents between 12 and 17 olds across 76 countries ranged from 9.2% to 14.4% depending on the geographic region (Surkalim et al., 2022). Before the pandemic, up to 20% of eight-year-olds consistently reported feeling lonely (Lempinen et al. 2018).

These numbers suggest that when the Covid-19 pandemic broke out, youth had already been experiencing the pandemic of loneliness for a long time. After 2000, internationally comparable quality data began to be collected (e.g., PISA data), and a clear picture began to emerge. Drawing on PISA data collected in 36 OECD countries, Twenge et al. (2021) and Freije *et al*. (2025) report a rise in school loneliness among 15-year-olds between 2000 and 2018, with a substantial share of the rise occurring between 2012 and 2018. Igami et al. (2023) document similar trends in both low and HICs, showing that at the beginning of the period (2000) girls reported lower levels of loneliness than boys. Over time, however, this gender gap narrowed in HICs as loneliness increased more rapidly among girls. By around 2012, girls' loneliness levels had overtaken those of boys and continued to rise at a faster pace thereafter. Parlikar et al. (2023) show that loneliness prevalence doubled from 5.9% in 1995/97 to 10.2% in 2017/19 among Norwegian adolescents aged 13-19 years.

Evidence from the late twentieth century is comparatively limited. Nevertheless, loneliness among young people was already recognised as an important research topic because of its potential long-term negative psychosocial consequences (Davis, 1990). In the 1980s and 1990s, public concern was heightened by youth social disconnection, as evidenced by media attention in the United States to latchkey children — those who return to empty homes after school because their parents work — or to hikikomori, the extremely socially isolated young Japanese. However, no standardized, repeated national loneliness prevalence measure exists before 2000 for HICs that is directly comparable across years and countries.

3. The revolution and youth well-being

3.1 Free play and Children's well-being

As documented in the previous section 2.1. children's free play, that is an "activity that is freely chosen and directed by the participants and undertaken for its own sake, no consciously pursued to achieve ends that are distinct from the activity itself" (Gray, 2011, as

cited in Haidt, 2024, p.60), has declined markedly since the 1980s (Hofferth and Sandberg, 2001a; Hofferth, 2009; Carriero, 2006; Mullan, 2019a; Haidt, 2024).

In his book *The Anxious Generation* (2024), Jonathan Haidt argues that free play is not only beneficial for children's well-being but also a fundamental developmental need that supports social, cognitive, and emotional growth. Haidt further notes that across many species of young mammals, including rats, monkeys, and humans, play is both intrinsically motivated and biologically necessary for healthy development (Pellis & Pellis, 2007). A substantial body of research shows that free play fosters well-being and positive emotions, strengthens attentional capacities, enhances problem-solving, supports self-awareness and self-directed executive functioning, promotes social and emotional learning and reduces undesirable behaviours. Moreover, thrilling experiences associated with free play have antiphobic effects and allow children to develop their intrinsic antifragility (Sandseter & Kennair, 2011; Sandseter et al., 2023; Haidt, 2024).

Evidence from several HICs indicates that unstructured play is consistently associated with positive emotional experiences and children's well-being during childhood. A systematic review by Lee *et al*. (2020), which examined eight experimental studies of unstructured play interventions among children aged three to seven years, shows that free play supports not only physical health, social interaction, and cognitive development, but also enhances children's well-being during periods of stress by providing resources that help them cope with stressors. In addition, free play appears to strengthen social engagement and foster a broader sense of well-being. Qualitative evidence points in a similar direction: through interviews and conversations with 8–15-year-olds living in New South Wales, Australia, Fattore et *al*. (2009) found that participating in play and activities characterized by fun, freedom, and opportunities to develop competencies was central to children's well-being. The children also highlighted that the physical features of their natural and built environments can foster a sense of well-being, particularly when these environments allow them to act autonomously and engage actively in their communities.

Experimental and observational studies further corroborate these findings. An Australian experimental study of children aged 5 to 12 years found that a school playground intervention providing movable materials, with limited teacher supervision, increased children's enjoyment

and participation in physical activity as well as their enjoyment of intrapersonal play activities (Hyndman *et al*., 2014). Storli & Hansen Sandseter (2019) studied the effect of free play on Norwegian children aged 3 to 6 years in early childhood education and care settings and reported a significant positive association between children's free play and their well-being and involvement. Other studies also put forward the benefits of freeplay in terms of mental health. Chen *et al*. (2024) reported that free play was associated with improved mental health among Chinese children aged 3 to 6 years, primarily through reductions in internalizing difficulties, including emotional symptoms such as anxiety, excessive worries, and sadness. Evidence from clinical settings also suggests beneficial effects: two studies indicate that unstructured play may contribute to reductions in anxiety and cortisol levels among hospitalized young children (Potasz *et al.*, 2013; Al-Yateem & Rossiter, 2017). Conversely, sedentary time has been associated with higher levels of anxiety and depressive symptoms (Wipfli *et al*., 2011; Zink *et al.*, 2022).

Several studies suggest that free play supports the development of self-directed executive functioning, strengthens attentional capacities, enhances problem-solving skills, promotes social and emotional learning, and reduces undesirable behaviours, all of which are closely linked to children's overall well-being (Santoso, 2022; Bundy *et al*., 2010; Lee et al., 2020; Gibson *et al.*, 2017).

A growing body of research highlights the role of free and unstructured play in supporting children's cognitive development, particularly through its contribution to executive functioning and self-regulation. Barker et al. (2014) examined the impact of structured versus unstructured activities on executive functioning in a sample of 6–7-year-old children in the United States. Executive functions are cognitive control processes that regulate thoughts and actions in the service of goal-directed behaviour. Developing primarily during childhood, they underpin higher-order cognitive processes such as planning and decision-making, the maintenance and manipulation of information in working memory, the inhibition of unwanted thoughts and actions, and the flexible shifting between tasks. The authors found that greater time spent in less structured activities was associated with stronger self-directed executive functioning, whereas more time devoted to structured activities predicted lower levels of self-directed executive functioning.

Two main pathways have been proposed to explain the positive association between free play and executive functioning. On the one hand, free play may directly support the development of cognitive skills, as it encourages imagination and creativity in interactions with peers. During such activities, children negotiate roles, respond to others' ideas, and adapt to evolving storylines, thereby fostering cognitive flexibility, perspective-taking, and continuous adjustment to changing play contexts. On the other hand, free play may strengthen self-regulation and reduce stress, which is known to negatively affect the functioning of the prefrontal cortex, thereby indirectly enhancing executive functioning (Eberhart et al. 2023; Colliver et al., 2022). In line with this reasoning, free play is associated with improved attentional capacities (Storli & Hansen Sandseter, 2019), coping strategies (Capurso & Ragni, 2016) and deep-level learning (Laevers, 2000). Laevers (2000) describes how deep level learning takes place when children are in a mode of high involvement, and argues that to promote optimal learning environments it is important to provide for a high level of involvement in children's play and activities. This perspective resonates with Haidt's (2024) concept of the "discovery mode," a state characterized by heightened positive emotions and shared excitement that nurture children's curiosity and support their personal development. Moreover, several studies indicate that experiencing an activity as play is important for children's learning from that activity (Howard & McInnes, 2013; McInnes et al., 2011). Notably, children's well-being appears to be higher when they perceive an activity as play rather than as adult-led, even when the activity itself remains similar (Howard & McInnes, 2013).

Free play enables children to exercise autonomy in peer interactions and to learn from the consequences of their decisions and behaviours. The systematic review of the impact of unstructured play interventions on young children's wellbeing of Lee *et al.* (2020) highlights that free play promotes social interaction skills and enhances social engagement. Moreover, a U.K. study on children aged from 2- to 3 years showed that freeplay is associated with pro-social behaviour and fewer behavioural problems (Mathieson & Banerjee, 2010). Trostle (1988) further reports that, in a sample of Puerto Rican children aged 3 to 6 years, participation in child-centered group play sessions was associated with greater social competence in peer interactions and helped foster positive peer relationships and confidence within the group. More specifically, rough-and-tumble play has been linked to the development of the social brain, particularly neural systems involved in social interaction and emotional regulation. Such play helps children interpret social cues and distinguish playful interactions from aggression,

which may in turn reduce behavioural problems. It also provides opportunities for cooperation, negotiation, and role-taking, thereby supporting the development of social competence and adaptive peer relationships (Pellis & Pellis, 2007; Bundy *et al*., 2010).

Within the literature on children's free play, special attention has been given to the well-being benefits of challenging and risky play, as well as outdoor play and play that fosters connection with nature. As emphasized by Haidt (2024) antifragile kids need risky play to be in discover more. Exposure to the uncertainty inherent in challenging or risky play provides children with opportunities to develop emotional responses, physical skills (Gibson *et al*., 2017), and coping strategies that can strengthen resilience, have antiphobic effect and support mental health and well-being across childhood and adolescence (Sandseter & Kennair, 2011; Capurso & Ragni, 2016; Bundy *et al*., 2010). Moreover, Santoso (2022), in a review of the literature on outdoor activities and child development, highlights their broad developmental benefits, encompassing sensory and motor development, cognitive functioning, emotional regulation, mood and behavioural outcomes, and the enhancement of social interaction and social skills. More specifically, using cross-section HBSC data on Canadian adolescents, Piccininni *et al*. (2018) found that outdoor play and connections to nature was related to improving psychosomatic health.

Multiple studies in this literature rely on field experimental designs that are conducive to causal inference. However, well-being outcomes are often measured over relatively short time horizons, whereas increased opportunities for play may require longer periods to produce measurable effects on children's physical, social, and emotional well-being (Lee et al., 2020). Moreover, while the association between free play and children's mental and physical health, as well as cognitive development, is well established, evidence regarding its impact on social skills remains mixed across studies (Gibson et al., 2017; Lee et al., 2020).

3.2 Screen-based activities and children well-being

As outlined in Section 2.2, adolescents and young adults have experienced a significant restructuring of their time allocation in the beginning of the millennium, driven primarily by the rapid expansion of smartphone and social media use, with more moderate increases in video gaming (Harvey et al., 2022). This transformation has contributed to a reconfiguration of social life, with a substantial portion of interactions now occurring through digital platforms rather than in person (Leonard, Agrawal & Kotharia, 2024). In his book, Haidt (2024, p. 19)

characterises virtual interactions as fundamentally different from face-to-face exchanges. He describes them as *disembodied*, in that communication occurs primarily through language, sometimes with an AI, without the presence of the body. They are also *asynchronous*, with exchanges often taking place through text-based messages that may be delayed rather than occurring in real time. Moreover, online interactions often rely on *one-to-many communication*, enabling individuals to address broad audiences or engage with several people simultaneously across different conversations. These exchanges occur within digital communities characterised by a *low bar for entry and exit*, where participation requires minimal commitment and disengagement is effortless. Users can easily block others, leave conversations, or withdraw from platforms altogether. These shifts in modes of communication among young people have far-reaching consequences for their psychosocial development and well-being.

While the expansion of digital services has opened up valuable opportunities for learning, information access, exploration, psychological support and social connection, it has also generated growing concerns regarding their potential adverse effects on children's well-being. The risks associated with digital engagement encompass social isolation, intensified social comparison, exposure to harmful content and behaviours, experiences of online abuse, fragmented attention, sleep loss, problematic or addictive use, and adverse physical and mental health outcomes (OECD, 2025a; OECD, 2025b; Haidt, 2024). Although Haidt (2024) largely attributes the rise in adolescent mental health problems to the spread of digital technologies, no clear scientific consensus has yet emerged regarding the impact of smartphones and social media on adolescents' mental health. The predominance of correlational studies, combined with the scarcity of large-scale experimental research, makes it difficult to establish causal relationships (Pearson, 2025).

However, although Pearson (2025) quotes the unclear results of meta-analysis on the relationship social media use and teens well-being (Orben, 2020; National Academies of Sciences, Engineering, and Medecine, 2024; Plackett, Blyth & Schartau, 2023), several recent studies start to highlight an emerging consensus on the detrimental effect of social media use on teens' wellbeing. Fumagalli, Shrum & Lowrey (2024) reviewed cross-sectional, longitudinal, experimental studies, as well as, meta-analyses, on the effect of social media consumption on adolescent psychological well-being. They argue that although disagreements between researchers on the size and importance of social media effects on adolescent psychological

well-being seems to exist, a consensus start to emerge (Orben *et al.*, 2022); "(1) even minimal social media usage can have negative effects on young adolescent well-being, (2) These negative effects are greater for girls than boys, (3) these effects occur during specific developmental windows (e.g. puberty onset), and (4) these effects occur at different developmental periods for girls and boys (i.e. 11-13 for girls and 14-15 for boys)" (Shrum & Lowrey, 2024, p. 125). Another umbrella review of research on social media use and adolescent mental health from Agyapong-Opoku *et al.*, (2025) concluded that most studies link social media use to poorer mental health outcomes, particularly higher levels of depression and anxiety. Moreover, they highlight that problematic use and passive consumption of social media are most strongly associated with adverse effects. A recent longitudinal study by Blanchflower et al. (2024) further corroborates the growing body of evidence indicating a negative association between social media use and adolescents' well-being. Blanchflower *et al.* (2024) document a structural change in the relationship between age and mental health that appears to have emerged around 2011 in France, Germany, the Netherlands, Italy, Spain, Sweden, New-Zealand and many ISSP countries. Before this turning point, the age profile of mental health followed a curvilinear pattern: indicators of poor mental health displayed a hump-shaped relationship with age, while subjective well-being followed the more traditional U-shaped pattern. In more recent years, however, this pattern has shifted. Mental ill-health now tends to decline steadily with age, whereas subjective well-being increases progressively across the life course. They also note that similar patterns have been documented in a wide range of studies covering a total of 47 countries (Blanchflower, Bryson, & Xu, 2024a; Blanchflower & Bryson, 2024b; Botha *et al.*, 2023; Garriguet, 2021). Interestingly, they also find that in France, Germany, Italy, Spain and Sweden, individuals with poorer mental health devote more time to screen-based activities, and that within-person deteriorations in mental health are positively correlated with greater daily screen use. They highlight that this pattern is particularly pronounced among young women and appears to have emerged around 2011, well before the COVID-19 lockdowns. Moreover, Shannon *et al.* (2021) conducted a systemic research on cross-sectional studies analyzing the effect of problematic social media use on mental health. Reviewing 21 studies they estimate moderate positive correlations between problematic social media use and depression, anxiety, and stress.

Fumagalli, Shrum & Lowrey (2024) highlight several limitations of this literature including the lack of consensus on the definition of social media. Different networking platforms are likely to

influence well-being in distinct ways depending on their specific features. The way social media use is operationalized varies considerably; some include total time spent on all social media, time spent on specific networking sites, while other measures frequency of checking social media, problematic social media use, intensity of social media use, or total screen time. Similarly, measurement of psychological well-being changes across studies including; life satisfaction, affective well-being, depression, loneliness, stress, anxiety, and self-esteem.

One key mechanism underlying the negative association between social media use and adolescents' well-being is the combination of feedback-seeking behavior and social comparison, especially on highly visual, metric-driven platforms such as Instagram, TikTok, Snapchat, and Facebook. In his book, Haidt (2024) provides a clear explanation of the mechanisms that arise when adolescents use these social networking platforms, particularly among girls; "On the most prototypical platforms, like Instagram, users post content, often about themselves, and then wait for the judgments and comments of others. Such posting and waiting, along with social comparison, is having larger and more harmful effects on girls and young women than on boys and young men, and this difference shows up consistently in many correlational studies." (Haidt, 2024, pp. 156-157). In the context of social media use adolescents are highly sensitive to their own and their peers' physical appearance and often engage in frequent appearance-based social comparisons. Numerous studies document the association between social media use and upward social comparisons (i.e. comparisons to those perceived to be better off) (Hanna *et al*., 2017; Burnell *et al*., 2019; Fardouly *et al*. 2020; Kingsbury *et al*., 2021; Fumagalli, Shrum & Lowrey, 2024). For instance, Hanna et al. (2017) found that Facebook use was associated with higher levels of social comparison and self-objectification, both of which were linked to lower self-esteem, poorer mental health, and greater body shame. Additionally, Fassi *et al.* (2025) provide cross-sectional evidence from the U.K. indicating that adolescents with internalizing conditions report spending more time on social media, engaging in higher levels of social comparison, and experiencing stronger mood effects from online feedback. They also report lower satisfaction with the number of their online friends and lower levels of honest self-disclosure. Moreover, de Vries *et al*. (2016) use panel data on Dutch adolescents aged 11-18 and found that social network site use predicted higher levels of body dissatisfaction as well as stronger peer influence on body image, particularly through the receipt of appearance-related feedback from peers. Besides, several studies provide evidence that social media use has a causal impact on body image and

appearance satisfaction (Thai *et al.,* 2024; Engeln *et al.,* 2020; Kleemans *et al*., 2018; Fumagalli, Shrum & Lowrey, 2024). For instance, Thai *et al*. (2024) demonstrate experimentally that limiting social media use to one hour per day improves appearance esteem and weight esteem among individuals aged 17-25. As a consequence, this deterioration in self-perception may contribute to the development of eating disorders, such as anorexia, and body dysmorphic disorder (Ryding *et al*., 2020), and, in more severe cases, to suicidal ideation or self-harm (Hanna *et al*., 2017).

The ease to visualize pro-eating disorder or self-harm content further exacerbates this risk (Memon *et al*., 2018; Sala *et al*., 2024). Moreover, being victim of cyberbullying is a risk factor for developing depressive symptoms and may lead to increased suicide attempt and suicidal ideation (Hamm *et al*., 2015, Sedgwick *et al*., 2019, Vidal *et al*., 2020; Sala *et al*., 2024). Besides, numerous studies show that social media use is associated with sleep deprivation, attention fragmentation, addiction and loneliness (Haidt, 2025; Andreassen & Schou, 2015; Agyapong-Opoku *et al*., 2025).

3.3. Academic pressure and mental health outcomes

Among the potential contributing factors to the youth's mental health crisis, increasing attention has been devoted to the role of school-related pressures, including both the time demands imposed by schooling and the competitive nature of contemporary educational systems. This section reviews a growing body of research documenting the robust association between academic pressure and adverse mental health outcomes among adolescents. In their systematic review, Tom Steare et al. (2023) show that higher academic pressure is consistently associated with depression, anxiety, self-harm, and suicidal ideation across a wide range of national contexts, including Europe and North America. Although many of the 52 studies reviewed are cross-sectional and control for a limited set of confounders, the consistency of the association across methods, measures, and contexts is striking.

Importantly, recent longitudinal evidence strengthens the case for such an association. Using a large prospective cohort of adolescents in England, Guo et al. (2026) find that higher perceived academic pressure at age 15 predicts increased depressive symptoms and self-harm up to early adulthood, even after adjusting for prior mental health and socioeconomic factors. Complementary evidence from Northern Europe shows that within-person increases in academic stress are associated with higher psychological distress among Norwegian

adolescents, with academic self-efficacy acting as a partial buffer (Kristensen et al., 2023). Earlier UK-based research similarly documents a strong association between perceived school pressure and emotional distress during adolescence (Sweeting et al., 2010). Large-scale survey evidence further corroborates these findings: data from the Health Behaviour in School-aged Children study summarized by World Health Organization Europe (2024) document rising perceived school pressure across many European countries, alongside worsening indicators of adolescent mental well-being.

The association between academic pressure and mental health is not limited to Western societies. Research on highly competitive educational systems in Asia reports similar patterns. For example, Khumanlambam et al. (2025) show that school-related stress is significantly associated with suicidal ideation among Indian adolescents, while Haritay et al. (2025) identify academic stress as a major risk factor for psychological distress among Indian students aged 13–15. Recent work has also begun to explore potential mechanisms linking academic pressure to mental health. Using data on Chinese middle and high school students, Wang et al. (2025) find that excessive academic burden is associated with emotional problems partly through reduced physical activity, increased loneliness, and poorer sleep quality. These findings suggest that academic pressure may affect mental health indirectly by crowding out restorative activities and disrupting daily routines.

At the same time, the literature emphasizes substantial heterogeneity in effects. Protective factors such as self-efficacy, family support, and school-level resources appear to moderate the relationship between academic pressure and psychological distress, indicating that similar levels of pressure may have different consequences depending on individual and contextual characteristics.

Overall, what is striking in this literature is the stability of the association between academic pressure and poor mental health across a wide range of empirical strategies, measures, and institutional and cultural contexts.

3.4 Commercial pressure and youth well-being

The effects of commercial pressure on children's well-being pass through the promotion of materialistic values. Materialistic individuals, including children, prioritize objectives such as money, image, status, and fancy goods.

Children's materialism perfectly mirrors the conflict described by Polanyi (1968) between sociability and well-being on the one hand, and market pressure on the other. Materialism fuels children's demand for toys and thus supports sales and employment for toy companies. However, more materialistic children experience lower well-being and have poorer relationships with both parents and peers (Dunkel et al., 2019; Nairn & Bottomley, 2007).

From the point of view of corporations, all this marketing is extremely expensive but an excellent investment because it has successfully generated an epidemic of consumerism among children. Since the 1970s, studies have invariably recorded a relationship between exposure to advertising and consumerism among children (Goldberg and Gorn, 1978; Pollay, 1986; Greenberg and Brand, 1993; Buijzen and Valkenburg, 2003; Schor, 2004; Nairn & Bottomley, 2007).

Various methods have been developed to measure child consumerism (Nairn, 2014). Chaplin & John (2007) ask children to make a collage with pictures of things that make them happy. The children can choose from pictures of brands, sports, friends, families. A predominant choice of pictures of brands points to greater consumerism. Another measure of child consumerism is the Consumer Involvement Scale (McNeal, 1992) that measures children's sensitivity to commercial novelties with questions of the type: is it important to you to dress fashionably?

Child consumer studies produce similar results to those of adults. Children more inclined to consumerism are less happy according to many measures of wellbeing, such as their parents' assessment (Goldberg et al. 2003), satisfaction and dissatisfaction with life (Ahuvia and Wong 2002, Buijzen and Valkenburg 2003), self-esteem (Nairn et al. 2007, Chaplin & John 2007) and standard measures of anxiety, depression and psychosomatic symptoms (Schor, 2004, Kasser, 2005).

Child consumerism is also strongly linked to family conflict (Buijzen and Valkenburg 2003, Nairn et al. 2007). Children more inclined to consume have less self-esteem and less esteem for their parents, with whom they bicker more often. The probability of attitudes like "My parents are not cool" or "my parents do not understand what children of today need" is strongly correlated with consumerism (Schor, 2004, Nairn et al., 2007).

A special aspect of these family conflicts concerns pester power: children pester their parents to buy them advertised products (Buijzen and Valkenburg, 2003; Nairn, 2014; Flouri, 2004). Children who are more exposed to advertising are more likely to pester their parents. In turn,

children who pester their parents are more often dissatisfied and disappointed when their parents refuse to buy the products requested (Buijzen and Valkenburg 2003). Pester power is a frequent source of family fighting. In Great Britain, around one third of children report that when they want their parents to buy them something, they keep asking until their parents eventually give in. More than half claim to have done this. Only 15% claim never to have pestered their parents (Bailey, 2011).

4. A dysfunctional revolution

We have tracked the profound changes in young people's lives that began almost half a century ago and their impact on well-being. The literature we have reviewed so far is fragmentary and incomplete. Nonetheless, it's striking that the pieces of literature we reviewed form a coherent picture to which all contributions converge: a revolution in children's lives has been underway since the 1980s.

Children's daily lives have shifted away from unstructured , outdoor, peer-based, toward home-centered, screen-based and adult-supervised activities, amounting to a structural reorganization of childhood time. Over time, kids and teens have become more besieged by commercial pressures (advertising) and performance pressure by adults (school and parents), and they have experienced more loneliness and less free play. They lost autonomy and their time has been increasingly directed at extrinsically motivated activities.

A key issue, strongly emphasized by Haidt (2024), is the evaporation from kids' lives of free play, which is necessary for humans (as for all mammals) to develop fundamental social, emotional, physical and cognitive skills. Time devoted to intrinsically motivated interactions with peers has been substituted by extrinsically motivated activities and a flooding of screens.

The low priority of free play in social organization and culture can be understood starting from its defining characteristics. According to Gray (2011), play requires suppression of the drive to dominate and enables the formation of long-lasting cooperative bonds, beyond being motivated for its own sake. According to this definition the constitutive elements of free play are democracy, cooperation and intrinsic motivations. These elements are at odds with the dominant economic and social organization, largely based on hierarchies, competition and extrinsic motivations.

For this reason, free play receives little societal attention. The priority in organizing young people's lives is extrinsically motivated activities. For nearly 50 years, the main demand made on young people seems to have been to become producers and consumers at an ever earlier age. Predictably, with the pressure to perform, performance anxiety has increased. Young people have been deprived of the physical, temporal, and mental spaces for intrinsically motivated relationships, leaving screens as the only space for leisure and sharing. A space invaded by commercial pressures.

This revolution in childhood is unprecedented in human history, as children have always grown up spending their free time outdoors and in groups. Such a momentous shift in our species' experience of youth could not go unnoticed. Its result has been the mix of loneliness, competitive and commercial pressure, and a lack of social experience that is undermining the well-being of younger generations. Such a scenario suggests we have taken the wrong path. There's something wrong with the way industrial societies are growing their young members.

We are witnessing the impact on young people of what Polanyi (1968) considered the greatest risk of the market economy. According to Polanyi, the market economy combines an extraordinary capacity to create material progress with great destructive potential, as it tends to colonize all spheres of social life. Basing an economy on personal convenience, competition, and possessions tends to erode sociability and community. The way we live together, the political system, land, information, community bonds, the way we spend our time, and even our children's education tend to be shaped by the market to conform to its commercial logic. Societies have always protected themselves from this destructive potential by regulating markets. In other words, according to Polanyi, the market economy can function to the extent that it does not become a market society. When the regulations that prevent this effect are absent or ineffective, serious social crises occur.

Under such a Polanyian light, youth’s malaise is one of those social crises. Such malaise appears to be a consequence of today's society's inability to protect young people from the invasion of the market in their lives. In young lives competition, performance, possession, and extrinsic motivations are overstimulated. The crisis of kids and teens is fostered by a social organization that ignores intrinsic motivations. But these are necessary for young people to live and grow well.

The literature reviewed here suggests that the revolution in childhood and adolescence experienced by HICs has been dysfunctional for well-being and mental health. A change is needed. In the following sections, we will explore some fields in which the market regulation approach indicated by Polanyi seems viable: urban planning, schooling, and advertising.

5. Policies

5.1 Urban planning

Urban evolution over the last 50 years has played a key role in the childhood revolution. For thousands of years, cities brought people together. The square, where people of all ranks could meet was the symbol of this. Common urban spaces, the streets and squares – all for pedestrians– created the social fabric. This continued until a few decades ago, when the first epoch of urban life, which had lasted about 5000 years, came to an end. The second epoch commenced with the advent of automobiles and everything rapidly changed. Common space was invaded by cars. The human environment par excellence, i.e. the city, became a dangerous place for humans. Common urban spaces lost their capacity to encourage relationships and cities became places where people meet solely to shop or to work.

Since the advent of the automobile, cities have been built for cars and not for people. In so many European cities, in neighborhoods built since WW2, public spaces have given way to private spaces: more and more houses, fewer and fewer squares increasingly congested with traffic. With the collapse of walkability, malls took on the function of meeting places. Their advantage is that they are pedestrians areas, a mother can let go of her child's hand without fear of cars. Families and young people end up passing their free time there. The purpose, however, is not to bring people together but to sell. Sociability is immersed in marketing pressure that makes it undemocratic, frustrating those who cannot buy.

Everyone has paid the relational price of this urban evolution, but children have paid the highest price because their opportunities to socialize depend largely on the existence of a social fabric at walking distance (same for the elderly). The social context that was once outside their front doors has disappeared. Thus, cars in cities generate relational inequalities between generations. The young (and old) people are the population groups at high risk of loneliness in

HICs. In the US, 80% of children under 18 and 40% of persons over 65 admit feeling lonely (Pinquart and Sorensen 2001, Weeks 1994).

In this way, what specialized studies call children's autonomous mobility (CAM) has collapsed. CAM is the ability to move independently in public space without adult supervision. A substantial empirical literature has focused on CAM and its implications for social interaction and psychosocial outcomes. Although most of this work does not measure loneliness directly, it identifies mechanisms that later research consistently links to loneliness in children and adolescents.

Early evidence from the United Kingdom documents a marked historical decline in CAM. Using repeated national travel surveys, Hillman, Adams, and Whitelegg (1990) show that between 1971 and 1990 children in urban and suburban Britain experienced a substantial reduction in independent mobility. This decline was associated with fewer opportunities for unsupervised peer interaction and informal play, and a growing reliance on adult-organized activities, indicating a contraction of children's informal social worlds over time. Based on cross-sectional survey data and spatial mapping in Finnish urban contexts in the late 1990s and early 2000s, Kyttä (2004, 2006) finds that children with wider independent activity spaces report more neighborhood friends, higher perceived social competence, and stronger place attachment. These factors are widely recognized in later developmental research as protective against loneliness. Reviews and reports associated with the World Health Organization document a long-run decline in children's independent mobility across many high-income countries since the 1970s, framing CAM as a determinant of social participation and community integration rather than solely a transport issue WHO (2026).

The relevance of these patterns for loneliness is clarified in the adolescent mental-health literature. A systematic review by Loades et al. (2020), covering pre-pandemic studies from Europe, North America, and Australia, shows that reduced face-to-face peer interaction is strongly associated with higher loneliness among children and adolescents. Although autonomous mobility is not always measured explicitly, structural constraints on independent movement are repeatedly identified as upstream factors limiting in-person social contact. Finally, urban and environmental studies from the 2010s, conducted in European and East Asian cities, show that adolescents report lower loneliness in neighborhoods characterized by

walkability, perceived safety, and opportunities for independent movement (e.g., Wang et al., 2019; Ma et al., 2020).

Taken together, this literature suggests that autonomous mobility shapes the social conditions—peer interaction, social competence, and neighborhood belonging—that are robustly linked to loneliness, even in the absence of long-run datasets directly connecting mobility trends to loneliness outcomes. The message from these studies is that urban evolution has significantly contributed to the collapse of CAM, which has worsened children's loneliness, development, well-being, and social experience. Children have paid a high price for the low priority given to their quality of life in urban planning.

If societies are ready to change priorities, the opportunities are there and are well-tested. They show that restoring urban freedom to children requires improving the quality of life of all residents. In fact, urban studies show that where cars are less important, where alternatives to motor vehicles exist, people are happier and more inclined to establish relationships. Studies comparing traditional high-density neighbourhoods with low-density suburbs record more social interactions and sense of community in the former (Kim and Kaplan, 2004, Lund, 2002). Other studies concentrate directly on the degree of walkability, measured with a widely-used index (Frank et al. 2010) based on objective and/or perceived measures that generally combine three factors: population density, ratio of the area considered and that of the shops within it, mixed use of space. These studies show that walkable neighbourhoods improve social interactions and generate a greater sense of community (Leyden, 2003, Lund, 2003, du Toit et al., 2007, Wood et al., 2008 and 2010, Rogers et al. 2011, 2013). Even walking the dog acts as a catalyser of relationships (Wood and Christian 2011). Walkability also has a positive impact on crime rates (Gilderbloom et al. 2015). Walkable neighbourhoods have more eyes in the streets, a deterrent to petty crime. These results have been replicated in cities of North America, Europe, Asia and Oceania.

None of these studies specifically address children. However, they are informative on what matters to create the safe, populated spaces needed to give cities back to children. The recipe is: high density, walkability, mixed use, pedestrian areas, green spaces, sports centers, and mobility based on public transportation and biking.

CAM has not collapsed across the whole industrialized world. In Japanese cities, it's perfectly normal for children to move around independently (on foot, by public transport, or by bike), and

in other Northern European cities as well. Interestingly, the map of cities with high CAM virtually coincides with less cars. In the Tokyo area, home to over 30 million people, public transport is so efficient that most residents do not own a car. Northern European cities where children walk to school alone have very limited traffic and efficient public transport.

5.2 Schooling

If urban evolution has contributed to narrowing the physical spaces for relationships between young people, most schooling has contributed to narrowing the mental ones. Education, and particularly teaching practices, play a major role in the development of social skills among children. Participatory teaching practices support several dimensions of students' social capital, including cooperation with others, participation in groups and associations, trust in institutions, and civil participation (Algan et al., 2013). Participatory teaching argues for students working in groups on common projects, and student-centered classrooms, where the central relationship is horizontal, i.e. between students. Horizontal is opposed to vertical teaching, a practice according to which teachers primarily lecture and ask students questions, students prevalently take notes or read textbooks, and the central relationship in the classroom is between the teacher and the students. Algan and colleagues (2013) show that beliefs and skills underlying social capital are acquired through the practice of cooperation. Predictably, schooling practices that are more cooperative train individuals to more cooperative behavior. Participatory teaching has been integrated in mainstream education practice in many northern European countries (Brulé and Veenhoven, 2014). Such practices characterize Montessori education – a century-old schooling system (Biswas-Diener, 2011). Lillard (2006) found that Montessori education fosters social and academic skills more than traditional education.

These three examples indicate that it is possible to introduce policies that enhance relational goods at a relatively low cost for the benefit of well-being, the environment and even public budgets. Epidemiological studies documented that greater levels of social connections and well-being, and weaker social comparisons predict substantial reductions in morbidity, and thus in healthcare spending (Hawkley and Cacioppo, 2010; Kawachi et al., 1997). Such savings could be used to finance policies for social capital.

5.3 Regulation of advertising

Advertising is designed to sell products. It manipulates children's values, desires, relationships, wellbeing and behaviour for commercial ends. It works in the same way for adults, though its effects are less extreme. Europeans are less involved in consumer values than Americans because they are exposed to less advertising pressure. In Europe per capita spending on advertising is a quarter of what it is in the US (Mulgan 2014).

So advertising is dangerous. We can treat it exactly as we treat other dangerous goods, such as alcohol, tobacco, gambling, pornography, arms, and drugs: by regulating it and imposing limits, rules, taxes, or even outright bans.

There is nothing new about regulating advertising, especially advertising that targets children. In 1874, the English parliament approved a law to protect children against the guile of merchants and money lenders (James, 1965, p. 8). The world is full of examples of regulation to protect children and adults. Sweden banned television advertising to children under 12 years of age in 1990, and was followed by Norway. Greece banned advertising of toys for children between 7am and 10pm. New Zealand banned advertising of junk food and many European countries have banned advertising of cigarettes. France banned advertising on state television. Austria and Flanders (Belgium) banned ads targeting children before, during and after television programmes for children. Countries like Australia, Canada and the UK have powerful advertising regulation authorities (Lisosky, 2001; Caron and Hwang, 2014). The British Advertising Standards Authority recently announced the coming into force of new regulations banning ads that promote gender stereotypes or denigrate those who do not conform to them, or that portray women as sex objects or promote unhealthy body images.

Besides such measures, advertising could be heavily taxed, or at least the most dangerous forms, to reduce their pressure. A mix of taxation and communication strategy has already been adopted by certain European countries to regulate gambling. Video poker, slot machines and the like are heavily taxed; the resulting income is used partly to finance publicity campaigns against gambling.

These proposals do not refer to digital advertising on the internet, mobile phones and social networks, where it is much more difficult to enforce rules. The regulation of digital advertising is much too technical to deal with here.

6. Conclusion

Our analysis has similarities with that of Haidt, who identifies the problem of young people in the transition from a play-based childhood to a phone-based one. However, our policy implications are different. His main policy proposal consists of no social media before age 16 and phone-free schools, although he also advocates for more unsupervised play and childhood independence. In our approach, limitations to screens' access can have a positive impact only if it is framed in the context of a comprehensive decommercialization of childhood, which includes urban planning, schools, and advertising regulation. Screen restriction on young people can work only if the context is changed. Otherwise, it is only destined to increase youngsters' frustration and their tensions with adults. What is needed above all is offering children alternatives to screens. Limits to screens without alternatives would sound like depriving young people of virtual relationships, after having deprived them of real ones.

In our framework, the issue of social media is certainly important, but it appears at least in part as a consequence of the erosion of free play. In the decades preceding the social media era, children were already deprived of social interaction and autonomy, replaced by a flood of TV. The process of privatizing children's time began long before social media. The transition from TV to phones appears as a technological evolution, offering screens far more entertaining than TV to children whose time had already been privatized.

Therefore, the problem is not so much social media as the context that allowed it to develop and thrive. Cities, schools, and advertising don't offer the physical and mental spaces that allow free play, with all its positive implications for the development of social, emotional, cooperative, and physical skills. In other words, the dominant role that social media has assumed is the market's response to the revolution in youth's life. This revolution is built on the social priorities of performance (i.e., competition) and consumption.

Our emphasis is on the loss of social character and intrinsic motivations of free time and the commercialization of young age. By commercialization we mean the pressure to assume the roles of producers and consumers at an ever earlier age. Our proposals are based on criticisms of the performance society, which produces extensive performance anxiety. And on criticisms of the advertising pressure on children, an element absent from Haidt's analysis.

Acknowledgments

This research was developed as a part of the project “Well-being In a Dematerialized Economy (WIDE)” funded by the Italian Ministry of University and Research - PNRR M4C211-Code P2022S83EA – CUP I53D23006770001.

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