# Emotional well-being of children and adolescents: Recent trends and relevant factors

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**EMOTIONAL WELL-BEING OF CHILDREN AND ADOLESCENTS: RECENT TRENDS AND RELEVANT FACTORS**

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**By Anna Choi**

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## ABSTRACT

This paper provides a synthesis of the literature on mental health and emotional well-being of children and adolescents, including an overview on the latest PISA 2015 results where relevant. The paper begins by providing a definition of the terms and a synopsis of mental health and emotional well-being trends among youths in the recent decades, including psychiatric disorders, life satisfaction, and bullying. Different factors underlie recent emotional well-being trends, such as sleep deprivation, increasing levels of stress and pressure and social relations. The contexts and environment that children live in today have been rapidly changing and can have a considerable impact on their well-being. Among effective prevention and intervention programmes for children and adolescents' depression, anxiety, and suicide, the most common element found is cognitive-behavioural therapy. This approach aims to improve children's problem solving, coping skills and to overcome negative thoughts and emotions. Efforts to collect more information on mental health indicators and information on relevant factors would be helpful for future research.

## RÉSUMÉ

Ce document propose une synthèse de la littérature actuelle sur la santé mentale et émotionnelle des enfants et des adolescents, ainsi qu'un aperçu, si nécessaire, des derniers résultats de l'étude PISA 2015. Cette étude commence par donner une définition des termes et dresse une synthèse des tendances en matière de santé mentale et de bien-être émotionnel parmi les jeunes au cours des dernières décennies, en englobant les troubles psychiatriques, la satisfaction face à la vie et le harcèlement. Différents facteurs sous-tendent les tendances liées au bien-être émotionnel, comme le manque de sommeil, un niveau de stress et de pression en augmentation et les relations sociales. Le contexte et l'environnement dans lesquels les enfants vivent aujourd'hui ont changé de manière rapide et peuvent avoir des répercussions considérables sur leur bien-être. Le dénominateur commun des programmes efficaces de prévention et d'intervention sur la dépression, l'anxiété et le suicide des enfants et des adolescents, est la thérapie comportementale et cognitive. Cette approche a pour objectif d'améliorer la résolution de problèmes chez les enfants et leurs capacités d'adaptation, et de vaincre les pensées et émotions négatives. S'efforcer de collecter davantage de renseignements sur les indicateurs de santé mentale ainsi que des informations sur les facteurs concernés serait utile pour des recherches futures.

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## Introduction and background

Emotional health and well-being are vital elements for our health and everyday life. It is an important element of one's overall well-being (Pollard and Lee 2003) and essential to "good quality" life (Morgan et al. 2007). Over the recent decades, the well-being of individuals, children and adolescents in particular, has been gaining more attention and interest among researchers and policymakers.

Emotional well-being during childhood and adolescence is particularly crucial for several reasons. Children who are in a good state of emotional well-being have higher odds of growing into adults who are happy, confident, and enjoy healthy lifestyles, consequently contributing towards a better society and improving its overall well-being (Morgan et al. 2007; OECD 2015b). Furthermore, the development of social and emotional skills and state of well-being is rather dynamic in nature where "skills-begets-skills" (OECD 2015b).

A large body of literature documents the long run benefits of developing these social and emotional skills and positive emotional health during the early years and demonstrates how these can be important predictors of emotional well-being later in life. Analysis using the longitudinal data from different countries reveals that 14-year-olds in Korea who have a high sense of responsibility are less likely to suffer from depression at age 19; kindergarten students in the United States who are in the top decile of social and emotional skills distribution are less likely to report that they are depressed at grade 8; and 15- to 19-year-olds in Norway who exhibit high self-confidence levels are less likely to report depression at age 26 to 31 (OECD 2015b). Table 1 (below) from OECD's Skills for Progress report (OECD, 2015b) summarises the result from the longitudinal analysis across different countries illustrating the impact of social and emotional skills on later life outcomes.

**Table 1. Social and emotional skills that drive children's lifetime success are those that raise individuals' capacity to achieve goals, work with others and manage emotions**

| Tasks that demand social and emotional skills | Social and emotional skills | BEL | CAN | CHE | GBR | KOR | NOR | NZL | SWE | USA |
|---|---|---|---|---|---|---|---|---|---|---|
| Achieving goals | Responsibility | ○ | | | | ● | | ○ | | ○ |
| | Persistence, Perseverance | ○ | | ● | ○ | | | ○ | ○ | ○ |
| | Locus of control, Self-efficacy | | ○ | ● | ○ | ● | | | | |
| Working with others | Extraversion, Sociability | ○ | | | | | ● | ○ | ○ | |
| | Adaptability | | | | | | | | ○ | |
| Managing emotions | Reactivity, Mood | | | | | | | | | ○ |
| | Self-confidence | | | ○ | | | ● | | | |
| | Self-esteem | ○ | ○ | ● | ○ | | | | | ○ |

*Note:* This table is based on the empirical results from the OECD's longitudinal analyses (Box 3.1). It presents the social and emotional skills with statistically significant improvements of over 5 percentage points, after moving individuals from the lowest to highest skill deciles, in at least one socio-economic outcome. Cells are marked ● when the impact of the corresponding latent social and emotional skill construct on socio-economic outcomes was directly assessed using multiple skill measures. Cells are marked ○ when the impact of the corresponding latent social and emotional skill construct on socio-economic outcomes was indirectly assessed by using a higher-order latent construct of social and emotional skills. This higher-order latent construct was constructed by multiple measures of social and emotional skills, including one measure of the corresponding latent social and emotional skill construct.

Source: OECD (2015b), *Skills for Social Progress; The Power of Social and Emotional Skills,* OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264226159-en.

Childhood and adolescence are crucial developmental periods. During this time, children undergo various changes in the body including the brain structures, brain activities as well as neurosystems, which in turn have implications for cognitive functioning, emotion regulations, motivation, and social interactions (Giedd, Keshavan, and Paus 2008). Thus, emotional ill-being during childhood and adolescence can increase the likelihood of emotional ill-being in adulthood with lasting adverse consequences.

Moreover, evidence from the literature demonstrate that adult mental health disorders mostly originate during childhood or adolescence (Kessler et al. 2007; Giedd, Keshavan, and Paus 2008; Kieling et al. 2011; P. B. Jones 2013), but treatment usually does not begin until later in life due to stigma, lack of awareness, and other cultural or social norms. Nearly one in two adult mental health problems begin by age 14 and 75% by the mid-20s ("WHO | Child and Adolescent Mental Health" 2017) and many of these problems recur and persist. For the onset of first depression, nearly one in two occur during adolescence (Kessler et al. 2005). Adults who attempted suicide during adolescence were significantly more likely to have recurring mental health problems (depression, substance use, and suicide attempts), to be in poor physical health and engage in more violent and risky behaviours (Goldman-Mellor et al. 2014). It is important to examine the causes, contributing factors and to detect these problems earlier –before these conditions become chronic and severe (Morgan et al. 2007; OECD 2015a).

### Defining mental health and emotional well-being

The World Health Organisation (WHO) proposed the following definition for mental health: "A state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community." (WHO 2016c) .

Kahneman and Deaton (2010) describe emotional well-being as one of the two distinct concepts within subjective well-being. Emotional well-being, often referred to as "hedonic well-being", signifies the quality of an individual's emotions and experiences, i.e. sadness, anxiety, worry, happiness, stress depression, anger, joy, and affection that leads to unpleasant or pleasant feelings. The other notion is life evaluation, that mostly refers to one's general thoughts and feelings about his or her life (Kahneman and Deaton 2010). Another review article discusses the two dimensions of mental health: the positive (well-being and coping with difficulties) and the negative (symptoms and disorders). Positive mental health does not solely mean the absence of symptoms like anxiety or depression but also includes other protective factors like happiness, self-esteem, and balanced emotions (Korkeila et al. 2003). In this paper, we attempt to review the trends of children's emotional well-being as described by these studies to the extent possible.

Despite their importance, indicators of child well-being are not often part of various child well-being frameworks, with the exception of life satisfaction (See Table 2 below). This may be due to the challenging nature of readily defining the scope and measuring the components of emotional well-being. Also, the interdependent nature of different dimensions of overall well-being where each dimension of well-being can be considered both as a result and an enabling factor with respect to other dimensions, adds to the task.

A recent PISA report on students' well-being paints a picture of students' well-being over different dimensions (OECD 2017a). This report provides the most recent data on 15-year-old students' well-being, particularly those that are related to student's psychological well-being and emotional health across 72 participating countries.

**Table 2.  Different dimensions and indicators of child and adolescent well-being (among developed or OECD countries)**

| | UNICEF | OECD (How's life for children) | OECD (PISA 15-year-old students' well-being) |
|---|---|---|---|
| **Material well-being** | • Relative income poverty<br>• Households without jobs<br>• Reported deprivation | *Well-being conditions of families where children live*<br>• Income and wealth<br>• Jobs and earnings<br>• Housing conditions<br>• Environmental quality | N/A |
| **Health** | • Health at age 0-1<br>• Preventative health services<br>• Safety | • Infant mortality<br>• Low birthweight<br>• Self-reported health status<br>• Overweight and obesity<br>• Adolescent suicide rates<br>• Teenage birth-rates | N/A |
| **Behaviours (healthy and unhealthy)** | • Health behaviours (eating breakfast, physical activities)<br>• Risky behaviours (alcohol, cannabis use etc)<br>• Experience of violence (being bullied, fighting) | N/A | *Physical dimension*<br>• Physical activities in and out of school (# of days)<br>• Eat breakfast or dinner |
| **Education** | *Education well-being*<br>• School achievement at age 15 (PISA)<br>• Beyond basics<br>• Transition to employment | *Education and skills*<br>• PISA mean reading and creative problem-solving score<br>• Youth NEET (neither in employment nor in education or training)<br>• Educational deprivation | *Cognitive dimension*<br>• PISA average math, reading, and science scores |
| **Social** | *Relationships*<br>• Family structure<br>• Family relationships<br>• Peer relationships (HBSC) | *Social and family environment*<br>• Teenagers who find it easy to talk to their parents<br>• Students reporting having kind and helpful classmates<br>• Students feeling a lot of pressure from schoolwork<br>• Students liking school*<br>• PISA sense of belonging index<br>• Time children spend with their parents | *Social dimension*<br>• Sense of belonging at school<br>• Exposure to bullying<br>• Perception of teacher's unfair treatment |
| **Subjective well-being** | • Self-reported health status<br>• School life<br>• Life satisfaction | • Life satisfaction | • Life satisfaction |
| **Personal security** | N/A | • Child homicide rates<br>• Bullying | N/A |
| **Civic engagement** | N/A | • Intention to vote<br>• Civic participation | N/A |
| **Psychological well-being** | N/A | N/A | • Schoolwork-related anxiety<br>• Achievement motivation |

Source: Adapted from Adamson, Peter (2013), Child Well-being in Rich Countries: A comparative overview, Innocenti Report Card no. 11, UNICEF United Kingdom, https://www.unicef-irc.org/publications/683/ ; OECD (2015c), *How's Life? 2015: Measuring Well-being*, OECD Publishing, Paris.http://dx.doi.org/10.1787/how_life-2015-en; OECD (2017a), "*PISA 2015 Results (Volume III): Students' Well-Being*, OECD Publishing, Paris, http://dx.doi.org/10.1787/9789264273856-en.

There are many qualities and characteristics that support emotional and psychological well-being, such as self-esteem, motivation, resilience, self-efficacy, hope and optimism whereas high levels of anxiety,

depression, and stress can hinder emotional health and well-being (OECD 2017a). However, as shown in Table 2, when different health behaviours and self-reported health status are included in the international frameworks, they lack detailed measures for the elements of emotional well-being.

### *Mental health and emotional well-being trends among youth*

It might be surprising to hear that introduction to financial economics or computer science 101 are not the most popular classes today in world-renowned institutions like Harvard and Stanford University. Rather, thousands of college students sign up to take classes like Positive psychology or "Designing your life" where students learn about self-awareness, gratitude, generosity, and adaptability as well as learning how to be happier in life (Marelisa 2012; Harris and Harris 2015). This phenomenon is not exclusive to these institutions or to college students. But why and what contributes to this?

One potential reason is the rising prevalence of mental ill-being or mental health problems among youth and accordingly, the increasing interests on ways to improve emotional well-being. Over the last few decades, a growing number of children and adolescents reported symptoms of mental health problems and psychiatric disorders. About 10 to 20% of children and adolescents in the world suffer from mental health problems (Kieling et al. 2011; Henderson et al. 2017). Other than through self-reported responses in surveys, prevalence or incidence of affective disorders can also be identified through diagnosis, help-seeking behaviours, medication use, other treatment data and collected utilisation data (Korkeila et al. 2003).

Some explanations for these trends include increasing awareness and help-seeking behaviour among the youth and the parents, which is related to enhanced screening and diagnosis as well as a broader classification of disorders (Collishaw 2015). However, the rise in mental health problems over the last 20 years among youth may have captured the actual increase in prevalence to a certain extent, particularly for very rare conditions that are difficult to detect early on and thus are susceptible to underreporting. Given that not all mental health issues are clinically diagnosed and detected until a certain stage, the actual prevalence rate may potentially be higher. Even the data on death due to suicide among youths tend to be a lower bound estimate as they are misclassified by other diagnoses (Wasserman, Cheng, and Jiang 2005). Still, there are debates about whether this rise is due to different diagnoses and classification of mental health disorders rather than an actual increase in prevalence (Singh and Winsper 2017).

### *Psychiatric disorders*

The review of previous epidemiological studies in the last 15 years found significant increase in the prevalence of psychiatric disorders (including substance use disorder, affective disorder, and behavioural disorder) among children and adolescents in developed countries (Costello, Copeland, and Angold 2011). The most common diagnosis found among 12- to 19-year olds in the United States, the Netherlands, Spain, New Zealand, Canada, the United Kingdom, Chinese Taipei, Ireland, and Mexico was drug abuse or dependence (mean of 12.1%), closely followed by anxiety disorders (mean of 10.7%) and depressive disorders (mean of 6.1%) (Ma, Lee, and Stafford 2005; Costello, Copeland, and Angold 2011; Olfson et al. 2014).

Studies found that increasing numbers of adolescents have reported symptoms of anxiety and depression in Greece, Germany, Iceland, Sweden, Norway, People's Republic of China, and New Zealand since the 1980s (Fichter et al. 2004; Kosidou et al. 2010; Soest and Wichstrøm 2014; Smith, Larkin, and Southwick 2008; Hong and Wang 2007; Sigfusdottir et al. 2008) and also difficulties in sleep (Pallesen et al. 2008). Other psychiatric disorders such as psychosis, eating disorders, bipolar disorder, and autism spectrum disorder are rare relative to other emotional problems but these tend to develop into serious

impairing conditions (Costello, Copeland, and Angold 2011). Nearly 9 out of 10 patients diagnosed with an eating disorder (i.e. bulimia, anorexia) are either teenagers or females (Kreipe and Birndorf 2000).

The 2015 PISA report on students' well-being provides information across countries on anxiety, specifically about how 15-year-old students feel towards school work and exams such as " I often worry that it will be difficult for me to take a test" ; " I worry I will get poor grades at school"; "I feel very anxious even if I am well prepared for a test"; "I get very tense when I study for a test"; and "I get nervous when I do not know how to solve a task at school." Although PISA 2015 data is based on self-reports, it is still quite striking that in all countries with available data; girls reported higher levels of anxiety than boys. Around 64% of girls and 47% of boys reported that they feel very anxious even when they are well prepared for a test on average across OECD countries. Similarly, boys were 13 percentage points less likely to report that they get very tense when they study. Previous research has confirmed this gender difference for anxiety and depression.

Although causal interpretation is not possible, PISA findings highlight some of the relationship between anxiety and other measures such as academic performance and life satisfaction. On average across OECD countries, 63% of low performing students in science (in the bottom quarter of PISA science performance in a country) while 46% of top-performing students reported feeling anxious despite the fact that they are well-prepared for a test. Interestingly, the reverse was true among girls, where more than one in two top-performing girls but only 38% of boys reported such anxiety towards test (similar difference holds true among low performing students). Furthermore, life satisfaction level was lower by 1.2 points (on a scale of 0 to 10) among students who reported the highest levels of anxiety on average across OECD countries  (OECD 2017a).

One possible explanation as to why girls reported higher anxiety levels than boys in PISA 2015 could be attributable to gender differences in achievement motivation. PISA 2015 asked students about how much they agree or disagree with the statements such as "I want to be one of the best students in my class" "I want top grades in most or all of my courses"; "I want to be able to select from among the best opportunities available when I graduate"; "I see myself as an ambitious person"; and "I want to be best, whatever I do". On average, girls were more likely to report that they want top grades at school and to be able to select from among best opportunities upon graduation while boys were more likely than girls to report that they are ambitious (OECD 2017a). While it is challenging to identify the direction of causality of the relationship, this association suggests that girls tend to be more sensitive to their performance in schools than boys, which can lead to heightened anxiety towards school work and exams.  Another explanation for this pattern could be gender differences in the locus of control, particularly with respect to one's perception of control over life events that occur without one's control (Sherman, Higgs, and Williams 1997).

Psychiatric disorders during early years in life are negatively related to emotional well-being, health and education both in the short and the long run (Collishaw 2015). Recurring and chronic conditions can lead to further externalising behaviours.  For example, depression during adolescence is associated with negative physical and mental health outcomes such as suicide ideation and attempts and problems with social functioning (Maughan, Collishaw, and Stringaris 2013). Analysis by Sznitman, Reisel and Romer (2011) shows that adolescent's emotional well-being is an important predictor of educational achievement and also mediates the association between poverty and educational achievement (Sznitman, Reisel, and Romer 2011).

A similar association is found for anxiety disorders, eating disorders, and other psychiatric disorders. Consequently, this trend of increasing prevalence causes concerns among parents, teachers, and health professionals that children and adolescents today can be more susceptible to psychiatric problems (Russell, Kelly, and Golding 2010).  Different mental health conditions, bullying, substance use disorders

contribute towards higher risks of suicidality among youths, which is a serious public health concern (McLoughlin, Gould, and Malone 2015). This trend highlights the need to increase the efforts for prevention, early detection, raise awareness and also develop programmes and policies to strengthen the protective factors for children.

*Life satisfaction*

The Health Behaviour in School-Aged Children (HBSC) provides some information on mental health outcomes among 11-, 13-, and 15-year old students.[1] Using the HBSC data from 2002 to 2010, Cavallo et al (2015) found that the average level of life satisfaction (range of 0 to 10) 6 countries from Western Europe significantly dropped while the opposite was true for a group of Eastern European countries (Cavallo et al. 2015). Life satisfaction decreases with age and is lower among girls than boys (Cavallo et al. 2015). This pattern by gender also holds true in the recent PISA 2015 report findings where girls reported lower average life satisfaction than boys in all countries with available data.

*Subjective health complaints*

The HBSC study also provides information on multiple health complaints (based on self-reports) such as headache, stomach ache, back ache, trouble falling asleep, feeling dizzy, feeling nervous, feeling low, irritability or bad temperament. Across 34 countries with comparable data from 2002 to 2010, there was no significant increasing or decreasing trend in health complaints (Ottová-Jordan, Smith, Augustine, et al. 2015). Another study using HBSC data showed that from 1994 to 2010, health complaints increased in 5 countries, decreased in 7 countries, and in 23 countries had either no significant or stable trend (Ottová-Jordan, Smith, Gobina, et al. 2015). The authors also examined the relationship between the health complaints and micro-and macro-level factors and found that individual level factors such as being bullied and smoking were stronger predictor than macroeconomic conditions (captured through GDP or Gini coefficients) (Ottová-Jordan, Smith, Augustine, et al. 2015).

Figure 1a and 1b show the share of 11-year-old boys and girls who reported that they felt low (unhappy, down-hearted, and low in spirits) at least once a week in the last 6 months in 2006 and 2010 HBSC data. There is an increasing trend for many countries, and this is particularly pronounced among girls. For all age groups, the average share was higher among girls than boys and the rate was higher among 15-year-olds compared to 11-year-olds[2]. Between country variation is large: Austria had the lowest share of students (3 to 4% among 11-year-olds) reporting feeling low in both years while Turkey had the highest of 30 to over 50 percent of students reporting so.

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[1] HBSC is a collaborative cross-sectional WHO study across 43 countries, mostly in North America and Europe. HBSC collects data every 4 years among 11-, 13-, and 15-year olds through self-reported questionnaires on key health indicators, behaviours and background variables.

[2] For more information: www.hbsc.org/publications/datavisualisations/feeling_low.html.

**Figure 1a.    The proportion of 11-year-old girls who report feeling low at least once a week (2006-2010).**
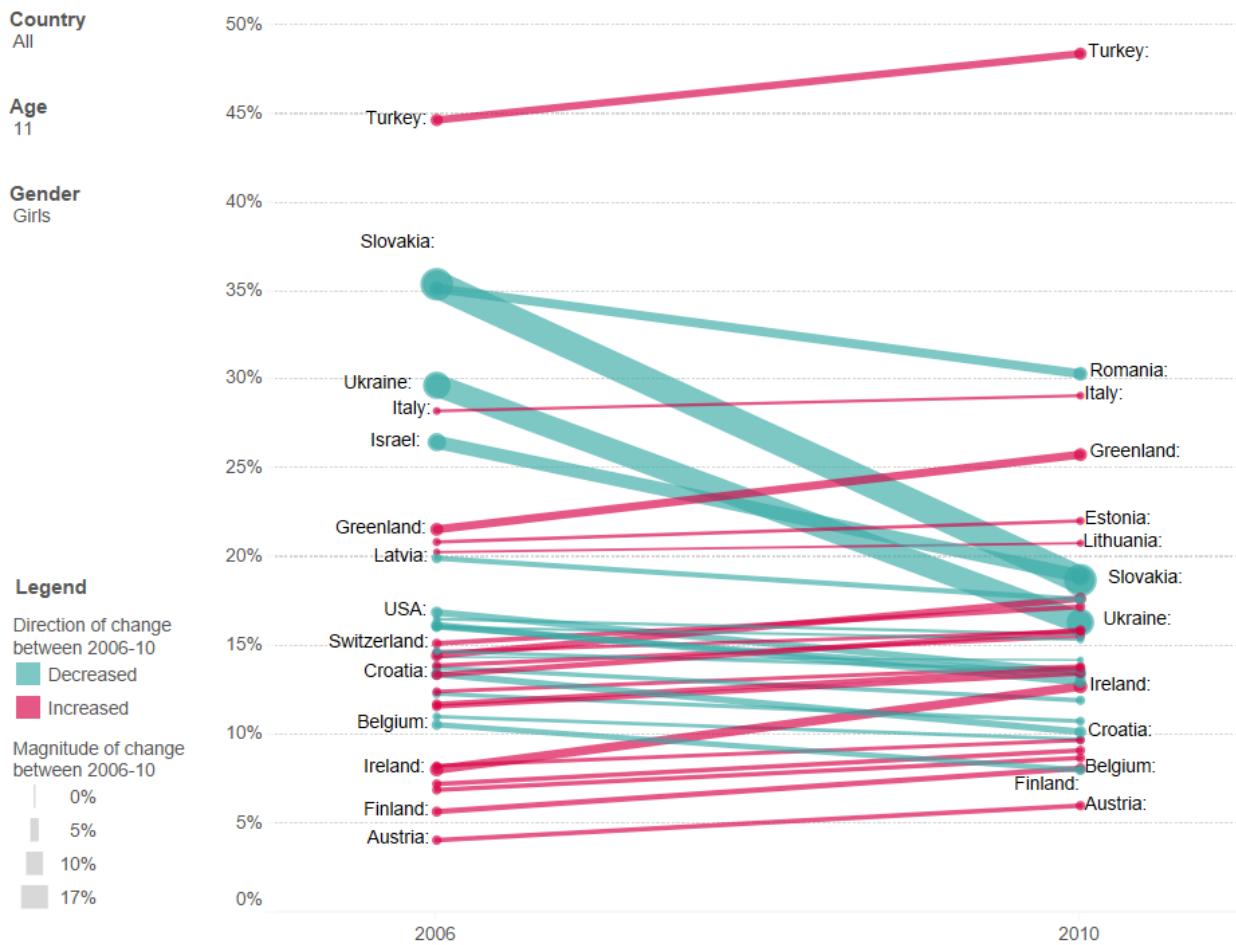


Source: Health Behaviour in School-Aged Children (HBSC). World Health Organisation Collaborative cross-national study, www.hbsc.org/. University of St Andrews. (2014). [Proportion of young people who report feeling low at least once a week across Europe and North America (2006 - 2010)]. Health Behaviour in School-aged Children study. *European Commission Operating Grant data visualisations*. Retrieved from http://www.hbsc.org/publications/datavisualisations/feeling_low.html.

**Figure 1b.    The proportion of 11-year-old boys who report feeling low at least once a week (2006-2010).**

*Externalising behaviours: Bullying and cyberbullying*

Findings from the HBSC data from 1994 to 2006 suggest that bullying and victimisation (both occasional and chronic) has been decreasing in as many as 20 out of 27 countries with available data. Differences between countries exist, where most of the English speaking countries demonstrated an increasing or no change in the prevalence of bullying, but many non-English speaking European countries observed a decreasing trend (Molcho et al. 2009). A similar trend holds true in the more recent cycles of HBSC data from 2002 to 2010 (Chester et al. 2015).

According to PISA 2015 data, about 19% of students reported being bullied (any type) at least a few times a month on average across OECD countries. The most common forms of bullying that students in the OECD countries reported were "other students made fun of me" (Verbal bullying: 10.9% of students) and "other students spread nasty rumours about me" (Relational bullying: 8.4% of students) at least a few

time a month. Boys are more likely than girls to report that they have experienced physical bullying while girls tend to experience nasty rumours more than boys do (OECD 2017a).

Cyberbullying is a new type of bullying that has accompanied the rise of smartphones and other social media and communication tools. On average about 20 to 40% of youth in the United States report experiencing cyberbullying during their lifetime (Tokunaga 2014). This can involve sending offensive messages or comments, spreading rumours, excluding victims from online groups (OECD 2017a) and other forms of harassment. Unlike offline bullying where victims can avoid the bullies outside of school, cyberbullying can potentially affect the victims anywhere and anytime, which in turn can make the victim feel helpless (Agatston, Kowalski, and Limber 2007). Youth who would not otherwise engage in offline bullying may do so online as it can provide some degrees of anonymity, no obvious physical harm and lower perceived risks of being caught (Englander and Muldowney 2007).

Research on cyberbullying is relatively new compared to literature on bullying and accordingly the data on cyberbullying is not as readily available as traditional forms of bullying, particularly across countries. The most recent data from HBSC survey showed that cyberbullying victimisation (including mean instant messages, wall-posts, emails and text messages, or creating a webpage that made fun of them) was less common than traditional forms of bullying, where 0 to 12% of youth in 43 participating countries reported experiencing cyberbullying (WHO 2016a). Other studies find that about 7 to 15% of youth reported being victims of cyberbullying (National Academies of Sciences, Engineering, and Medicine et al. 2016).

*Suicide rates*

Suicide among adolescents remains a major public health concern across the world. Suicide rates have been decreasing in OECD countries since the 2000s (OECD 2015a) and similar pattern holds true for adolescents. On average across OECD countries, teenage suicide rate (total number of deaths due to intentional self-harm' among 15 to 19-year-olds in a given year) was 8.3 per 100,000 teenagers in 1990 while this share has fallen to 6.4 in 2013 (OECD Family Database - OECD 2017). Different reviews of suicide patterns indicate that suicide rates among boys have been increasing and the rates are higher among girls especially in developed countries. However, boys exhibit higher rates of completed suicide than girls while girls had a higher risk of suicidality (Wasserman, Cheng, and Jiang 2005; McLoughlin, Gould, and Malone 2015).

**Factors influencing trends and their consequences**

As previous studies have documented, mental ill-being is detrimental towards overall well-being and other educational outcomes. For children living in a world characterised by rapid changes and technological advancement, it is important to understand that different trends and factors can be related to their emotional well- and ill-being. This does not mean that the fundamental elements of mental health changed but as a result of various contexts and environment that children face today, different trends arise and accordingly various approaches exist to mitigate the negative effects.

*Macro-level factors*

Why do we observe this recent increase in mental health problems? There are a number of changes that 21st century children experience which can potentially have negative consequences for their emotional well-being, contributing to the increasing prevalence of mental health problems (Bor et al. 2014). Recent social and economic conditions of a country can play a role in children's emotional well-being through affecting individual families and their overall financial resources as well as external and internal pressure and concerns about the future (Ottová-Jordan, Smith, Gobina, et al. 2015).

A recent macro-level change that can potentially affect children's emotional well-being today is increasing inequality. Many OECD countries experienced economic growth and prosperity in the last 30 years but income inequality also increased between and within countries (OECD 2016). The top 10% of the population earn nearly 10 times the income of the bottom 10% in OECD countries (OECD 2016). The greater a share of income concentrated among the top 1%, the more individuals are likely to report lower levels of life satisfaction and report higher levels of negative daily emotional experiences (such as stress, anger, pain, worry, and sadness) (Burkhauser, Neve, and Powdthavee 2016). Among 15-year-olds across OECD countries, similar pattern holds true, where students whose relative family wealth was lower than that of their peers in schools reported significantly lower life satisfaction levels even after accounting for socio-economic status (OECD 2017a).

The world today is becoming more and more connected between and within countries, which gives more mobility to individuals and families. The share of the immigrant population has been increasing in OECD countries since the 1960s, but there was a significant uptake from 1985 and onwards (OECD 2016). This trend is also confirmed in the PISA data where 9.4% of students had an immigrant background in 2006 compared to 12.5% of students in 2015. With the increasing flow of immigrants, children and adolescents in OECD countries are more likely to meet and interact with peers and teachers from different cultural backgrounds. This may pose new challenges for immigrant students to integrate and be part of a different school community (OECD 2017a, 2015d). For some children, learning a new language and getting used to different living arrangements during the first few years of settling down in a new country can be quite stressful (OECD 2015d).

Due to differences in culture, language, race, ethnicity and appearance, children of immigrants may face a higher odds of being a bully victim (Qin, Way, and Rana 2008). Figure 2 shows that students who are recent migrants (13 to 16 of age) are more likely to report higher rates of exposure to bullying than immigrants who arrived much earlier. As children and adolescents spend the most time at schools during the week, schools can play a key role in the integration of immigrant children. However, this can be challenging in schools where they lack the support or have deep divisions between new immigrant and native students. Teachers in some of these schools often lack adequate training to foster cohesion (Suárez-orozco and Suárez-orozco 2013).

**Figure 2.  Percentage of students who experience bullying (%) at least a few times a month: Immigrant students (by the age of arrival in the host country) and native students**
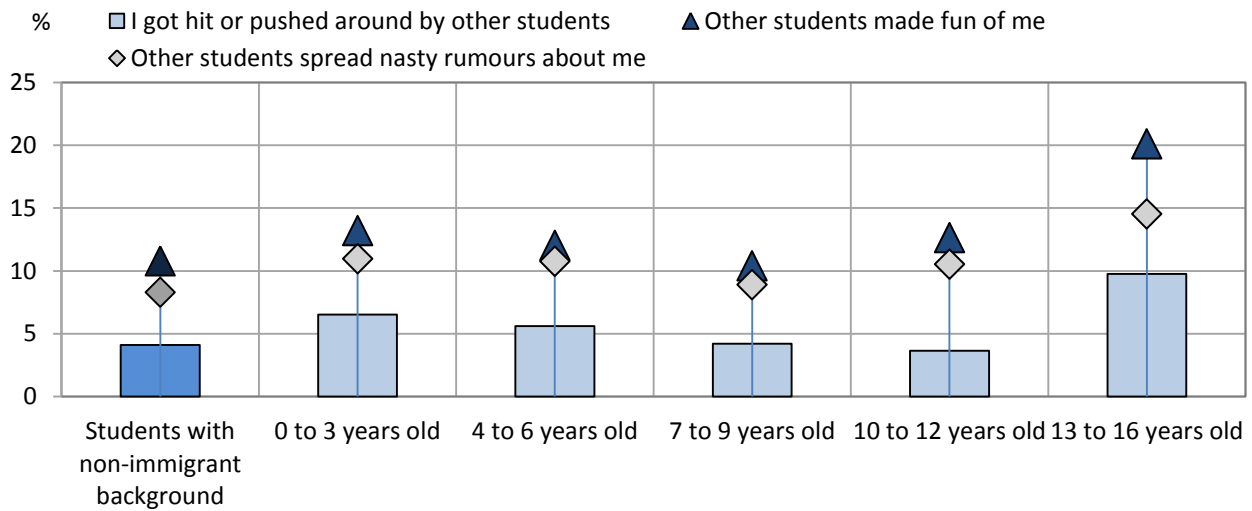


Source: OECD, PISA 2015 Database, Table III.8.11 (http://dx.doi.org/10.1787/888933471772) Table III.8.3.
http://dx.doi.org/10.1787/888933471689.

Findings from PISA 2015 highlight this challenge of integration to some extent where students without an immigrant background reported a higher sense of belonging at school on average in 29 countries and economies than students with an immigrant background after accounting for socio-economic status. However this differs across countries and by country of origin and destination for immigrant students. For example, as shown in Figure 3, among immigrant students who are from Arabic-speaking countries, 67% of those who immigrated to Denmark reported that they feel like they belong at school whereas 83% of those who migrated to the Netherlands reported so even after accounting for socio-economic status. Similarly, among immigrant students from Poland, 65% of those who migrated to Austria reported that they feel like they belong at school while 79% of those who migrated to Germany reported so. While this does not establish a causal relationship, it suggests that schools and communities can play a role with respect to supporting the emotional well-being of migrant students and the extent to which they feel integrated into schools (OECD 2017a).

**Figure 3. Student's sense of belonging at school by country of origin and destination**

*Percentage of students with an immigrant background who reported that they feel like they belong at school, adjusted for differences in socio-economic status*
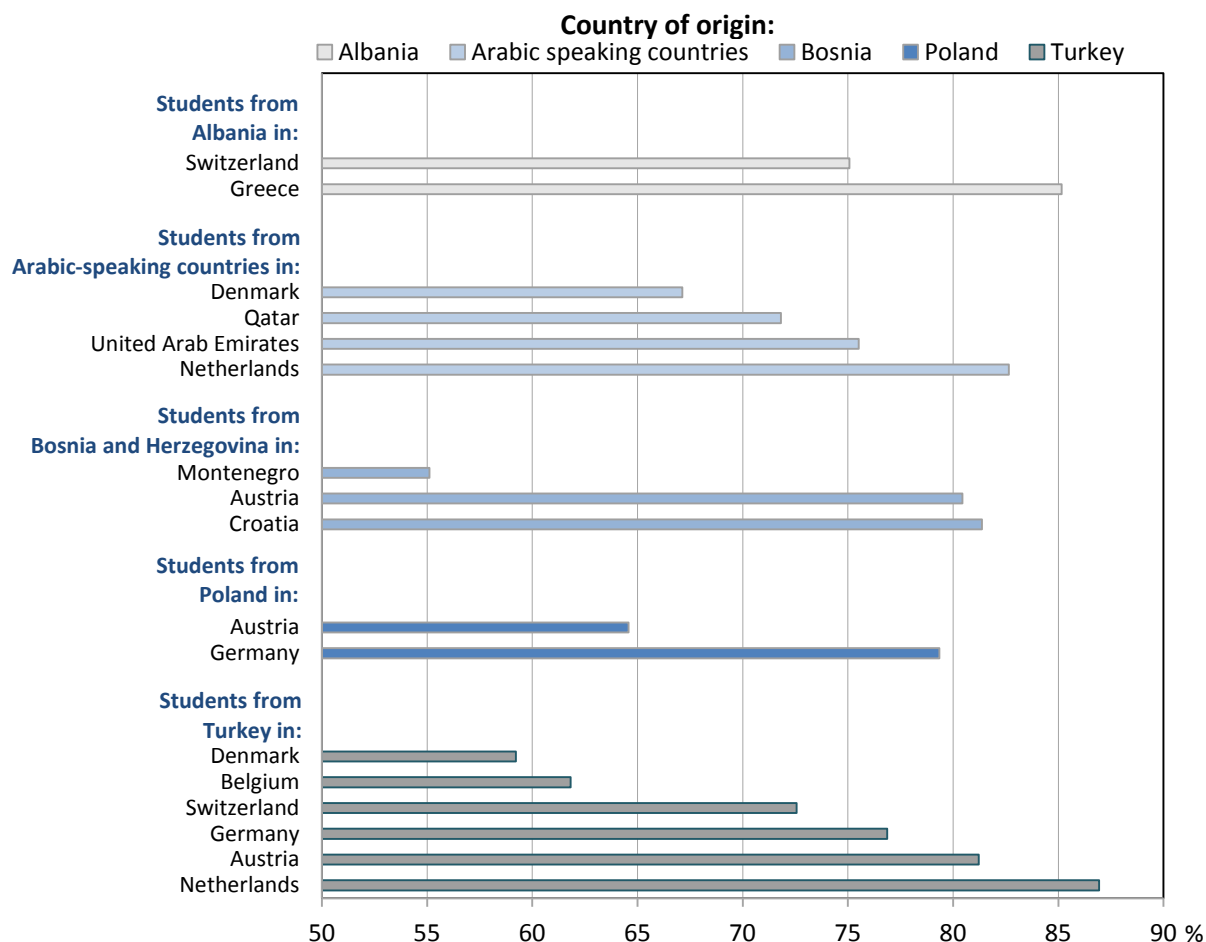


Notes: The estimates are obtained from pooled data from the PISA 2012 and 2015 databases. Only countries where the percentage of immigrant students in PISA 2015 is higher than 5% are shown. The estimates are adjusted for differences in socio-economic status by assigning the same value of socio-economic status to all students of one origin group independently of the destination country. The coverage of destination countries is limited by the fact that only some countries collect detailed information on immigrants' country of birth. Results are only shown for pairs of origin and destination countries/economies with data for 20 or more immigrant students.

Sources: OECD, PISA 2006, 2009, 2012 and 2015 Databases, Table III.7.9, http://dx.doi.org/10.1787/888933471342.

*Stress and pressure*

Children experience different types of stressors throughout their own life course, some of which can be mild such as moving to a different school, meeting new peers, learning something new, solving problems, and others can be quite devastating and negative such as going through a natural disaster, experiencing poor health, injury or accident, being bullied, family dissolution or the death of a family member (Barnes 2016).

Over the last two decades, families have changed on a number of fronts: increasing rates of divorce, children born outside of marriage, and single parent households. The share of divorced or

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separated parents has increased across many OECD countries since mid-1990s, with an average of around 10% in the latest available year with data. Approximately 5 to 10% of households in OECD countries are single mother or father households (OECD Family Database - OECD 2017). Children going through divorce or family separation may face additional adjustment difficulties (Gladstone, Beardslee, and O'Connor 2011).

Children who are living in a competitive environment and a more pressured style of parenting can experience higher levels of stress and pressure with less time for play and relaxation. This kind of hurried lifestyle leads to reduced time for play, preventing children from enjoying the benefits of play which includes creativity, dexterity, physical, cognitive and emotional development (Ginsburg 2007). American children lost 12% of their regular free time, 25% of play activities and 50% of structured activities while they spend 50% more time in sports and homework in 1997 compared to 1981. Children with mothers in the labour market had less time available for activities as they spent more time in day care centres (Hofferth and Sandberg 2001).

Children and adolescents today also face pressures to do well in schools and excel in academic achievements. The pressure to get good grades and worries about not doing well in exams are some of the anxiety sources often cited by school-age children and adolescents. In about five out of six school systems, students go through at least one mandatory standardised test per year. Even though this may seem like a lot of assessment, rather than absolute number of the tests, how students' perceive these assessments affect how anxious they feel about tests (OECD 2017a).

According to a study that compared the student reports on the perceptions of school pressure between 1994 and 2010, the level of perceived pressure did not increase during the period, except for a temporary uptake between 2002 and 2006. Similar to the recent PISA findings, girls and older adolescents (15-year-olds compared to 11-year-olds) tend to report a higher level of pressure in schools from 1994 to 2010 (Klinger et al. 2015).

The pressures and expectations to be top performers may well lead into more hours spent studying and doing their homework instead of playing with friends outdoors or learning something new. The hours spent on studying is negatively correlated with life satisfaction levels among adolescents in OECD countries (OECD 2017a) and hours spent on homework is one of the strong predictors of activity-related stress among children (Brown et al. 2011).

Although research has shown that moderate stress can be beneficial, chronic exposure to high levels of stress can be detrimental to one's psychological and physical health (National Academies of Sciences, Engineering, and Medicine et al. 2016). That is because prolonged exposure to cortisol (stress hormone) can change parts of the brain architecture (i.e. hippocampus and the amygdala) that are important for one's emotion regulation. Prolonged exposure to cortisol is particularly problematic for youths because the body's system that handle stress is especially sensitive during the period of development (McEwen and Morrison 2013; National Academies of Sciences, Engineering, and Medicine et al. 2016).

*Sleep disorders and deprivation*

Another factor that can deteriorate children's emotional well-being is inadequate sleep (deprivation, poor quality, and disorders). With less time to play and more hours spent doing school work and homework, children today face higher odds of sleep deprivation. Having a sufficient amount of sleep is essential to one's well-being and for both physical and mental health. Sleep deprivation negatively affects one's ability to appropriately allocate attention resources during an emotional task (Alfarra et al. 2015). It is particularly important to understand the negative effects of sleep deprivation during adolescence because sleep loss, problems and mood dysregulation are very common during this period,

partly due to maturation processes and changes in sleep patterns (Short and Louca 2015; Sarchiapone et al. 2014).

While there is no international survey or study that compares the hours of sleep children and adolescents get in the 21st century, empirical findings demonstrate various adverse consequences of sleep loss and disorders on physical and mental health. Sleep loss and disruption is associated with negative psychosocial health, school performance, risk taking behaviour (Shochat, Cohen-Zion, and Tzischinsky 2014) and with depressive mood and anxiety (Short and Louca 2015). Adolescents with sleep disorders tend to have lower average health-related quality of life and more health complaints (Paiva, Gaspar, and Matos 2015).

This relationship holds true across several countries. Adolescents who sleep less than 7.7 hours (which is the average amount of sleep among 11 countries) tend to report more suicidal ideations, emotional problems related to peers (Sarchiapone et al. 2014). Similarly, high school students in the United States who sleep less than 5 hours face significantly higher odds of having behavioural and psychological issues such as drunk driving, smoking, carrying a weapon, fighting, and suicide ideation and attempt, compared to those who sleep more than 8 hours a day (Meldrum and Restivo 2014).

Some researchers argue that in addition to having an appropriate amount of sleep, the quality of sleep also matters. Adolescents who reported poor quality sleep (where quality of sleep is considered by the ability to begin and continue sleeping and reported subjective feeling of refreshment after waking up) tend to sleep less during the weekdays, have lower daytime alertness and more depressive mood than those with relatively good quality sleep (Short et al. 2013).

*Social relations*

Forming healthy relationships with peers, parents, and teachers can help enhance children's and adolescent's psychosocial development and emotional well-being. School-aged children and adolescents spend most of their days at school, which involves interacting with their peers and teachers. In the context of the school environment, one of the factors that can negatively affect children's emotional well-being is being bullied by peers—physically, verbally, socially, or on line.

While bullying seems to have decreased in many OECD countries over the last 15 years, bullying still affects many children in the world and has lasting adverse consequences. Many studies have documented different consequences of bullying. Adolescents who experience bullying as perpetrators and/or victims are more likely to have depressive and anxiety symptoms, low self-esteem, feel lonely, and lose interest in activities (Haynie et al. 2001; Kochel, Ladd, and Rudolph 2012; Striegel-Moore et al. 2002). Bullying also has negative influences on bystanders who report feelings of guilt or helplessness (Huitsing and Veenstra 2012; Molcho et al. 2009). These adverse effects can persist into adulthood and have long-term consequences, such as lower participation in the labour force (Drydakis 2014).

Similar to traditional forms of bullying, cyberbullying is significantly related to multiple psychosocial and behavioural problems such as feeling angry, anxious, depressed, skipping schools and not being able to focus on school tasks that often deteriorate children's emotional well-being and educational outcomes (Tokunaga 2010; Ybarra and Mitchell 2007; Juvonen and Gross 2008). When it becomes extreme, cyberbullying victims can ideate or attempt suicides (DeSmet et al. 2014; Tokunaga 2014).

**Improving emotional well-being among 21st century children**

*Key protective and risk factors for emotional well-being*

In identifying the relevant factors that are essential in improving children's emotional well-being, it is important to understand the multidimensional nature of well-being and how the sources and dimensions are interconnected. Proximal sources such as the family, community, peers, school environment, and teachers affect children's well-being but they are also shaped by their well-being and contextual sources at the macro-level.

*The role of parents*

One of the essential elements that fosters positive development among children and adolescents are healthy and stable interpersonal relationships (Goldman et al. 2016). Specifically, there are few relationships in life that are as enduring and crucial as the ones children have with their parents or caregivers. What consists of good parenting or positive parent-child relationship may differ by culture and social norms but in essence it includes listening, trust and respect, providing support, protection, affection and guidance for healthy mental, physical and social development (Amato 1994; Gorman-Smith, Henry, and Tolan 2004; Leadbeater, Hoglund, and Woods 2003; OECD 2017a). Maintaining communication with parents can also have an influence on children and adolescents' emotional well-being. "Spending the time just talking" with the adolescents was shown as one of the strongest predictor for high life satisfaction (OECD 2017a; Morgan et al. 2007).

Forming close and secure attachments with parents during early childhood can foster the development of social and emotional skills such as self-regulation, autonomy and cooperativeness, self-efficacy and self-worth (Goldman et al. 2016). Stable emotional support and relationships with parents can act as a protective or compensatory factor during difficulties in life such as chronic stress, exposure to bullying, anxiety, and depression (OECD 2015b, 2017a; Goldman et al. 2016).

Caring and supportive parents can help reduce the pain and stress associated with being bullied (National Academies of Sciences, Engineering, and Medicine et al. 2016). The prevalence of exposure to different forms of bullying was substantially larger among adolescents who reported that their parents are not emotionally supportive when they face difficult situations in school (OECD 2017a). This does not establish a causal relationship that having positive and supportive parents lead to reduced probability of being bullied or with adversity of repercussions from being bullied. However, what the evidence suggests a positive correlation between supportive and caring parents with exposure to being bullied and also with coping skills.

While causal interpretation is not possible, findings from PISA also suggest that parental involvement and support can have a positive influence on adolescent's well-being. 15-year-olds with parents who reported that they "spend time just talking to my child" or "eat the main meal with my child around a table" regularly were more likely to report high life satisfaction levels. Also, adolescents who reported that their parents encourage them to be confident are less likely to report that they feel tense when they study (OECD 2017a).

Several risk factors within the families and living environment can be detrimental to emotional well-being and the mental health of children. This can include poverty, other financial constraints, social exclusion, drug use, abuse, maltreatment, family history of mental disorder, family dysfunction, and distress due to divorce or other life events (WHO 2016b; Gladstone, Beardslee, and O'Connor 2011). As these adversities and risk factors persist and accumulate over the life course, children experience greater

stress and face higher risks of having behavioural and emotional difficulties such as depression, substance use disorder, and suicide ideation (Beauchaine and Hinshaw 2016; Goldman et al. 2016).

Depressive and anxiety symptoms are more common among children with parents going through depression and anxiety disorders (Rasing et al. 2013). However, evidence from a longitudinal follow-up study found that even for children of parents with depression, good-quality social-relationships, parents' expressing positive emotions, and frequent physical activities strongly predicted good mood-related mental health (Collishaw et al. 2016). Findings from a few randomised control trials, albeit small sample size, demonstrate the potential role of effective prevention and intervention programmes that focus on teaching them about their emotions, beliefs and behavioural consequences among these children with high familial risk (Rasing et al. 2013; Beardslee et al. 2013).

*The role of teachers and schools*

School is another key environment that can help foster children's positive development and growth in addition to learning new subjects. Particularly, teachers can play an important role. Teachers can help raise student's self-esteem and motivation by being a role model, mentor and educator (OECD 2015b). One of the strongest predictors in PISA 2015 data for bullying victimisation were students' perceptions of teacher's unfair treatment and school disciplinary climate. On average across OECD countries, students who attended schools with wide perceptions of teacher's unfair treatment (indicated by self-reports on the following statements: "Teachers ridicule me in front of others"; "Teachers say something insulting to me in front of others"; and "Teachers discipline me more harshly than other students") reported a higher exposure to frequent bullying by 12 percentage points. This can suggest that bullying occurs more frequently in schools where students are more cognisant of the lack of norms for respectful and nonaggressive behaviours (OECD 2017a). A similar association holds true between the share of frequently bullied students in schools and the level of disciplinary climate in schools.

On the other hand, forming a positive relationship with teachers and other adults in the school environment can have a positive impact on children's emotional well-being. Students who are happier tend to have good relationship with their teachers and those who perceive high level of support from their teachers tend to handle stress better at school (Malecki and Demaray 2006; Reddy, Rhodes, and Mulhall 2003; Roeser, Eccles, and Sameroff 1998; Goldman et al. 2016). Positive teacher-student relationships are also related to emotion regulation and positive peer relationships (Goldman et al. 2016), which can help reduce the likelihood of aggressive behaviour, suicide ideation, substance use, and violence (Bergin and Bergin 2009). 15-year-olds who reported that their science teachers adapt the lesson to the needs of the class or try to support students with individual help are less likely to report schoolwork-related anxiety (OECD 2017a).

*Social and emotional skills*

Common factors found among positive parent-child and teacher-child relationships include fostering the development of social and emotional skills. Having a positive and trusting relationship with parents and teachers are essential in and of themselves but as a result of this positive relationship, children are better able to learn and apply different social skills and emotional intelligence that can act as a buffer or protective factor against adversities throughout life.

Positive relationships that form during childhood and adolescence are conducive to children developing skills to be able to control themselves, regulate their emotions and behaviours, learn to be resilient, optimistic, empathetic and enhance their self-esteem and self-efficacy (OECD 2015b; Goldman et al. 2016). Optimism and self-efficacy are associated with fewer mental health problems (Goldman et al.

2016) and lack of self-control is related to various neurological and mental health disorders, which in turn further interferes with development of self-regulation (Davidson et al. 2015).

### Interaction with trends: Changing contexts and implications for children's emotional well-being

*New technologies*

The contexts and environment that 21st century children live in are rapidly changing and also have considerable impact on their well-being. One example is new developments in technologies that affect children's daily lives, the way they socialise and learn both in and out of schools. Increasing number of adolescents use and interact with peers using social network sites. While these platforms can provide opportunities to connect and interact with diverse group of people, and opportunities for collaborative learning, it can also increase the risks of cyber harassment, cyberbullying, sexting, and other cybersecurity issues.

There are concerns that high exposure and use of social network sites such as Facebook can have negative consequences on children and adolescents' emotional well-being. Although the evidence is too limited to draw a causal conclusion, some studies find that moderate use of digital technologies and social network sites are not inherently harmful to children (Przybylski and Weinstein 2017; Tandoc Jr., Ferrucci, and Duffy 2015). Tandoc Jr., Ferrucci, and Duffy (2015) found no direct link between intensity of Facebook use and depression but found a negative association when envy (based on self-reported scale on 8 items) was accounted for. Others found non-linear relationships between adolescent's mental well-being and digital-screen time use. However, moderate use of digital devices was not significantly harmful to mental well-being of adolescents (Przybylski and Weinstein 2017). However, further evidence is necessary to fully understand the effects on emotional well-being as well as the underlying mechanisms. Also, more research is necessary to identify and evaluate the appropriate guidelines are for parents and caregivers in terms of the level of supervision and involvement with respect to use of technology and digital devices at different stages of child's development.

*Changing families and neighbourhoods*

As shown in previous sections, families have changed drastically over the last few decades in many OECD countries. What are some of the potential implications with regards to changes in marriage and birth patterns as well as family structures and living arrangements on children's emotional well-being? An increasing number of children is born outside of marriage or lives in a single parent household. This may reflect shifts in beliefs or meaning of marriage and childbearing (Hayford, Guzzo, and Smock 2014). Some argue that children who live with two biological parents tend to enjoy better social, cognitive, and behavioural outcomes than otherwise (Susan L. Brown 2004; Artis 2007; Carlson and Corcoran 2001; Manning and Lamb 2003; Teachman 2008; Videon 2002). Differences in financial resources, parental socialisation, family stress and changes are some of the mediating factors that affect the relationship between family structure and child well-being, mostly for traditional couples (Susan L. Brown 2010). However, it is difficult to conclude that the same holds true for different types of families.

Another notable trend is delayed birth and older parents, which has largely coincided with increasing female labour market participation and educational attainment in the recent decades (Bongaarts, Mensch, and Blanc 2017; Hayford, Guzzo, and Smock 2014). While additional research is necessary to further understand the implications of delayed fertility on children's well-being, to the extent that delayed marriage and birth can positively affect the marital stability, children's emotional well-being may improve (Hayford, Guzzo, and Smock 2014).

Furthermore, over the recent years, the neighbourhoods that children grow up in have been changing. Nearly half of the population in the world lives in cities (Ferreira et al. 2010). This share of world's population is expected to grow where seven out of ten people live in urban areas by 2050 (OECD 2016). While there are potential benefits of urbanisation, this trend can also lead to a lower sense of social connection and sense of belonging in the local communities and neighbourhoods (OECD 2016), which can worsen the issue of social alienation and exclusion. One's sense of belonging in their neighbourhoods (via social networks or interaction with neighbours) or prevailing norms or beliefs shared in the community can affect parent-child interaction and how children interact with their immediate surroundings outside of the family to a certain extent (McDonell 2007).

Other changes in neighbourhoods can have implications for family and children's emotional well-being. Neighbourhoods' features related to safety, violence, and crime can have direct implications for children and adolescent's physical health but also towards their emotional well-being. For example, children living in high-crime urban neighbourhoods tend to show more selective attention towards negative emotional stimuli than those children who live in low-crime areas (McCoy, Roy, and Raver 2016). Furthermore, higher exposure to artificial physical features of urban dwellings and to atypical light sources for extensive periods are significantly associated with depressive symptoms (Lambert et al. 2015). However, more research is necessary to better understand specific implications of these features of urbanisation among children, especially younger children (McCoy, Roy, and Raver 2016).

### Prevention and intervention programmes

It is important for schools and communities to further consider ways in which they can help enhance children's social and emotional skills. Many promising childhood intervention programmes to enhance social and emotional skills often involve parental training, family environment and parent-child interaction in homes and/or school settings (OECD 2015b).

Effective treatment programmes and efforts can help minimise the long-term adverse effects and effectively manage psychiatric disorders through involving and providing information to schools, teachers, and parents. In the context of bullying, schools can also play a vital role in terms of detection, intervention, and prevention. An open line of communication between teachers and parents can raise the awareness of the problem as some victims may be reluctant to openly talk about how they are bullied in schools with their parents. Substantial shares of parents whose children are frequently bullied at school do not seem to be actively engaged in communication with the teachers. One of the common features among successful bullying prevention programmes is that they take a holistic approach that encourages collaborative engagement between teachers, students, and parents instead of targeting a specific group of affected students.

Providing a platform to facilitate meetings, communications or trainings to efficiently exchange information between teachers, teachers-students, teacher-parents will be helpful in identifying the problems or symptoms early on. It would also be important to support and provide training the teachers and parents to monitor and detect children's symptoms and behaviours (including depression, bullying, chronic stress, and other behavioural problems). Many parents across the 18 countries with available data in PISA 2015 reported inconvenient meeting times, inability to take time off from work, lack of childcare or transportation as the common barriers that deter participation in school activities.

Interestingly, for obstacles in communication with schools and teachers, many parents cited that they do not know how to participate or do not see this as relevant for child's development, and some cited lack of language proficiency as obstacles in communicating with teachers (OECD 2017a). Although this does not confirm a causal relationship, these findings do suggest how providing information to parents about their roles and involvement can matter for their child's development and well-being. Practitioners

and policymakers can consider the use of technology and other tools to overcome these challenges as well as increase the opportunities for parents to engage in schools and communicate with teachers.

This is crucial as many mental conditions begin during adolescence can have lasting repercussions and recurrences. For conditions like depression, anxiety, eating disorders, and other common psychiatric disorders among children and adolescents today, it is important to raise the awareness for early diagnosis and treatment before the condition becomes more severe and chronic. Even though depression is one of the most curable mental disorders, it still remains a chronic condition where 85% of patients have recurring episode of depression within 15 years (Gladstone, Beardslee, and O'Connor 2011; Mueller et al. 1999). Evidence shows that the majority of children and adolescents with psychiatric disorders do not readily get treatment. Many youths with the highest need for mental health support have the least access or do not seek support (McLoughlin, Gould, and Malone 2015). Only about a third of children and adolescents in the U.K who were suicidal or engaging in self-harm seek help (Potter et al. 2012).

*Common characteristics of effective programmes to reduce mental health problems*

Effective prevention and intervention programmes in schools can potentially help reduce and prevent depression and anxiety as well as increase the awareness of different mental health issues among youth. However, several evaluation studies argue that it is difficult to directly compare the effectiveness of specific programmes' and particularly in regards to the magnitude of effect sizes. Evidence is somewhat mixed on how much these programmes make a lasting impact on preventing disorders and reducing symptoms (Hetrick et al. 2016; Gillham et al. 2007; Corrieri et al. 2014; Beardslee et al. 2013).

Three different levels of interventions exist in prevention programmes. Universal-based interventions do not have a specific target group per se, and apply to all members within a group (i.e. school) irrespective of their risk status. This has a benefit of reduced stigma towards select group of students and can be a good opportunity to raise overall awareness. Selective programmes are targeted towards youths who are at a higher risk of developing disorders based on individual or other observable characteristics. These types of selective programmes tend to show larger effect sizes but a recent meta-analysis suggests that these studies often lack attention placebo control groups, which may explain the large effect size for these programmes (Hetrick et al. 2016). Indicated approaches target those who already exhibit symptoms (low-to-moderate) (Corrieri et al. 2014). In general, programmes that target a high-risk group of children will have a larger effect than universal programmes with no or lower than average risk.

Some studies find larger effects for interventions towards a targeted group, but because many universal prevention programmes lack a proper control group to compare to, it is difficult to conclude that targeted intervention is more effective than a universal one (Hetrick et al. 2016; Werner-Seidler et al. 2017). The goal here is not to identify the single most effective strategy or method per se but rather to learn from successful practices and distinguish common features that bring the most benefit to children, particularly those who are at high-risk and in need of most support for emotional well-being.

One of the most common components found among different prevention programmes for adolescent depression, anxiety and suicide is cognitive-behavioural therapy (CBT). These type of programmes focus on cognitive and behavioural risk factors for depression among children and teach children and adolescents cognitive restructuring skills that help them detect and overcome negative thoughts and emotions as well as improve their problem-solving skills (Schultz and Mueller 2007; Beardslee et al. 2013; Clarke et al. 1995).

Behavioural component in CBT approaches can include focusing on coping, social problem-solving skills, and interpersonal relationships and a cognitive component to help adolescents identify and gain control over thought process and patterns to be more optimistic (Spirito et al. 2011). Similarly, CBT programmes targeted towards lowering anxiety have a behavioural component that helps participants block avoidance behaviour and a cognitive therapy component that emphasises monitoring of feelings and behaviours as well as cognitive restructuring to change anxious thoughts and processes (Sauter, Heyne, and Michiel Westenberg 2009).

There are several successful universal school-based programmes such as the Problem Solving for Life, Resourceful Adolescent Program-Adolescents (RAP-A), and Resource Adolescent Program-Family (RAP-F: involves parents as well). These programmes often consist of regular sessions delivered by teachers, counsellors or psychologists who are trained to teach students on cognitive restructuring, resilience, and problem solving. Resourceful Adolescent Program-Teachers (RAP-T) focuses on raising awareness among teachers the importance of school connectedness and promote key elements.[3] Most of the studies found null or small positive effects in reducing depressive symptoms post-intervention (Gladstone, Beardslee, and O'Connor 2011).

Results from a pilot study of a universal school-based programme in Hong Kong, China confirm that these types of programmes without a specific target group can help raise the overall awareness and knowledge of mental health issues. The programme sessions were based on CBT but more interestingly students in teacher-led sessions showed greater improvements than those in professional-led sessions post-intervention (Lai et al. 2016). Although a causal relationship cannot be drawn from this study alone, but the findings do suggest the potential impact that teacher training and support can have on adolescents' emotional well-being.

The Penn-Resiliency Program (PRP) is another example of a school-based programme that is based on CBT. It is a school-based intervention programme that mainly teaches adolescents how to connect between life events, their feelings and beliefs about life events, and enhance their resiliency and manage emotional consequences from these events. PRP also involves parent intervention programmes to raise parents' resilience and improve parenting skills (Gladstone, Beardslee, and O'Connor 2011). PRP has been successfully implemented both as universal and indicated depression prevention programmes (Wijnhoven et al. 2014).

CBT has been implemented in family-based intervention programmes to prevent depression, particularly among those with high risk of depression onset (youths with divorced parents, family history of depression, family bereavement). Family-based intervention programmes have similar elements but at the family level and environment. Some common features of these programmes include increasing awareness of symptoms and its impact on functioning among family members, coping skills with stress, and enhancing parenting skills and parent-child relationships (Gladstone, Beardslee, and O'Connor 2011).

Also, tools like computer and the Internet can serve as another alternative. A review of CBT intervention programmes using a computer, mobile device, or the Internet to reduce symptoms of depression and anxiety among youth up to age 25 show that these can be useful in reducing the symptoms (Ebert et al. 2015). The Internet can be effective in reaching adolescents for interventions that combine CBT and family training, particularly for those who are reluctant to engage in traditional prevention programmes (Gladstone, Beardslee, and O'Connor 2011).

In a recent review of existing studies on prevention programmes for mental health, substance use, violence, sexual health, and life skills, problem-solving (in 76% of the programmes) was the most

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[3] http://www.rap.qut.edu.au/programs/rap-t.jsp.

commonly shared practice element followed by communication skills (45%), assertiveness (45%), and insight building (38%) (see also Table 3 below). Cognitive coping, coping skills, social skills training, and goal setting were included among all programmes evaluated in the review (Boustani et al. 2015). Similar to commonalities among depression prevention programmes, existing programmes for anxiety prevention often use CBT and mostly target adolescents (Neil and Christensen 2009).

**Table 3.   Cognitive-Behavioural Therapy based prevention programmes**

| | Programme | Components | Age groups/gender | Effective? |
|---|---|---|---|---|
| **Universal** | Penn Resiliency Program (Cardemil et al. 2007; Chaplin et al. 2006; Wijnhoven et al. 2014) | • social problem-solving skills<br>• 12 weekly sessions by trained school staff | 5-6th grades; 6-8th grades girls | Y |
| | Friends for Children (P. Barrett and Turner 2001; P. M. Barrett, Lock, and Farrell 2005; P. M. Barrett et al. 2006) | • Coping strategies<br>• 10 weekly sessions by teachers or mental health professionals<br>• Homework activities<br>• Sessions for parents by mental health professionals | 6th grade; 6th and 9th grade; 5th and 7th grades | Mixed[4] |
| | 4Rs program (S. M. Jones et al. 2010) | • Social and emotional learning<br>• Literacy based curriculum by trained teachers | 3rd grade | Y |
| | Mood-GYM (O'Kearney et al. 2009) | • Internet based<br>• Detect problems and develop coping skills<br>• 2 weeks and part of regular curriculum | 10th grade girls | Y |
| | RAP-KIWI (Merry et al. 2004) | • Interpersonal therapy<br>• 11 sessions by trained school staff | 9th and 10th grades | Y |
| | Beyond Blue (Sawyer et al. 2010) | • Social skills, resilient thinking<br>• Coping strategies<br>• 10 sessions over 3 years by trained teachers | 8th grade | N |
| | RAP-A (Resourceful Adolescent Program) (Shochet et al. 2001) | • Problem solving, self-management<br>• 11 weekly sessions<br>• 3 sessions for parents by mental health professionals | 9th grade | Y |
| | Aussie Optimism Program(R. E. Roberts, Roberts, and Duong 2009) | • Optimistic thinking, social skills<br>• 20 weekly sessions by teachers | 7th grade | N |
| **Indicated** | Feelings Club (Manassis et al. 2010) | • Recognise and manage negative thoughts and feelings<br>• Coping strategies<br>• 12 weeks sessions and three parent sessions by mental health professionals | 5th and 7th grades | N |
| | Counselor-Care (C-CARE) (Eggert et al. 2002) | • Coping and support training<br>• Assessment<br>• Peer support<br>• Skills training<br>• 12 sessions by trained teachers | 9th 12th grades | Y |
| | Penn-Prevention program (C. M. Roberts et al. 2010) | • Coping and social problem skills<br>• 12 sessions by trained school staff | 7th grades | N |
| | Personal Growth Class (Thompson, Eggert, and Herting 2000) | • Mood management<br>• Life skills training<br>• ~1h daily sessions for 18-36 weeks by trained teachers | 9th and 12th grades | Y |
| | Substance misuse prevention program (Castellanos and Conrod 2006) | • Motivational, coping skills training<br>• Two 90 min sessions by mental health professionals | 9th and 11th grades | Y |

Along with a growing amount of evidence (see Table 3 above), these commonalities among prevention programmes all indicate the importance of social and emotional skills as a powerful tool to counteract and overcome the adverse effects of mental health problems and their consequences. Instead of framing these programmes as preventive or having separate courses and sessions (which tend to be

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[4] Barrett et al (2006), Barrett et al (2001) finds null effects; Barrett et al (2005), Lowry-Webster et al (2003) find positive effect.

temporary, short in duration and can be costly and burdensome for teachers), school and policymakers can structure these programmes strategically to improve social and emotional skills that can yield other positive effects such as lowering anxiety and depression. A recent meta-analysis of universal school-based social emotional programmes for Kindergarten to adolescents show that programmes to foster social and emotional skills learning yield positive effect on social and emotional skills, attitudes, behaviours, and in some cases academic achievement (Durlak, Weissberg, and Pachan 2010; Durlak et al. 2011). Future studies and education practitioners should think about ways to incorporate teaching these skills through the curriculum to reduce additional burden among teachers and to have lasting impact on students' emotional well-being.

## Considerations for future research: gaps and priorities

While many studies have examined the trends as well as the causes and consequences of emotional well-being and ill-being among children and adolescents, there are still areas of uncertainty. Previous studies and data used to identify the prevalence of mental health and factors associated with emotional well-being tend to have a small sample in certain developed countries and are mostly cross-sectional in design. It is difficult to understand the change and persistence of psychiatric disorders without the data that follow a sufficient share of representative samples from childhood into adolescence and from adolescence into adulthood. Unfortunately this kind of data set is very rare (Costello et al. 2003). A similar argument follows for the need to have data on sleep duration and patterns and cyberbullying (and other forms of online harassment) among younger children to better understand the long-term relationships and trends. More comprehensive data on prevalence and outcomes will allow for a more rigorous assessment of programmes and policies in place to improve emotional well-being.

The majority of existing data in the literature on mental health and emotional well-being and its associated factors include adolescents but do not examine children younger than 12 despite the importance of mental health during this stage of development. It might be difficult to get parental consent in participating in a study for younger children and possibly there might be other restrictions in conducting a study that involve younger children and students. In contrast to the large body of evidence on adolescent depression, evidence for long-term trends in emotional problems among children is comparatively limited (Collishaw 2015). Furthermore, comprehensive data that allows for cross-country comparisons of emotional well-being among children and adolescents are limited and do not allow comprehensive analysis. Many studies often use the PISA, HBSC data or compare different national studies which provide useful evidence but it can be problematic in making cross-country comparisons due to cultural comparability and measures used for symptoms and outcomes.

Due to differences in clinical practice, diagnosis criteria, cultural contexts and availability of data and information across countries, it is challenging to monitor and have a standard set of indicators for emotional well-being and mental health. However, it will be extremely useful to develop indicators or surveys that better capture the state of children's emotional well-being that is comparable across countries, particularly among younger children. Triangulation of data on emotional well-being measures will be useful, particularly for younger children. Supplementary information on teachers and parents can provide crucial information on what works for fostering healthy child development and their emotional well-being as they play a key role.

Recent evaluation studies on prevention programmes and their relative effectiveness revealed some of the gaps in the literature. Many existing programmes use different types of interventions and methods. Often these prevention programmes aim to reduce anxiety and depression symptoms and onset. But many of these programmes are temporary and brief in length, lack rigorous comparison groups in randomised controlled trials, have small sample sizes, a narrow set of outcomes and focus largely on adolescents.

Different psychiatric disorders and emotional problems tend to have overlapping causes, symptoms and consequences. Future studies can consider examining multiple outcomes and indicators (i.e. examine the combined effects of stress, anxiety and depression and not each in silo) to maximise the synergies in understanding what works to improve awareness and reduce negative consequences. In particular, longitudinal data and follow-up of these programmes and interventions from childhood to adolescence along with indicators on their outcomes on social and emotional skills as well as indicators of mental health can allow for a dynamic causal analysis.

Future research should examine a longer-term follow-up of comprehensive data on prevalence and outcomes, encompass more high quality rigorous randomised control trial designs with comparable control groups, and also study the potential effectiveness and feasibility of teachers in delivering these programme sessions and trainings (Neil and Christensen 2009). The aspect of investigating teacher delivery of efforts to improve student's mental health is important, as several studies (Durlak, Weissberg, and Pachan 2010; Neil and Christensen 2009; Lai et al. 2016; Durlak et al. 2011) have pointed out, teachers can play a vital role in delivering such prevention programmes. Future studies should also investigate the practicality of implementation in terms of costs, additional burden on teachers, and the necessary support that teachers need to deliver these training and programmes. In order to prevent an increase in teachers' workload, which can reduce teacher's own emotional well-being and in turn that of students, it will be important think about ways in which social and emotional learning can be incorporated into the curriculum and existing day-to-day learning activities.

Also, several prevention programmes highlighted the role of parents through fostering positive parent-child relationships and parenting skills particularly among high-risk students. One of the common features of successful anti-bullying prevention programmes involved the provision of training and providing information to parents, having parent-teacher meetings and improving the supervision and monitoring of symptoms and activities such as bullying among youth (Ttofi and Farrington 2009; OECD 2017a). Future research should examine the ways in which parents can be involved and effectively communicate with teachers in order to foster these skills and reduce the adverse effects of mental ill-being.

Accordingly, another important priority for future research is to investigate ways to promote communication and collaboration between teachers and parents via the Internet or other platform. As noted in previous sections, the role of parents and teachers in fostering social and emotional skills is crucial. Thus, learning about what works for effective communication and monitoring for teachers and parents as well as identifying pedagogy and learning tools to foster social and emotional skills that enable teachers to readily embed in the existing curriculum would be another important priority.

As many studies document higher prevalence and vulnerability among girls with respect to mental health problems and sleep deprivation, further research is necessary to uncover the potential mechanisms and efforts to properly intervene and prevent these issues from presenting among younger girls.

Most importantly, efforts to improve emotional well-being should be made a priority given the close relationship between mental and physical health. New data, policies and programmes designed to monitor and enhance children's mental health and emotional well-being will also improve their physical health and their overall well-being (and vice versa).

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