

**Improving Education Outcomes for Students Who Have Experienced Trauma
and/or Adversity**

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Table of contents

Acknowledgements.....	3
Abstract.....	6
Introduction.....	7
Causes and effects of adversity and/or trauma.....	10
2.1. Common causes of adversity and of trauma.....	10
2.2. Common effects of adversity and of trauma.....	13
Factors that mitigate or exacerbate the effects of adversity and/or trauma.....	19
3.1 Vulnerability and resilience.....	19
3.3. Mitigating factors that increase resiliency.....	31
Education policies and practices.....	34
4.1. System level.....	34
4.2. School level.....	39
4.3. Student level multi-tiered approaches.....	46
4.4. Innovative approaches to traditional schooling.....	48
Case studies.....	50
Case study 1: Alaska’s transforming schools framework.....	51
Case study 2: Trauma-informed schools in Indigenous friendship centre communities.....	53
Case study 3: Gift of Gallang: A programme with Indigenous Australian students.....	55
Case study 4: A comprehensive districtwide approach to improving student behaviour and school safety.....	56
Case study 5: Trauma-focused school-based interventions in treating unaccompanied refugee minors.....	58
Conclusion.....	61
References.....	63
Appendix A. Methods.....	80
A.1. Scope.....	80
A.2. Data collection.....	80
A.3. Information extraction and synthesis.....	83

Figures

Figure 1. The effects of adversity and/or trauma on educational outcomes.....	9
Figure 2. Adverse childhood experiences across the life-span.....	14
Figure 3. The spectrum of student voice-oriented activity.....	45

Boxes

Box 1. School disciplinary practices.....	13
Box 2. The role of culture	20
Box 3. Trauma-informed approaches.....	21
Box 4. Trauma-informed approaches: Supporting students with multiple adversities	22
Box 5. Trauma-informed approaches: Meeting the needs of immigrant students	24
Box 6. Implications of COVID-19 and lessons learned from the Ebola Crisis	31
Box 7. Multi-tiered systems of support for students.....	46
Box 8. Examples of effective social and emotional learning programmes	47

Abstract

All children experience some level of stress in their lives. If stress is persistent and accumulative, it may have detrimental effects on the social, emotional, and physical well-being of the individual child and long-term economic and health impacts on our societies. Understanding the causes, effects, and mitigating and exacerbating factors of adversity and trauma is critical to promote practices and policies for better lives. The purpose of this working paper is to help education policymakers and education leaders and practitioners know how to better support students who have experienced adversity and/or trauma and build their resilience.

Introduction

All children experience some level of stress in their lives. A tolerable level for the short term is useful for adapting coping skills (Center on the Developing Child, 2020^[1]). If stress is persistent and accumulative, however, and not addressed adequately, it may have detrimental effects on the social, emotional and physical well-being of the individual child, and long-term economic and health impacts on our societies. Therefore, understanding the causes, effects, mitigating and exacerbating factors of adversity and trauma, and identifying effective practices and policies that support the well-being of vulnerable children, is a worthy investment for OECD to promote better policies for better lives among its member states.

Adversity, toxic stress, and trauma are often interrelated. *Childhood adversity* is a broad term that refers to a wide range of circumstances or events at home, school, or community, or within the larger society, that are experienced as a serious threat to a child's physical or psychological sense of safety and well-being (CDC, 2019^[2]). *Toxic stress* can occur when a child experiences adversity that is intense, repeated, and prolonged; it can have lifelong implications (Theirworld, 2016^[3]). *A traumatic event* is an event that is perceived by the individual as extremely frightening, harmful or threatening to self and/or others ((Atkinson, 2013^[4]); (NCTSN, 2017^[5])). *Trauma* is the emotional, psychological and physiological residue from heightened levels of stress that accompany experiences of danger, violence, significant loss and life-threatening events that elicit survival mechanisms that are unnecessary in other contexts.

There has been progress in the last four decades among researchers and practitioners in their understanding of adversity, trauma, resilience, and risk factors that increase vulnerability, and the supports that buffer against vulnerability, as well as effective prevention and intervention strategies that build resilience. We have today a stronger understanding of the mutual interaction between the individual and the environment and how the individual continuously makes meaning of experiences with the environment. Thus, our understanding of trauma and adversity has evolved and expanded from a focus on the individual capacity to system capacity, and to the importance of strengthening the human, social, economic, political, and cultural processes that support the system in reorganising and adapting to changes that the individual experiences (Cantor et al., 2019^[6]). Nonetheless, this is still a developing field of practice and research. Many interventions implemented in schools and communities have not had sufficient evaluative measures in place to accurately gauge the likely impacts on students (Maynard et al., 2019).

Given their substantial role in children's lives, educational institutions and systems are in a unique position to help buffer children from the negative effects of adversity and/or trauma. At the same time, if educators and educational systems are unaware of the complexities of adversity and trauma, are unprepared to respond with support, and/or provide a negative school environment, they can exacerbate or even cause student difficulties (Osher et al., 2014^[7]). For example, a review across 10 OECD countries found that support for children's holistic needs was often viewed by educators as extraneous to a school's primary mission of academic instruction (Spier et al., 2017^[8]).

This working paper provides an in-depth synthesis of existing research on improving education outcomes for students who have experienced adversity and/or trauma. The OECD is commissioning this working paper in response to growing demand amongst educators at all levels for practical, evidence-based, interdisciplinary information and guidance on how to recognise and respond to the

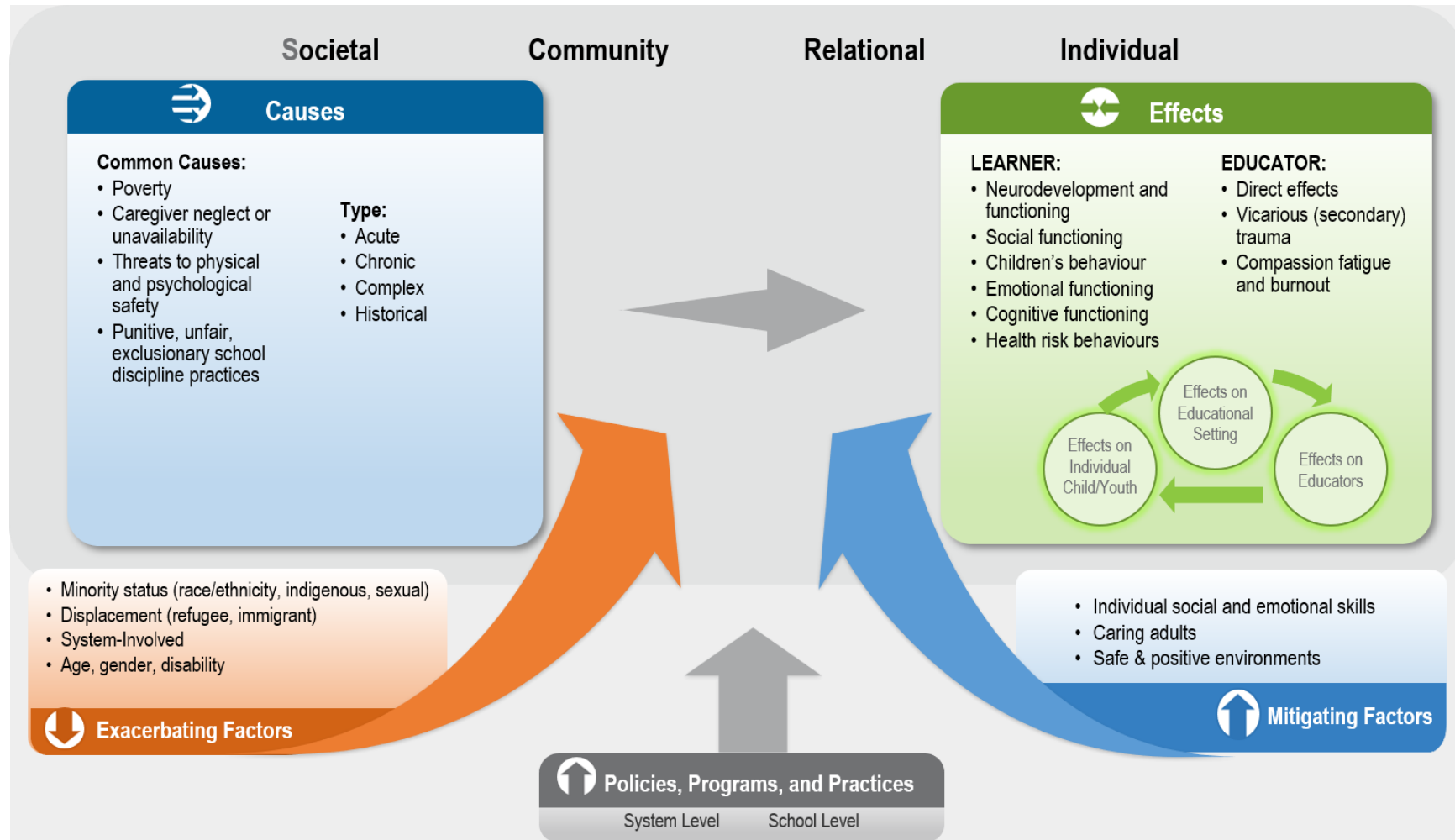
needs of such students. The purpose of this working paper is to help education policymakers and education leaders and practitioners know how to better support students who have experienced adversity and/or trauma. Ultimately, this work should promote the quality, effectiveness and impact of education policies and practices in ways that will lead to improved outcomes for the most vulnerable.

The OECD's recent efforts to support educational policies and practices created several entry points for our study of adversity and trauma. OECD Working Papers, such as the *Framework for the Analysis of Student Well-Being in the PISA 2015 Study* (Borgonovi and Pál, 2016^[9]), *Emotional Well-Being of Children and Adolescents: Recent Trends and Relevant Factors* (Choi, 2018^[10]) and *Teachers' Well-Being – A Framework for Data Collection and Analysis* (Viac and Fraser, 2020^[11]), cover trauma-related factors such as stress, personal security and bullying, physical pain, and emotional well-being more broadly. The publication *Refugee Education: Integration Models and Practices in OECD Countries* (Cerna, 2019^[12]) addresses acute traumatic events such as war, loss, and separation, while *Promising Practices in Supporting Success for Indigenous Students* (OECD, 2017^[13]) highlights how to better meet the educational needs and aspirations of Indigenous students and families. Another intersection for trauma research by the OECD concerns research on social and emotional well-being outlined in the publication *Social and Emotional Skills for Student Success and Wellbeing: Conceptual Framework for the OECD Study on Social and Emotional Skills* (Chernyshenko, Kankaraš and Drasgow, 2018^[14]). In consideration of these works and drawing on the lessons described in the OECD publication, *Education Policy Outlook 2019: Working Together to Help Students Achieve their Potential* (OECD, 2019^[15]), this working paper advances the dialogue on the issues concerning adversity, trauma, and the education sector.

In the following pages, we aim to capture this broad perspective of today's complex, diverse, and dynamic educational systems and provide insights for educators and other stakeholders working to improve educational outcomes. In Section 2, we synthesise the best available evidence for the causes and effects of adversity and/or trauma in children. In Section 3, we specify the factors that exacerbate poor educational experiences and outcomes for students who have experienced trauma and/or adversity. In Section 4, we draw together evidence on effective practices in education systems to improve supports and outcomes for students who have experienced trauma and/or adversity. In Section 5, we feature five case studies of these effective practices and in Section 6, we conclude with a discussion of evidence from our review of the literature and directions for education stakeholders.

Figure 1 presents an overview of the content that we discuss in the following pages and provides visual guidance for the reader on the overall conceptualisation of the dynamic processes that influence the educational outcomes of students who experience adversity and/or trauma.

Figure 1. The effects of adversity and/or trauma on educational outcomes



Causes and effects of adversity and/or trauma

Adverse experiences can happen at the interpersonal level, at the community level, or at the broader societal level. They can be acute and short-lived, such as natural disasters, illness, accidents, violent events in the home or community, parental divorce, or loss of a loved one. Adverse life events can also be chronic, such as poverty, marginalisation, institutional racism, or historical trauma; lack of safety at home, school and/or in the community; parental neglect; parental mental illness; separation from loved ones (e.g. due to incarceration or deportation); forced labour; displacement or homelessness. Trauma occurs when an adverse experience is extremely frightening, threatening, or harmful to mental and/or physical well-being.

The effects of both acute and chronic adverse experiences can have serious consequences on a child's life (Gerrity and Folcarelli, 2008^[16]). Children experience “toxic stress” when they experience significant adversity that is frequent and/or prolonged, and do not have adequate support from adults to help them cope effectively. And “complex” trauma occurs when children experience multiple traumatic events – events that are severe and pervasive (such as with child abuse or profound neglect) (NCTSN, 2013^[17]). When these adversities accumulate, they reduce a child's ability to cope with stressors effectively and can have a severe effect on the child's healthy physical and mental development (NCTSN, 2013^[17]). However, it is critical to note that individual children's responses to adversity and to trauma will vary substantially

In this section, we address the common causes of adversity and trauma experienced by children, address the effects of adversity and trauma on children's development and functioning, and then discuss how educators are affected by adversity and trauma (their own, as well as their students').

2.1. Common causes of adversity and of trauma in children

There are a multitude of potential causes of adversity and/or trauma in children. In this section, we focus on some of the most common causes: poverty, caregiver neglect or unavailability, and threats to physical and psychosocial safety. We also discuss school disciplinary practices as a common source of adversity and trauma in Box 2.2.

2.1.1. Poverty

Poverty is perhaps the most common cause of adversity. Across the OECD, the average national child poverty rate is 13%, with rates over 20% in several countries (Chile, Israel, Spain, Turkey, and the United States), but lower in the Nordic countries (OECD, 2019^[18]). A 2014 report from Child Trends highlighted five ways that poverty is especially harmful for children:

1. Poverty harms children's developing brains and bodies.
2. On average, children growing up in poverty receive less support for learning, contributing to learning gaps that become apparent early in life and (if unaddressed) widen over time.
3. Poverty affects children's physical, emotional and behavioural health. For example, children in poverty experience elevated rates of food insecurity and dietary deficiency, higher rates of diseases such as asthma, and lower rates of receiving adequate medical and dental care.

4. Children who are poor are more likely to live in neighbourhoods with concentrated community poverty, which increases their risk of exposure to crime and violence and environmental toxins. They are also more likely to attend lower-quality schools with few resources and transient leadership.
5. Poverty increases psychosocial stress amongst parents and other caregivers, making it more challenging for many to provide a safe and nurturing environment. Poverty also makes it more difficult for parents and other caregivers to meet their children's material needs and can decrease stability in areas like housing (Murphy and Redd, 2014_[19]).

Poverty is often related to social disadvantages, which we address in Section 3.

2.1.2. Caregiver neglect or unavailability

Children are placed in adverse circumstances when the adults who should be caring for them fail to do so or are unavailable to do so. Unfortunately, neglect by caregivers is one of the most prevalent sources of adversity for children. Globally, the World Health Organization (WHO) estimates that 16% of children experience neglect (WHO, 2014_[20]).

In a review of child abuse and neglect in Australia, the prevalence rates for abuse were reported between 5% and 10% and neglect around 12% (Price-Robertson, Bromfield and Vassallo, 2010_[21]). Parental substance abuse is an underlying concern in up to two-thirds of child maltreatment reports in the United States (Child Welfare Information Gateway, 2014_[22]), and approximately 13% of American children under age 17 live with at least one adult with a substance use disorder (Lipari and Van Horn, 2017_[23]). Child neglect can also result when caregivers have limited coping skills and become overwhelmed with parenting responsibilities, or for other reasons such as parental physical or mental health challenges. The feeling of attachment and social support is a crucial part of development (NCTSN, 2013_[17]), and children often suffer when adult caregivers fail to provide adequate and appropriate social and emotional support. Children's healthy development can also be disrupted when caregivers fail to provide adequate supervision or fail to send them to school regularly.

Some types of neglect relate to children's physical needs, such as inadequate medical care, inadequate nutrition (assuming the caregiver has the means to provide sufficient food), lack of sufficient material resources that the caregiver could otherwise provide (such as inadequate clothing, lack of school supplies), or an environment that is unsafe and/or unsanitary.

Many of these kinds of neglect can exert "cascading consequences" that leave children vulnerable to trauma (Institute of Medicine and National Research Council, 2014_[24]). For example, children who do not have their emotional needs met at home are vulnerable to sexual predators (Elliott, Browne and Kilcoyne, 1995_[25]). Children who live in physically unsafe environments are at elevated risk for injuries. And when young children are left alone for long periods of time or face other situations that exceed their coping abilities without an adult present, the experience can be traumatising (Ruiz-Casares and Rousseau, 2010_[26]); (Aizer, 2004_[27]).

2.1.3. Threats to physical and psychological safety

Children face numerous threats to their physical and psychosocial safety. Globally millions of children experience physical threats to their safety due to environmental disasters or political reasons such as war and conflict. As of 2019, there were over 13 million school age children globally who were refugees or displaced, including 7.9 million aged 5 to 11 years, and 5.2 million aged 12 to 17 years¹ In addition, globally, including in all OECD countries, unintentional injuries are the leading cause of death in children ages 5 to 19 years (Sethi et al., 2008_[28]). A substantial number of children also face a range of interpersonal threats to their physical and psychosocial safety. These threats often originate in the child's home, but can also come from the community, school setting, or broader society. The WHO estimates that globally, 36% of children

¹ <https://www.unhcr.org/refugee-statistics/>

experience psychological abuse (also referred to as psychological or mental abuse), 23% experience physical abuse, and 18% of girls and 8% of boys experience sexual abuse (WHO, 2014^[20]).

Studies have reported considerable country-level differences in childhood exposure to interpersonal violence at home, ranging from 14% in Sweden to 28% in the United States, and children are most likely to be exposed to interpersonal violence before the age of five (OECD, 2019^[29]). The Violence Against Children and Youth Surveys² released recently also show contrasts among countries across the globe. For example, the Colombia national report released in 2020 showed that amongst children ages 13-17 years, almost twice as many boys as girls experienced physical violence at home (20.1% vs. 10.8%) in the past 12 months, compared to a lower ratio in Moldova, for example (15.1% vs. 10.8%).

Although violence against children is low in Europe compared to some other parts of the world, peer violence in schools is highly prevalent. Among 106 countries with comparable data on adolescents who were recently bullied, 1 in 3 adolescents aged 11 to 15 in Europe and North America admit to having bullied others at school at least once in the past couple of months, with prevalence ranging from around one in seven (14%) in the Czech Republic and Sweden to nearly 6 in 10 (59%) in Latvia and Romania (UNICEF, 2014^[30]).

² <https://www.togetherforgirls.org/violence-children-surveys/>

Box 1. School disciplinary practices

Students who have experienced trauma and/or adversity can face higher rates of being disciplined in school, due to factors such as behavioural issues. In addition, when school discipline is excessive and/or applied unequally or unfairly, the experience can add to students' trauma and/or adversity. Many teachers are not prepared to assess and address the effects of trauma. When signs of student trauma are misunderstood, teachers may respond to students' trauma-related behaviours with harsh discipline practices (Guarino and Chagnon, 2018^[31]) compromising a student's ability to perform well in school and increasing the risk of dropout (Osher et al., 2014^[7]). For students who do present emotional and/or behavioural problems in school, exclusionary discipline takes them away from what could (or should) be a protective and supportive environment (Quin, 2019^[32]).

A 2015 meta-analysis of 34 studies concluded that exclusionary discipline was associated with both decreased achievement and increased risk of dropping out of school (Noltemeyer, Ward and McLoughlin, 2015^[33]). These relationships are not solely based on pre-existing student characteristics: A 2011 study in the United States found that even after controlling for 83 separate student characteristics (such as poverty, gender, race and disability status) exclusionary discipline substantially multiplied a student's risk of grade repetition, dropping out, and entry into the juvenile justice system (Fabelo et al., 2011^[34]).

In Australia, students who experience exclusionary discipline are more likely to drop out, and when youth are out of school (due to suspension, expulsion, or dropping out), they are more likely to engage in delinquent and violent activity in the community – thus relocating the misbehaviour rather than reducing it (Hemphill and Hargreaves, 2010^[35]). Research from Australia notes that exclusionary discipline decisions for non-violent offences is often based on factors unrelated to the student's behaviour, including (1) teacher belief that students are incapable of handling their problems, (2) a lack of fair and consistent application of the rules across the student body, (3) the established use of suspensions as the go-to method for managing student misbehaviour in the school, and (4) the belief that suspending “problem” students will benefit the other students and school staff – it does not. Students and staff at schools with high suspension rates report a lower sense of security and a less positive school climate, and those schools have lower levels of achievement relative to schools that make less use of suspensions (Hemphill and Hargreaves, 2010^[35]).

In many OECD countries, students from ethnic-minority groups, those living in poverty, and those who have disabilities can face disproportionate use of exclusionary discipline (as we discuss in Section 3) – adding to a student's experiences of adversity.

2.2. Common effects of adversity and of trauma

Children who experience adversity and/or trauma are at significantly higher risk of developing physiological symptoms, poorer physical health, difficulties with cognitive functioning, compromised academic or learning outcomes, inadequate social, behavioural and emotional skills, and mental health problems (Perfect et al., 2016^[36]). In this section, we address the common effects of adversity and of trauma at a population level. However, it is important to note that how individual children are affected by adversity and/or trauma can vary substantially, based on their environment, relationships, prior experiences, and genetic makeup.

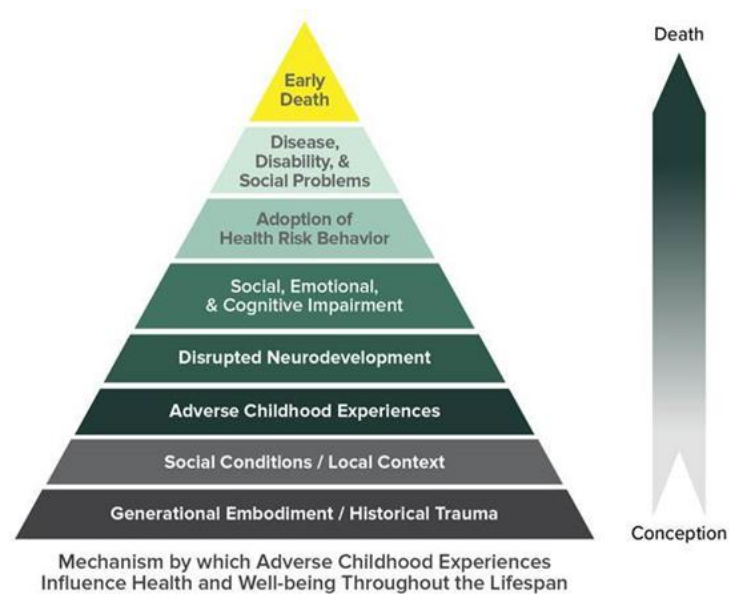
In addition, different types of adversity and trauma have been associated with different impacts on children and youth. For example, exposure to violence has been associated with depression, separation anxiety and conduct problems whereas non-interpersonal traumatic events have been associated with phobic anxiety

(Briggs-Gowan, 2010^[37]). Childhood sexual abuse has been found to have stronger associations with negative adult outcomes than any other form of abuse and neglect ((Bebbington, 2004^[38]); (Bosqui, 2014^[39])).

In Section 3, we address the factors that mitigate or exacerbate the effects of adversity and of trauma for individuals or groups.

The Adverse Childhood Experiences (ACE) pyramid provides a useful, evidence-based framework for this discussion of the effects of adversity and trauma (see Figure 2 below). A landmark study in the United States found that when adverse childhood events accumulate, the long-term negative effects can go well into adulthood, including poor physical and mental health, substance abuse, and risky behaviours (Felitti et al., 1998^[40]). Subsequent research with a more socially and racially diverse urban population has supported the findings and identified even higher prevalence of long-lasting effects of childhood adversity (Public Health Management Corporation, 2013^[41]).

Figure 2. Adverse childhood experiences across the life-span



Source: CDC (2020) “About the CDC-Kaiser ACE study”, Centers for Disease Control and Prevention, The Ace Pyramid, <https://www.cdc.gov/violenceprevention/aces/about.html> (accessed on 4 August 2020) modified from Felitti et Al. (1998) Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults. The Adverse Childhood Experience (ACE) Study, <https://www.ajpmonline.org/action/showPdf?pii=S0749-3797%2898%2900017-8>

For the purposes of this paper, we address the two lowest tiers (generational adversity and historical trauma, plus social conditions/local context) in Section 3. It is important to note that the original ACE model (which focused on experiences of adversity that mostly related to the home and/or family) has been expanded to include critical contextual factors for many children, including experiences of witnessing violence outside of home (as well as at home), experiencing discrimination, living in a neighbourhood that is not safe or supportive, being bullied, and being placed in foster care. We are not addressing the two uppermost tiers of the model, as these concern later adulthood. In this section, we focus on the effects of the adverse childhood experiences (third tier) on neurodevelopment and neurological functioning, and then explain how disrupted neurodevelopment and functioning affects children’s social, emotional, and cognitive well-being – especially in relation to their educational environment. We will also briefly address the tier related to adoption of health

risk behaviours, as these become relevant to student well-being and outcomes starting at the secondary school level.

2.2.1. Effects of adversity and/or trauma on neurodevelopment and functioning

The effects of stress on a child's physiological development are largely observed in their neurodevelopment (i.e. the development of the brain, nervous system, and endocrine system) (Gerrity and Folcarelli, 2008_[16]). For example, on average, children who have experienced poverty show significantly reduced grey matter in the frontal and temporal regions of the brain, and it is estimated that poverty-related changes to children's brain development account for 15% to 20% of the income-based achievement gap seen in the United States (Hair et al., 2015_[42]).

In addition, sustained stress due to adversity and/or trauma – and the attendant chronic elevation of stress hormones – typically cause damage to and disruption of neural and hormonal systems that have particularly negative implications for later development, physical and mental health, learning, and well-being (Cantor et al., 2019_[6]). Exposure to stress activates the amygdala responsible for the brain's fear detection and anxiety circuits, the “fight, flight, freeze” systems, and hippocampus that elevates cortisol, increased heart rate, metabolic rate, blood pressure, and alertness ((De Bellis and Zisk, 2014_[43]); (Chrousos and Gold, 1992_[44])). Chronic exposure to trauma can lead to excessive activation of the limbic-hypothalamic-pituitary adrenal axis (LHPA), the system that assesses stressors and regulates neurochemical responses, and elevation of the stress hormone cortisol. Such interference can damage neurons and result in an impaired stress response inhibition (Perfect et al., 2016_[36]). In other words, chronic exposure to traumatic events can cause children to become more easily triggered into survival mode and reduce ability to tolerate even ordinary stressors without fight, flight, or freeze responses (NCTSN, 2017_[5]). These neurobiological effects of adversity and trauma can have a profound effect on children's social, emotional, and cognitive functioning.

2.2.2. Effects of adversity and/or trauma on children's social functioning

In times of adversity, students may show different types of reactions to others. Some students may seek out social relationships and demonstrate increased need for affection, social support and reassurance (Collins et al., 2010_[45]). Conversely, many other students may have trouble connecting with others in school. For example, children who have lost their loved ones often withdraw from peers and teachers at school (NCTSN, 2019b_[46]). They may feel hyperactive vigilant, defiant, and less trustful of their peers and teachers (Cantor et al., 2019_[6]), and as a result may feel more disconnected and may disengage from school ((McInerney and McKlindon, 2014_[47]); (NCTSN, 2017_[5])). The effects of adverse life events and traumatic experiences can be exacerbated if interactions with peers and adults in the school are perceived as negative. Students from minority groups often feel the negative effects of cultural marginalisation through curriculum, school practice, or teacher or peer attitudes ((NCTSN, 2017_[48]); (NCTSN, 2017_[49])). For example, one study found that students of colour had less access to opportunities for academic advancement, such as pre-school, advanced classes, and college counselling, than did students who were white. The same study also found that students of colour were suspended from school at higher rates than students who were white ((U.S. Department of Education Office for Civil Rights, 2014_[50]); (NCTSN, 2017_[48])). Immigrant students are more likely to report being bullied and discriminated against than non-immigrant students (OECD, 2019_[51]) and tend to have a lower sense of belonging compared to students with a non-immigrant background (OECD, 2017_[52]). The exacerbating factors will be discussed in more detail in Section 3.

2.2.3 Effects of adversity and/or trauma on children's behaviour

The effects of adverse and/or traumatic experiences are often demonstrated in behaviours disruptive to learning environments and considered aggressive in nature, both of which can have a negative effect on academic outcomes. These behaviours stem from the neurobiological processes described above, whereby ongoing psychosocial stress (such as toxic stress or complex trauma) increases activity in the part of the brain

responsible for fight, flight, or freeze responses. Students exposed to violence are at increased risk of displaying disruptive and/or aggressive behaviours (NCTSN, 2017^[5]). Studies with refugee children and adolescents in Syria showed increased aggression (McDonald, 2017^[53]), and other studies show that children exposed to violence are also more likely to bully others (McInerney and McKlindon, 2014^[47]). Despite these concerns at a population level, it is important to keep in mind that how individual children respond to adversity and to trauma can vary substantially. We will discuss the resilience factors (e.g. the role of a caring adult) that help function well despite these adversities in Section 3.

2.2.4. Effects of adversity and/or trauma on children’s emotional functioning

Children who have adverse experiences may exhibit changes in emotional expression and emotional awareness, and resort to maladaptive emotion regulation strategies (such as ruminating) (McLaughlin and Hatzenbuehler, 2009^[54]).

Exposure to traumatic experiences can cause a wide range of emotions in a child and often may affect a child’s ability to regulate or manage their emotions in a healthy way. For example, children who have experienced loss may show signs of negative emotions – anger, guilt, and shame – or a lack of positive emotions, such as seeming “numb” (NCTSN, 2019^[55]). Traumatic experiences can also cause increased arousal states such as irritability, becoming easily startled and/or experiencing constant fear related to their safety or the safety of those around them (McInerney and McKlindon, 2014^[47]).

The experience of trauma and adversity can also significantly impact a child’s mental health. The effects may include a range of disruptions to mental health such as feelings of grief, trouble sleeping, and nightmares, to disorders such as depression, anxiety and post-traumatic stress disorder (PTSD) (NCTSN, 2017^[5]). Chronic stresses such as physical and sexual abuse are often associated with PTSD, depression, and anxiety (Gerrity and Folcarelli, 2008^[16]) and repeated exposure to chronic stress may also lead to self-harm and suicidal ideation (Cowley, Edwards and Salarkia, 2019^[56]). These problems have been commonly observed in children who were forced to migrate (Cerna, 2019^[12]). In addition, recent research focusing on the experiences of lesbian, gay, bisexual, transgender, and queer (LGBTQ)+ students found that those marginalised or victimised by hostile home or school environments reported higher rates of depression and suicidality compared to heterosexual peers or peers with traditional gender identities (Hatzenbuehler et al., 2014^[57]); (Kosciw et al., 2018^[58]). Students constantly exposed to reminders of racial trauma often feel increased anxiety (NCTSN, 2017^[48]). Finally, adolescents who feel disconnected to their peers, such as being a victim of bullying, are more likely to experience depression and anxiety (Choi, 2018^[10]).

2.2.5 Effects of adversity and/or trauma on children’s cognitive functioning

Trauma and adversity can impair the memory and attentional processes necessary for academic functioning. Such impairment can result from physiological changes in the brain due to chronic exposure to trauma and adverse experiences (e.g. disrupted development of the hippocampus, responsible for memory and attention) (INEE, 2016^[59]). When people experience psychosocial stressors, neurobiological processes shift mental activity *away* from areas of the brain responsible for higher order thinking, learning and decision-making (Vogel et al., 2016^[60]). For example, students exposed to violence may experience increased difficulties in concentrating (NCTSN, 2017^[5]) or they may be easily distracted thinking about their own safety or the safety of their loved ones (NCTSN, 2017^[48]).

Additionally, the experiences of trauma and adversity can limit attentional resources and the extent to which a child can pay attention during class or to their coursework. Children may be preoccupied in thinking about traumatic events or adverse experiences, diverting their attention from schoolwork. At a neurological level, thinking about a traumatic event can activate stress responses in the brain which then “turn off” areas of the brain responsible for thinking and learning (NCTSN, 2017^[5]). These effects of adversity and trauma are not limited to a child’s experiences of past events, or events that took place outside of school. If a child is

experiencing psychosocial stressors at school, such as being treated badly by a teacher or by classmates, these same neurobiological processes will compromise cognitive function – and by extension, learning.

2.2.6. Effects of adversity and/or trauma on health risk behaviours

Trauma and adversity can also affect physical health through its association with behavioural health (Cantor et al., 2019^[6]). Poor behavioural health places young people at risk for school leaving and school failure. Stress damages the ventral tegmental area (VTA) of the brain, which is associated with motivation, reward, and sensitisation to risk, contributing to increased risk-taking behaviours and lowered self-regulation (Gerrity and Folcarelli, 2008^[16]). Individuals exposed to chronic trauma are at a higher risk of smoking and engaging in high-risk sexual behaviours (NCTSN, 2019^[55]) and adverse childhood experiences increase the risk of drug use and alcohol abuse (Gerrity and Folcarelli, 2008^[16]). Substance use and the effects on physical health due to trauma and adversity can be observed from a young age. The use of substances is often considered a coping mechanism and chronic substance use is associated with poorer physical health outcomes. Also, tied closely to mental health, drug and alcohol use can develop into substance use disorder, defined as a mental health disorder. For example, a recent study in Syria reported that adolescents were frequently using drugs to cope with stress (McDonald, 2017^[53]).

2.3. How experiences of adversity and/or trauma affect educators

Educators' direct or indirect experiences with adversity and/or trauma can affect their interactions with students, while students' own experiences shape their environment and relationships with others – including in the school and classroom. These co-influential relationships should be considered when educators formulate policies and practices to address trauma and/or adversity in schools.

The relational aspect of the school environment has an important role in children's educational outcomes. The experiences of the child, peers, and adults in the school mutually influence their interactions with each other and the extent to which the educational setting is described as safe and supportive. For example, a student who frequently disrupts teaching in the classroom by acting out usually creates a stressful classroom environment for a teacher. Fortunately, the education field is beginning to recognise the importance of well-being amongst educators.

Direct effects of adversity and trauma on educators include when teachers, administrators and staff are exposed to traumatic events themselves. Teachers living in impoverished neighbourhoods, conflict zones, and/or regions affected by natural disasters are likely to experience anxiety, uncertainty and frustration (Powell, 2011^[61]). Teaching in adverse environments with limited resources (e.g. run-down building, lack of materials) and high levels of student behavioural, emotional, and social needs can lead to these experiences that can influence the quality of teaching and learning environment (NCTSN, 2017^[5]).

Vicarious (secondary) trauma occurs when individuals experience negative effects in working with those who have experienced trauma. This type of trauma is considered secondary or vicarious because the educator is not experiencing the trauma directly but experiencing feelings of suffering, fear and distress in hearing about the trauma and taking on the perspective of the child (Hydon et al., 2015^[62]). Symptoms of secondary traumatic stress for staff may include increased anxiety and concern about their own safety; intrusive, negative thoughts and images related to their students' traumatic stories; and a desire to avoid people or situations that trigger these difficult thoughts and emotions ((NCTSN, 2011^[63]); (Hydon et al., 2015^[62])).

As with students, psychosocial stress amongst adults (including educators) reduces their capacities for empathy, coping, engagement, and good decision-making – attributes that are especially important when working to meet the needs of students who have faced trauma and/or adversity. Psychosocial stress among educators may increase the influence of implicit bias in decision-making as the brain shortcuts to responses (Yu, 2016^[64]), increasing the risk that educators will engage with students based on stereotypes or the educator's personal biases against individuals or groups of students. And over time, the cumulative effect of

vicarious trauma can lead to negative changes in how staff view themselves and others, manifesting as increased difficulty separating their work and personal lives, increased irritability with co-workers and students, diminished energy and patience, and doubts about professional capabilities and effectiveness (NCTSN, 2011_[63]). When a teacher displays higher levels of indirect and/or direct aggression against a student, that student's classmates also become more likely to mistreat him/her – multiplying the negative experiences for that student (Lucas-Molina et al., 2015_[65]).

Continuous exposure to students who are traumatised can influence teachers' own interactions. *Compassion fatigue and burnout* are responses due to chronic exposure to children who experience trauma. Compassion fatigue is an emotional state stemming from prolonged caregiving of those who have experienced intense trauma and suffering (Hydon et al., 2015_[62]). Burnout, like compassion fatigue, is an additional response to prolonged exposure to direct or indirect experiences of trauma, and is defined by exhaustion, cynicism, inefficacy, and lowered job satisfaction (Hydon et al., 2015_[62]). Educators' experiences with trauma are manifested through their physical, emotional, behavioural, cognitive, interpersonal, spiritual, and professional functioning. For example, they may feel fatigue in the classroom; feel overwhelmed grading papers; feel hyper-vigilant, intolerant of student behaviour or distrustful of school leadership; and may isolate themselves from the faculty or display low morale.

Many schools are unprepared to minimise the burnout and secondary trauma teachers experience and unprepared to address teacher well-being (such as by using mindfulness strategies) (Jackson et al., 2018_[66]). Together, the effects on educators and the educational setting highlight the need for trauma-focused educational approaches to address teacher well-being and create safe and supportive conditions for students. For example, in a study conducted in New York school after the 9-11 event, teachers reported less "compassion fatigue" if they had positive perceptions about mental health services available to students (Hydon et al., 2015_[62]).

Factors that mitigate or exacerbate the effects of adversity and/or trauma

In Section 2 we discussed the different individual, family, community, and environmental causes of adversity and/or trauma that lead to short term or long-lasting effects and we characterised the different types of physiological, social and emotional, behavioural, and academic effects. Research suggests that while the underlying drivers of these effects are similar, the potential outcomes can be exacerbated or mitigated by certain individual, social, and environmental factors (Garbarino and Kostelny, 1996^[67]) and it is important for social and behavioural scientists to share these with practitioners and policymakers to advocate for contextually, culturally relevant, and sustainable practices (Luthar and Brown, 2007^[68]).

In this section we will first define vulnerability and resilience and then we will explore these factors.

3.1 Vulnerability and resilience

All children experience some level of stress, which is useful for them to learn coping skills and adapt to their daily lives. The accumulation of risks, however, can jeopardise their healthy development. Research shows that children can cope with one or two major risk factors in their lives, but when risk accumulates –with the addition of the third, fourth or fifth factor – there is a marked precipitation of developmental damage. The effects of accumulated stress can be profound when no compensatory forces are at work to buffer it (Sameroff et al., 1987^[69]).

Resilience has been described as the process of and capacity for successful adaptation and transformation despite challenging or threatening circumstances (Masten, 2014^[70]). The ways in which each individual child experiences adversity and/or trauma – through labelling, assigning meaning and the potential disruption to physical and psychological well-being – determines the extent to which certain events function as adverse childhood experiences and/or may lead to trauma (SAMHSA, 2014^[71]). Yet resilience is more than individual-level assets and skills. It is a complex construct best understood as a bio-psychological-ecological process influenced by internal and external systems to facilitate the potential for positive outcomes over the course of life (Cantor et al., 2019^[6]). This perspective values ongoing human development in which individuals’ “meaning making” of everyday risks, trauma, and individual injustices are influenced by structured inequality as well as social capital that exists at the community and society level (Spencer, Dupree and Hartmann, 1997^[72]).

Years of social science and behavioural research in neuroscience, biology, psychology, anthropology, sociology, economics, and many other fields has taught us that unpacking the effects of human experiences is complex, situational, culture- and context-driven. While contributions from many different social and behavioural science fields have enhanced our understanding of resilience in the last forty years, there is not a single conceptual model that captures all the complexities (Ungar, 2018^[73]). However, any model of resilience is strength-based and solution-focused rather than problem-based. In addition, research repeatedly shows that there are core elements of human resilience. For example, supportive relationships with stable adults such as a parent, a non-parent caregiver, a mentor, or another adult in the community can have a significant effect in mitigating the harsh effects of adversity and/or trauma (Masten, 2014^[70]); (National Scientific Council on the Developing Child, 2015^[74]). These relationships provide children with opportunities to observe, learn, and practise healthy, adaptive responses and develop a sense of control (Kaufmann Gouvêa, 2016^[75]). Consequently, these learned coping skills reduce the activation of stress response systems that leads

to physiologic harm and thereby the long-term consequences for health and learning (Center on the Developing Child, 2020^[1]).

Resilience is also constructed through the culture and context that shapes “meaning making” and how one perceives self within this cultural context (Ungar, 2011^[76]); (Spencer, Dupree and Hartmann, 1997^[72]). In other words, how resilience is expressed in the United States could be different from how resilience is expressed in Chile or Italy. Resilience factors for a young recent refugee child in Turkey may be very different from a child who lost his mother to COVID-19 in Japan, or from an Aboriginal and Torres Strait Islander adolescent in Australia or a foster child losing a home to wildfires happening in California in the United States.

Box 2. The role of culture

The basic needs, the need for safety, and belonging are common to the human experience; the cultural context of the individual frames the way different adversities, traumas, and other stimuli are interpreted relative to those needs (Cantor et al., 2019^[6]); (Atkinson, 2013^[4]). Cultural context dictates different interpretations of negative effects as well as how the goal of well-being is perceived (Lechner and Blyler, 2016^[77]); (OECD, 2017^[13]). This reality is known but little studied in the experience of trauma and subsequent recovery using frameworks other than the Western clinical approach (Burde et al., 2015^[78]). As a result, we cannot confidently speak to the culturally specific effects of trauma and adversity on children, rather on cultural propensities and risk factors for adversity as perceived from the Western perspective.

Although the legacy of historical trauma contributes to many problems and presents many challenges, the strength and resilience of Indigenous cultures – particularly in the face of extreme adversity – must be acknowledged. Protective attributes – including strong kinship systems and connection to spiritual traditions, ancestry, and community that exist in many Indigenous communities’ help transcend painful personal and communal histories (Atkinson, 2013^[4]). Research into resiliency needs to better understand these strengths that exist in every community to strengthen collective and individual capacity in the face of adversity.

3.2 Exacerbating factors that increase the risks and consequences of trauma and/or adversity

Human well-being is shaped through the family, organisations – such as schools – and communities, and communities are shaped through societies and cultures, as well as the natural environment. Interventions targeted at any one of these levels will impact functioning at other levels (Southwick et al., 2014^[79]). We discuss below the conditions at the society, community, and family level that affect students’ educational outcomes. Educational policymaking and practice will need to consider changes at these levels to improve the conditions for children who experience adversity and/or trauma.

3.2.1. *Minority groups*

Across the world, belonging to a minority group often increases an individual’s likelihood of exposure to risk factors such as poverty, discrimination, community violence, institutional involvement, abuse, cultural or linguistic marginalisation in the education system, bullying, interpersonal violence or assault, illness or injury, displacement, or disruption of family structures (NCTSN, 2017^[48]); (O’Conner et al., 2017^[80]); (Geoghegan, 2018^[81]); (Leone and Weinberg, 2012^[82]); (Hatzembuehler et al., 2014^[57]). In this section we present evidence on the educational outcomes of students who are considered as minority because of (a) Indigenous /native, (b) race/ethnicity, or (c) sexual/gender orientation.

Indigenous /native students

Throughout history, Indigenous people in many parts of the world have been marginalised, often forced to forget their own culture, language and identity in order to assimilate to the dominating one, while at the same time educational opportunities provided to Indigenous children have been limited. Consequently, many Indigenous communities suffer directly from poverty, low educational attainment, mental health issues, and violence exacerbated by intergenerational and historical trauma (Guthrie et al., 2019^[83]). For example, Alaskan adults who have experienced four or more adverse childhood experiences (ACEs) are more than twice as likely to not complete high school and half as likely to graduate from college when compared to those with no ACEs (Alaska Department of Health and Social Services, 2015^[84]). In Australia, more than half of the Indigenous children leave school when they are 16 years old or younger (AIHW, 2019^[85]). Historical trauma can become normalised if the supportive mechanisms of the culture and community are not nurtured in the collective, cultural memory to support resilience (Atkinson, 2013^[4]).

In a review of student outcomes in Chile, Mapuche and Aymara Indigenous students (reported as the largest two Indigenous populations in Chile) had lower academic achievement than non-Indigenous students but socio-economic conditions and poor school conditions explained the difference (Guthrie et al., 2019^[83]). In addition, the Mapuche students experienced more physical and psychological violence than non-Indigenous students and the different forms of school violence were correlated with negative perceptions and prejudice that non-Indigenous students had about their Indigenous peers (Guthrie et al., 2019^[83]). The 2017 OECD report *Promising Practices in Supporting Success for Indigenous Students*, states that Indigenous students were more likely than non-Indigenous students to be assessed as having learning difficulties in Canada and their linguistic differences or the effects of trauma are interpreted by teachers as lack of ability (OECD, 2017^[13]). These findings may potentially suggest gaps in educator assessments of student learning needs that are not culturally sensitive and carry implicit bias.

Schools are uniquely positioned to disrupt patterns of intergenerational trauma and its effects because they sit at the intersection of students, families, and communities. However, they need to be sensitive to cultural and traditional practices of tribal communities that build on community resilience and support youth to traditional native teachings and culture. This need can be challenging to address when most teachers at a school are “outsiders” and schools face high rates of staff turnover. For example, in Alaska, 64% of teachers come from other states, and only 5% of teachers state-wide are Alaska Native or American Indian (Hill and Hirshberg, 2013^[86]). And just 46% of teachers in the Arctic region of Alaska still expected to be teaching at the same school in two years (Kaden et al., 2016^[87]). Fortunately, tribal communities have many assets of their own that can help them support child and youth well-being, such as talking circles to share narratives, and having native elders serve as mentors and role models to youth can function as mitigating factors of traumatic stress (Lechner and Blyler, 2016^[77]).

Box 3. Trauma-informed approaches

Research with Indigenous communities supports the importance of culturally responsive, trauma informed approaches where practices are constructed with collaboration of families, students, and communities. These approaches promote resilience, well-being, and hope by using community-based cultural and traditional practices.

In our review, we found limited research on effective approaches with Indigenous communities; however, we highlight a few implemented in Alaska, Ontario, and Australia.

See Case Studies 1, 2 and 3 in Section 5.

Race/ethnicity

There is substantial evidence that systemic racism, systemic inequality, and discrimination have significant effects on physical health, mental health, and educational outcomes, which are intertwined with access to educational opportunities and economic resources provided to minority groups.

An assessment of five-year-olds in the United States found no differences between Black children and White children across 10 dimensions of social-emotional and cognitive development (OECD, 2020_[88]). This finding contrasts with assessments of older children in the United States, which have consistently found gaps in student achievement in reading and mathematics between Black and White children. That a gap between Black and White children did not exist soon after school entry suggests that these gaps emerge as children progress through school.

Schools are often reflections of cultural and structural inequalities that exist in the society. Research on minorities has underscored the role of implicit stereotypes, unconscious attitudes towards others, that are particularly important in social services and education (Spencer, Dupree and Hartmann, 1997_[72]). Many decisions to address discipline issues in schools are influenced by implicit bias and lack of understanding of behaviours grounded in a student's cultural background, leading to punitive and exclusionary strategies further exacerbating problems of students of colour in the United States (Osher et al., 2014_[89]). Educators' implicit biases and prejudices can lead to harmful disciplinary practices and poor educational outcomes for students if they are not aware of the many effects of adversity and/or trauma on their students. As a result, educators can misinterpret students' externalising behaviours by failing to recognise them as signs of dysregulation, and instead assuming intentional misbehaviour). Race-neutral processes that reduce disciplinary incidents may reduce base rates for disciplinary actions and the harms caused by suspension and expulsion, but not disparities in discipline. This evidence underscores the importance of sensitising teachers and other adults in schools to their own attitudes about different student groups and trauma-sensitive practices.

The zero tolerance policies implemented in the United States schools starting in the 1990's were intended to improve school safety and reduce violence, weapons brought to school, and drug use. However, these policies to handle school discipline issues have disproportionately affected minority students. For example, in a state-wide longitudinal study in Texas, African American students had a 31 percent higher likelihood of receiving disciplinary action, that is suspension or expulsion from the school, for minor violations of local schools' conduct codes than white students (Fabelo et al., 2011_[34]). In the United Kingdom, students from Gypsy/Roma and Traveller of Irish Heritage ethnic groups appear to have the highest rates of exclusionary discipline,³ and students from a Black Caribbean background are permanently expelled from school at three times the rate of other students (Department for Education, UK Government, 2017_[90]).

Box 4. Trauma-informed approaches: Supporting students with multiple adversities

Adversity factors such as poverty, community violence and discrimination are further compounded by minority status as a result of experiences of marginalisation and contribute to challenges for youth in educational settings. The literature highlights the need for contextually and culturally relevant school practices so students feel safe and supported and can therefore effectively engage in learning.

A districtwide effort in a large US metropolitan area with primarily minority student population achieved great improvements in learning conditions through using data strategically, supporting social and emotional learning, and creating student support structures.

This programme is reviewed in greater detail in Case Study 4, Section 5.

³ Their numbers are small, so these conclusions should be viewed as tentative.

Gender identity/sexual orientation

Students whose gender identity or sexual orientation is not mainstream are vulnerable to stigmatisation as well as bullying situations where they feel physically unsafe. Thus, physical and emotional safety is a concern for them that could be trauma-inducing and interferes with their mental well-being, school engagement, and academic performance, including the risk for dropping out.

Physical and psychological safety of lesbian, gay, bisexual, transgender, and queer (LGBTQ) students is a global concern, although student reports vary across countries (UNESCO, 2016^[91]). In New Zealand, for example, lesbian, gay and bisexual students were three times more likely to be bullied than their heterosexual peers. In Norway, 48% of gay males reported being bullied, compared with 7% of heterosexual students. In Turkey, 67% of LGBTQ students experienced discrimination at school (UNESCO, 2016^[91]). In a national survey conducted in the United States with LGBTQ youth in 2017, 60% of LGBTQ students felt unsafe at school, 40% avoided gender-segregated spaces because they felt uncomfortable, 35% missed an entire school day in the past month because they felt unsafe, 29% were physically harassed, and 12% were physically assaulted (Kosciw et al., 2018^[58]).

An exacerbating factor for these students is the school peer environment in which they need to learn well academically. However, many students may also experience discrimination by adults. For example, in the 2017 survey mentioned above, the majority of the students who identified themselves as LGBTQ also reported hearing negative remarks from teachers about gender expression, and more than half heard homophobic remarks from teachers or other school staff (although prevalence was lower compared to 2015). Black/African American LGBTQ students were more likely to experience out-of-school suspension or expulsion than any other subgroup of race/ethnicity. In addition, LGBTQ students in lower secondary school experienced more hostile school experiences than those students in secondary school, and students in rural/small-town schools experienced more than those in urban schools and experienced increased suicidal ideation and depression (Kosciw et al., 2018^[58]).

In a study of LGBTQ protective school environments in the United States, lesbian, gay, and bisexual students living in cities and states with more protective environments (e.g. Gay-Straight Alliances in the school, safe spaces, curricula and services that address the concerns of sexual minority students) reported fewer past-year suicidal thoughts than those living in states and cities in less supportive school environments (Hatzenbuehler et al., 2014^[57]). These findings suggest that prevention programmes for sexual minority adolescents should address not only individual-level and family-level factors but also broader social-contextual influences, including school climate.

3.2.2. Children who are displaced

Millions of children live in conflict zones and millions are forced to flee their homes and communities. Children in conflict and crisis situations' exposure to violence and victimisation has increased by 174% since 2010 (Cowley, Edwards and Salarkia, 2019^[56]). Children's exposure to political conflict and violence is a global issue because they bear a disproportionate burden of the negative effects of conflict during their most critical developmental stages. These children have increased basic needs such as food and shelter, a need for emotional safety resulting from separation with or loss of loved ones, and need to learn to cope with loss, separation, and trauma. In addition, displacement puts children at immediate risk of interrupted schooling. Therefore, an immediate priority is to have these children get access to education and a second priority is to develop educational policies and practices that respond to the needs of refugee and immigrant students and promote their inclusion in schools and societies (Cerna, 2019^[12]).

Refugees

Globally, refugee children are five times more likely to be out of school compared to the global average (Graham et al., 2019^[92]). Chronic challenges can prevent children in refugee settings from benefiting from learning opportunities and mental health support (Cerna, 2019^[12]). For example, some of the daily stressors

include altered family dynamics, assuming the role of caregiver for younger siblings or for psychologically or physically injured parents, economic hardship, and lack of access to community services (INEE, 2016^[59]). Research shows that post-migration stressors are stronger predictors of mental health problems than pre-migration exposure to violence. Given these stressors refugee children experience, education in emergencies can provide protection and a sense of normalcy for children as well as a life-saving function where the classroom is considered a safe zone for children (Gladwell and Tanner, 2014^[93]). Yet despite convincing evidence on the buffering role of education in the face of adversities, there is a severe underfunding of education opportunities in emergencies on the part of both donors and governments, and the education sector receives a very limited allocation of the funding that is available⁴. And even within European Union (EU) countries and economies (such as Sweden, Germany, and Greece), many children who are refugees lack access to the country's formal education system during the (often lengthy) process of requesting asylum, leaving them with only some language classes in reception centres (Crul et al., 2019^[94]). Turkey provides an example of national policy to provide language instruction to more than 1 million Syrian school-aged refugee children. In 2018-19, the Ministry of Education mandated 15 hours of Turkish language instruction per week to prepare students for transition to Turkish schools. Intense teacher training, including the use of volunteer Syrian teachers who received pedagogical guidance, showed positive effects on grades, rates of absenteeism, rates of grade repetition and sense of belonging of Syrian students (Cerna, 2019^[12]).

Box 5. Trauma-informed approaches: Meeting the needs of immigrant students

Research supports the need for culturally-adapted mental health interventions to support the unique needs of immigrant and refugee students. Unaccompanied refugee minors (URM) in the United States have experienced unique traumatic stressors in their migration journeys and schools can often become front-line intervention spaces for mental health support.

An example programme using an adapted evidence-based practice for URM students is outlined in Case Study 5, in section 5.

Immigrants

Millions of children and young people, 36.1 million in 2018 alone, leave their home country with or without their families, driven by demographic factors, economic disparity, violent conflict, state failure, natural disasters, and resource and environmental pressures (UNICEF Office of Research-Innocenti, 2020^[95]). In 2015, 12.5% of students in PISA-participating countries and economies had an immigrant background. In the United States, one in four children under the age of 18 has at least one parent who is an immigrant (Northcott and Weisman, 2020^[96]).

Across OECD countries and economies, first-generation immigrant students were almost twice as likely as students without an immigrant background to fail to reach baseline academic proficiency in reading, mathematics and science (51% versus 28%, respectively) (OECD, 2018^[97]). On the other hand, the PISA 2015 results show that on average, immigrant students in OECD countries have an ambition to succeed that in most cases matches, and in some cases surpasses, the aspirations of students who are native to their host country (OECD, 2017^[52]). However, many immigrant children have learning and emotional needs and suffer from cumulative disadvantage they need to overcome, which can reveal itself in underperformance as measured through academic testing that must be addressed adequately to allow their successful integration into mainstream education and healthy intellectual development (OECD, 2018^[97]).

⁴ <https://archive.ineesite.org/en/education-financing>

Language proficiency in the dominant language is a significant barrier that can amplify the effects of other sources of disadvantage, such as having migrated after the age of 12, lack of parental support, studying in a disadvantaged school, or attending a school with a poor disciplinary climate (OECD, 2018^[97]). Research has pointed to a number of factors that influence how well immigrant students can gain language proficiency for social and academic integration, including linguistic proximity between the origin and host language, age of arrival in the host country, and levels of exposure to the host language (for example in school interactions) and the expected time of stay in the host country (OECD, 2019^[51]).

Language barriers also limit the extent to which parents can help with their children's schooling. Most parents experience limitations due to language barriers and lack of understanding of what is expected of them (Choi, 2018^[10]). In the 2017 OECD report on 2015 PISA results on student well-being, parent reports of language barriers were evident. In a number of European countries and economies, namely Belgium (Flemish Community), France, Germany, Ireland, Italy and Scotland (United Kingdom), the share of parents who reported insufficient language skills as a barrier to participation in school activities is at least 20 percentage points larger among first-generation immigrant students than among non-immigrant students. In Germany, 36% of first-generation immigrant students have parents who reported such difficulties, compared to less than 1% of non-immigrant students.

In addition to language barriers, school climate and relationships with the teachers as well as peers can also exacerbate the potential poor educational outcomes for immigrant youth. Stereotyping and low expectations by teachers, bullying, and discrimination by staff or peers has been identified in other studies as risk factors in the post-migration environment that can also interact with the impact of traumatic experiences prior to or during migration to affect emotional well-being and mental health problems such as post-traumatic stress disorder (PTSD) (Cerna, 2019^[12]). The 2017 OECD report *PISA 2015 results: Student well-being* suggested that many students with an immigrant background reported feeling that they are unfairly treated by their teachers, suggesting that teachers may not know how to effectively support their students. In addition, students who perceived unfair treatment by teachers in the school reported higher levels of bullying (OECD, 2017^[52]). Bullying is a concern because differences in language, culture, ethnicity and appearance may make children of immigrants more likely to be victimised. According to PISA 2015 results, bullying increases substantially for those immigrant students who were 13 to 16 years old when they arrived in the host country, and long-standing conflicts between ethnic or national groups can lead to ethnic-based victimisation at school, especially since recently arrived students may have weaker social networks (OECD, 2017^[52]). Consequently, immigrant students may experience a low sense of belonging. On average, in 24 countries and economies, students without an immigrant background reported a stronger sense of belonging than immigrant students, even after accounting for socio-economic status.

Another global concern regarding immigration is children of immigrant parents who are “left behind” in the care of the extended family or other guardians while they are looking for better economic opportunities. Many parents who migrate to other places are forced to make the hard choice to leave their children behind in order to provide improved access to resources, education, health care, and housing. In the absence of their parents, these children can experience psychological and emotional stress, which may have negative effects on overall development and patterns of socialisation (UNICEF, n.d.^[98]). However, these children can also achieve healthy psychological development when they have continuous contact with their parents and are supported by in-country guardians and the community. For example, in a study on the effects of parental migration on children's psychological functioning (i.e. internalising and externalising behaviours) and academic performance (i.e. grades and time spent studying) in Moldova, parental migration was associated with lower psychological functioning and academic performance. However, students' perceptions of their relationship with the parents (as assessed by student reports of parental support and positive monitoring practices) alleviated the impact of economic pressure on their children's emotional and mental well-being and academic achievement (Robila, 2014^[99]). The same study also noted high prevalence of extended families caring for the children whose parents migrated for economic reasons and sent remittance to home. While remittances can provide children with better access to resources in addressing the adversity of poverty, it is

also important that child protection services monitor and protect these children from additional adverse experiences they may be exposed to in the care of non-parental guardians. For example, in Latvia, a social service provider promotes the well-being of the entire family through physical, emotional, and educational assistance (UNICEF, n.d.^[98]).

3.2.3. *Children involved in welfare and justice systems*

Two groups of children who frequently have complex educational needs but are less likely to receive adequate education services than their peers are youth in foster care and those involved with the juvenile delinquency system (Leone and Weinberg, 2012^[82]). Students in foster care have likely suffered from emotional, physical, or sexual abuse and/or neglectful parenting. Studies reportedly show that children who have been abused or neglected and placed in foster care generally have higher rates of school absenteeism, lower scores on standardised tests, poorer school grades, and more behaviour problems and suspensions from school and placement in special education programmes relative to their peers not involved in child protection (Leone and Weinberg, 2012^[82]). For children and youth in foster care and juvenile justice systems, frequent school changes are common. For example, a 2013 study found that one in three students in foster care changes schools in a given school year, and 10% attend three or more schools in a single school year (compared to just 1% of children not in care) (Barrat and Berliner, 2013^[100]). And for youth involved in both child welfare and juvenile justice systems, two-thirds change schools in any given year, and 67% are chronically truant (Wiegmann et al., 2014^[101]); (Halemba et al., 2004^[102]). Many children who are in the child welfare system are at higher risk of poor developmental and educational outcomes, as their psychosocial needs related to experienced trauma and adversity can go largely unaddressed during transitions between new homes and schools. There is evidence that school mobility is harmful to children's academic achievement, even after controlling for other factors such as poverty (Selya et al., 2016^[103]). In many OECD countries, child protection systems gives preference to a child's relatives or family friends as a resource if the child needs to be placed in foster care (Laklija, 2011^[104]). There is evidence that children in care who are placed in kinship homes experience fewer school disruptions, experience less loss of their social support system, and have fewer behavioural and fewer mental health problems, compared to children in foster homes with non-relatives (Generations United, 2016^[105]).

In United States, children in poverty and African American and Native American students are disproportionately in the child welfare system and the juvenile justice system. They enter these systems at an earlier age and remain longer in the system than other groups of children because of a cycle of negative consequences (Leone and Weinberg, 2012^[82]). After controlling for poverty, race/ethnicity is a unique risk factor for being placed in foster care (Child Welfare Information Gateway, 2016^[106]). For example, a study in Texas found that although Black families referred to child protection authorities received lower average risk scores than white families, their children were taken away at significantly higher rates (Dettlaff, 2015^[107]). Disproportionality among subgroups of population is not unique to the United States. Across Italy, Bulgaria, Romania, Hungary, the Czech Republic, and Slovakia, Roma make up 3% to 10% of the population, yet Roma children account for 28% to 83% of those placed in child protection institutions (EUBusiness, n.d.^[108]). Similarly, in Australia, although only about 5% of young people aged 10–17 are Indigenous, almost half (49%) of those under supervision were Indigenous in 2017–2018 (AIHW, 2019^[85]).

Schools and educators that are not fully prepared to understand the needs of system-involved children and youth may further exacerbate the conditions that put these students at risk. In the US, alternative schooling structures, such as day treatment centres, residential treatment centres, and detention and correctional facilities, are used to provide targeted interventions for youth with different levels of behavioural, mental health, and rehabilitative needs while also continuing their education. While the goal may be to provide them physical and emotional safety, caring relationships with others, and lessons in social and emotional learning skills (Gonsoulin, Darwin and Read, 2012^[109]), many youth in juvenile justice settings do not receive adequate educational and related services, and staff in these facilities often resort to punitive discipline practices or removal from the learning environment (de Azúa, 2018^[110]).

In addition, segregating youth from the mainstream peer group and placing them in groups composed entirely or mostly of peers who have broken rules or struggle to meet expectations may do more harm than good. Placing an adolescent with challenging behaviour with like-minded peers can reduce the intended benefits of interventions and lead to less positive, and sometimes even negative, outcomes, especially under conditions of poor supervision and lack of structure (Jackson et al., 2018_[66]). A 2019 review of juvenile justice in Europe found that some countries (e.g. Italy) do not provide adequate social services to youth involved in their juvenile justice systems. However, the review also found several European countries (such as the United Kingdom and Switzerland) that offer successful models of providing comprehensive support services and diverting young people from justice system involvement (Souverein et al., 2019_[111]).

3.2.4. Disability

Disability status is framed differently across OECD countries, but we may generally define children with disabilities as children with “varying capabilities and needs whose individual functioning is limited by physical, intellectual, communication and sensory impairments and various chronic conditions” (OECD, 2019_[29]). All OECD countries are signatories to the UN Convention on the Rights of Persons with Disabilities.

Children with disabilities are both more likely to be exposed to and more vulnerable to circumstances of adversity. They are over-represented in institutional care such as foster care and juvenile justice systems, and are more likely to experience bullying, violence, maltreatment, and neglect. They are twice as likely to live in low socio-economic households, and they have lower average educational attainment – particularly when they come from a low-income household. The effect of poor social and environmental conditions during pregnancy and early childhood on child development may partially explain the relationship between low-income households and children diagnosed with disabilities, although caring for children with disabilities may also depress household economic situations (OECD, 2019_[29]). Having a disability can also increase a child’s risk of being stigmatised, discriminated against, and isolated (Fry, Lannen and Vanderminden, 2017_[112]).

Children with disabilities can face substantial adversity in school. For example, a 2009 review of 10 studies from the United States concluded that children with disabilities were bullied at two to three times the rate of their non-disabled peers (Marshall et al., 2009, as cited in (National Bullying Prevention Center, 2020_[113])). Students with disabilities can face adversity based on how adults at school treat them, as well. A very prominent issue for students with disabilities is school discipline. In some countries, students with disabilities face substantially elevated rates of disciplinary actions against them in school, including far higher rates of suspension (which then excludes them from education). In the United States, students with disabilities represent 12% of the student population, but represent 25% of the students arrested at school, 58% percent of those placed in seclusion or involuntary confinement, and 75% of those forcibly restrained at school (U.S. Department of Education Office for Civil Rights, 2014_[50]). In the United Kingdom, students with disabilities account for 47% of all expulsions (permanent exclusion from school) – approximately six times the rate of students without disabilities – and 45% of all suspensions (Department for Education, UK Government, 2017_[90]).

In some countries, parents can elect to send their children to schools that solely serve those with disabilities, with the idea that the children will be in a more protected and supportive environment. Current evidence from several European countries suggests that separating children with disabilities from the mainstream does not improve their socio-emotional or academic outcomes, and may make them worse (Kocaj et al., 2014_[114]); (Ruijs, Peetsma, and van der Veen, 2010_[115]). So, merely placing children with disabilities in segregated educational environments does not close gaps in how well schools meet their needs.

3.2.5. Age

Understanding how children across different developmental stages experience adversities and/or trauma differently is important to determine the timing and nature of interventions that will promote resilience (OECD, 2017_[116]). A life-span perspective helps us understand human behaviour and resilience as a process of biological, sociocultural, and psychological factors (Spencer et al., 2019_[117]). This perspective emphasises

the fluidity of development over time and affords opportunities for changing and improving the contextual influences (e.g. family, school, community) on the developing child.

Early childhood is a particularly vulnerable time for long-term effects of stress and trauma because of their developing brain and dependence on others for survival, nurturing, and care (INEE, 2016^[59]). Young children who are deprived of basic needs, physical and emotional safety due to adverse experiences at home (e.g. neglect, sexual or physical abuse, extreme poverty) in the community (e.g. violence, war) suffer from long-term consequences. Neuroscience has now clearly established how harsh environments in the early ages impact the structural and functional organisation of the brain, and these physical changes in the brain, in turn, can have substantive implications for exacerbating or mitigating vulnerability to future psychopathology (Cicchetti and Curtis, 2007^[118]). The frontal cortex, the area of the brain responsible for executive functions such as planning, organising, and paying attention to and remembering details, is in a critical period of development between the ages of 3 and 5. This evidence makes a compelling case for investment of resources in preventive interventions for at risk children and youth.

The 2019 OECD report *Changing the Odds* shows that country-level studies suggest significant numbers of children have witnessed interpersonal violence (IPV) at home at some point in their childhood – although the rates vary greatly across OECD countries – and most households with IPV contain young children under five years old (OECD, 2019^[29]). In other studies, young children, ages six and seven years old, who were exposed to violence and suffered from trauma-related distress scored significantly lower on IQ and reading ability tests (McInerney and McKlindon, 2014^[47]), and children with symptoms of post-traumatic stress demonstrated decreased IQ and reading ability and lower grade-point average (Powell, 2011^[61]). Almost one in three young children in foster care suffer from low birth weight, serious medical problems, or prenatal drug exposure (Leone and Weinberg, 2012^[82]).

Although there is substantial evidence highlighting the importance of early childhood as a critical period for healthy development, the needs of very young children are often overlooked for long-term consequences of adversity and/or trauma. Young children are particularly dependent on parental and caregiver support as a source of resilience that enables them to withstand and recover from significant challenges and adverse experiences (Bouchane et al., 2018^[119]). Early childhood programmes focus on family-centred support and access to early learning and are largely needed in emergency settings to support their cognitive development and social and emotional needs (Theirworld, 2016^[3]).

Early adolescence (typically defined as 9-14 years of age) is a time of immense physical growth and change. Hormonal changes brought on by puberty create a period of increased neuroplasticity and thus vulnerability to both negative and positive behavioural spirals. Desires for social connection in adolescence also magnify the effects of peer relationships, pressure, and rejection. These factors, in addition to the standard hormonal and neurological changes that predispose adolescents of all ages to engage in risk-taking behaviours, make early adolescence a time of particular vulnerability. Research has suggested that population-level stressors such as war and famine experienced during early adolescence had a significant negative effect on life span, more so than at any other age during childhood (UNICEF Office of Research-Innocenti, 2017^[120]).

The significant physical, cognitive, and physiological changes associated with adolescence make this developmental period a critical stage for a successful passage into adulthood. While identity formation takes place across the life course, the socialisation of positive opportunities afforded to youth is critical during the period of adolescence (Spencer et al., 2019^[117]). A young person's successful development at this development phase is linked to their capacity to thrive – to feel, be, and be seen as competent in multiple life domains – and is a product of their opportunities to develop individual competencies and experience supportive conditions. Adults can support young people to succeed and thrive through life by helping them develop their individual competencies, and also by providing supportive conditions while also working with them and their families to address historical and institutional barriers. In addition, schools and community resources such as faith and civic organisations, libraries, museums, employment training programmes and many others that build on community assets have the collective responsibility for creating structured experiences that support learning and development in different contexts with different content to help youth “thrive” despite adversities (Osher et al., 2020^[121]).

3.2.6. Gender

Globally, girls and boys are exposed to gender-based adversities and traumatic experiences that influence their developmental and educational outcomes, which we will discuss in this section separately for girls and boys.

In many cultures, educational opportunities for girls are more limited than those provided to boys due to attitudes towards female roles that limit their participation. Girls can be particularly at risk if societal attitudes undermine gender equity and limit girls' enrolment in school and subsequent attendance ((Geoghegan, 2018_[81]); (NRC, 2018_[122])).

Gender equality in education is a global objective. Goal 5 of the Sustainable Development Goals (SDGs) (officially adopted by 193 member states of the United Nations) aims at eliminating all forms of discrimination against all women and girls everywhere (target 5.1), and SDG 4 aims to ensure that all girls and boys complete free, equitable and quality primary and secondary education (target 4.1). However, these goals may be more difficult to attain in conflict- and violence-affected contexts. Countries dealing with internal or external conflict have some of the world's worst education indicators, including gender disparity (UNESCO, 2020_[123]). In times of conflict or crisis, parents are often more reluctant to send their daughters to school to protect their physical safety on the way to and from school, or when sanitation facilities are limited (Reyes, Kelcey and Diaz Varela, 2013_[124]), and girls are significantly more likely to be out of school than boys in the same areas (Geoghegan, 2018_[81]).

Poverty further adds to existing gender disparities in educational participation. Many parents keep their girls at home so they can work, take care of chores, and help siblings, or arrange their daughters for child marriages in order to alleviate financial burdens of care on the family (Couldrey and Peebles, 2019_[125]). Displacement puts economic strain on families, and in some cultures displaced girls are especially vulnerable to forced marriages before they are 16 years old (NRC, 2018_[122]). Offering financial incentives to families conditional on daughters' school attendance and providing food and other resources have also been effective approaches (Couldrey and Peebles, 2019_[125]).

Gender-based violence at home, in school, and in the community is a pervasive global concern observed in stable and developed as well as developing contexts, particularly in conflict zones (Burde et al., 2015_[78]). Gender-based violence can be experienced in ways of physical, psychological, and sexual domain and effects health behaviour, mental health, violence displayed against others, and educational outcomes (UNESCO and UN Women, 2016_[126]).

One specific form of gender-based violence, female genital mutilation/cutting (FGM/C), has been traumatising millions of girls and young women globally for its lifelong effects on physical and mental health. FGM/C is a cultural practice that is prevalent in African and Asian cultures; it is also observed in developed countries within communities representing countries where FGM/C is prevalent (Sanctuary for Families, 2013_[127]). Research provides evidence on the linkage of FGM/C to girls' school dropout and low levels of grade completion. Educational level, living in urban areas, and socio-economic status are associated with reduced levels of FGM/C (ICRW, 2016_[128]). Eliminating this global problem by 2030 is a target in the global Sustainable Development Goals, but achieving this goal will require systemic, multi-sectorial, and community-based efforts, including a collaborative effort among law enforcement, health providers, schools, and families (USIP et al., 2016_[129]).

To promote girls' resilience and well-being, a multi-level approach at the global, country, and community level is essential. At the macro level, understanding the societal and structural barriers to mitigate gender-based inequity, setting up protection systems for physical safety, and implementing child-friendly systems that allow the reporting of abuses are important. On the other hand, it also matters to work at the micro level. It is also important to sensitise parents and communities to advocate for changing societal attitudes towards empowering girls (Couldrey and Peebles, 2019_[125]) while also being sensitive to cultural and contextual norms and differences to avoid putting girls or teachers of girls at increased risk of physical safety and interpersonal violence on the way to school or at school (Geoghegan, 2018_[81]).

While there is a global priority to address girls' issues and close gender-based disparities in educational outcomes, many boys are also vulnerable to poor educational and developmental outcomes. For example, human trafficking or what some call "modern-day slavery" is a global issue for both boys and girls. A 2012 report by the International Labour Office estimated that globally, 5.5 million children and youth under the age of 18 (22% of 20.6 million people) were victims of forced labour including sexual exploitation (ILO, 2012_[130]).

Some of the potentially traumatising experiences identified above as acutely affecting girls also affect boys, and the likelihood of experiencing these traumas is similarly magnified in situations of conflict, displacement, disaster, and extreme poverty. Boys also experience sexual victimisation, although significantly less often than girls ((OECD, 2019_[29]); (Osher et al., 2014_[89])). Conversely, boys are more often recruited into armed groups, although girls are occasionally recruited as well ((McDonald, 2017_[53]); (Cowley, Edwards and Salarkia, 2019_[56])). Children of all genders become more vulnerable to exploitation and other adversities when they are forced to leave school and work to support their families (McDonald, 2017_[53]). While being out of school does not lead to child marriage for boys, school enrolment and participation protects boys from forcible recruitment into armed groups (Gladwell and Tanner, 2014_[93]).

Cultural constructs and beliefs about masculinity expose boys to unique pressures. In school, boys are often bullied or otherwise victimised when they are perceived as not conforming to accepted norms of male behaviour or appearance (Global Working Group SRGVB, 2016_[131]). Across OECD countries that administered the PISA 2015 assessment, boys were more likely to report feeling that they had been treated unfairly by their teachers (OECD, 2017_[52]), and in the United States male youth are more likely than female youth to be detained and committed to juvenile justice systems for most categories of delinquent offences (Leone and Weinberg, 2012_[82]). In the Caribbean, associations of masculinity with anti-academic attitudes are associated with higher dropout rates for boys (Reyes, Kelcey and Diaz Varela, 2013_[124]).

Though mostly similar across genders, boys' reactions to trauma sometimes differ from girls' in ways that expose them to further adversity. While it is still unclear to what extent biology or culture creates this difference, distinct trends highlight the greater propensity of boys to manifest stress and trauma in externalising behaviours relative to girls – who are more likely register internalised reactions to stress (Save the Children, 2014_[132]). These externalised reactions may be expressed as reduced prosocial behaviour or increased hyperactivity, aggression, violence and social withdrawal ((UNICEF Country Office Ukraine, 2017_[133]); ((Global Working Group SRGVB, 2016_[131])). Externalising behaviours such as these are more likely to manifest in disruptive behaviour in the classroom, thus exposing boys to greater likelihood of discipline. In contexts of punitive disciplinary cultures, this relationship may at least partially explain the higher rates of discipline, grade retention, and school dropout for boys relative to girls. Educational factors such as dropout and grade retention are also associated with greater likelihood of subsequent involvement in juvenile justice systems, with their additional adversities (Nowicki, 2018_[134]).

Differences by gender also appear to affect how protective and therapeutic programming is received, although our literature review suggested that this topic remains underdeveloped. For example, in a mental health intervention setting for students in Denmark, girls were seven times more likely to retain a PTSD diagnosis after the intervention, and a rigorous evaluation of a psychosocial intervention for Palestinian schoolchildren found PTSD was reduced for boys in general, but only in girls who demonstrated low levels of baseline trauma (Burde et al., 2015_[78]). A wide review of artistic interventions in psychosocial programming reported greater benefits for boys than for girls in these situations (Thompson, 2015_[135]).

Box 6. Implications of COVID-19 and lessons learned from the Ebola Crisis

Our understanding of the COVID-19 pandemic and its effects on individuals, communities, and systems is evolving. Reports from the United Nations suggest that as many as 1.5 billion children had disruption to their education (UN, 2020_[136]). Actions taken to contain the spread of the pandemic – such as school closures and movement restrictions – have disrupted children’s routines and their support systems and increased their risk of exploitation, abuse and neglect, social exclusion, separation from caregivers and friends, and/or gender-based violence – including Female Genital Mutilation FGM (UNICEF, 2020_[137]). Initial trends in nations’ and educational systems’ responses to the pandemic serve as warning flags and indicators of areas needing future attention. COVID-19 has upended the lives of children and families across the globe. Inequality of access and transitions to distance learning can magnify pre-existing inequalities in access to education, including those caused by low-income, cultural or linguistic minority, refugee, immigrant, and disability status (UNESCO, 2020_[123]). Internet access and quality of internet connections are among the concerns. Among OECD member states specifically, “1 in 20 students, and almost 1 in 10 of those attending disadvantaged schools, lack an internet connection at home.” Access to digital learning solutions is further hindered by student, teacher, and administrator unfamiliarity with online learning structures.

On the other hand, lessons learned from the Ebola crisis may inform our understanding of populations most vulnerable to adversity during the Covid-19 pandemic as well as real-time adjustments to and eventual recovery from the Covid-19 pandemic. Students affected by the Ebola crisis showed knowledge loss and reversal in literacy due to school closures. In addition, they suffered from social isolation, post-traumatic stress, anxiety, increased levels of domestic violence and conflict, and loss of family members. Increased levels of sexual exploitation, sexual abuse, teenage pregnancy and early marriage for female students were reported. Stigmatisation of orphaned children and young women that became pregnant during the epidemic depressed post-crisis school enrolment. Children in lower-income families were disproportionately affected by the circumstances of the outbreak and more often experienced compounding negative effects that accumulated to create additional adversity (Karki, 2020_[138]). Research also shows that during Ebola, many resources traditionally devoted to education were diverted towards countering the public health aspects of the disease, and school staff were burdened with additional responsibilities for hygiene and sanitation that further strained depleted energy and resources (Karki, 2020_[138]).

There is evidence that during the Ebola crisis, radio broadcasts were effective in supporting learning, but there is little evidence for or against the effectiveness of distribution of materials for home learning (such as textbooks and school supplies) or computer- or smartphone-based learned approaches (Karki, 2020_[138]).

3.3. Mitigating factors that increase resiliency

Most children – even some of those who have lost family or witnessed violence – may not need professional therapy and counselling but are best served by other forms of psychosocial support. Strong family and social networks at school and in the community, a sense of stability and structure, and safe places to play with their friends as well as creative art and play are vital for helping children to cope ((McDonald, 2017_[53]); (Powell, 2011_[61])).

Research on trauma highlights three underlying drivers of adversity and/or trauma that schools can address in reducing children’s vulnerability and increasing their resilience: (1) enhancing individual social and emotional

skills, (2) caring relationships with adults, and (3) safe and positive environments ((National Scientific Council on the Developing Child, 2015^[74]); (Williamson and Osher, 2018^[139])).

3.3.1. Individual social and emotional skills

As discussed earlier, adverse and/or traumatic experiences a child experiences may trigger negative physiological, social, emotional, behavioural, cognitive and health processes that reduce a child’s sense of control and safety. On the other hand, a sense of self-worth, self-efficacy, and having a sense of purpose or meaning in life are all associated with higher levels of resiliency (NCTSN, 2016^[140]).

There is compelling evidence from two decades of research on social and emotional learning in educational settings that teaching children cognitive skills (e.g. problem-solving, responsible decision-making, and perspective taking), emotional skills (e.g. empathy and emotion regulation), and social skills (e.g. cooperation, helping, and communication) at school has positive effects on their attitudes, behaviours, mindsets, and academic performance ((Durlak et al., 2011^[141]); (Osher et al., 2014^[7])) as well as violence victimisation and perpetration and health risk behaviours such as drug misuse and teenage pregnancy (CDC, 2019^[2]). Teaching students the brain and body strategies to “listen, learn, and apply” is strength-based, empowering, and resilience building (Stokes and Brunzell, 2019^[142]). Helping students develop a growth mind-set and the belief that effort will lead to increased competence can change students’ beliefs about themselves, how they perceive their environment, and how they choose to overcome challenges (Darling-Hammond et al., 2020^[143]).

3.3.2. Caring adults

Relationships with caring adults, be it a parent, grandparent, aunt, uncle, neighbour, teacher, coach, or any other person in the community, are the “active ingredients” of the environment's influence on healthy human development, because they incorporate the qualities that promote competence and well-being (Luthar and Brown, 2007^[68]). Connecting youth to caring adults is an important preventive strategy to buffer against parental absence or other difficulties at home, frequent moves, and exposure to negative influences at school and elsewhere that children may experience ((DuBois et al., 2011^[144]); (National Scientific Council on the Developing Child, 2015^[74])). Additionally, stable, supportive, and committed relationships are critical for resilience; through these relationships, children can develop the skills that contribute to a sense of control and agency, such as the ability to plan and adapt. For example, teachers can profoundly impact students’ growth mind-set through affirmation of students’ effort and motivation, which has been found to foster academic engagement, achievement and well-being across academic, emotional, and social domains (Darling-Hammond et al., 2020^[143]).

Teachers and school staff are in a unique position to teach the cognitive, social, and emotional skills and model good relationships with students, in particular when positive and caring relationships are missing in the child’s home environment (Luthar and Brown, 2007^[68]) or absent due to immigration (Robila, 2014^[99]). Research shows that teachers can help students with an immigrant background adjust in their classrooms and society more generally, which have been associated with reduced behaviour problems and decreased mental health concerns in schools among immigrant students (Choi, 2018^[10]). Teachers can also promote positive relationships among student peers and therefore promote a supportive environment. Perceptions of teacher fairness and teacher respect for students are important contributors to resilience and psychosocial well-being (Burde et al., 2015^[78]). In contrast teachers’ implicit biases –unconscious attitudes and beliefs about race, language background, economic background, gender or other traits – may influence their expectations about student performance, and level of confidence in students’ abilities, which may directly or indirectly influence students’ social identity and their own confidence in their abilities (Darling-Hammond et al., 2020^[143]). Given the critical role of the teachers and school staff, it is also important to provide the adults in the school with adequate trainings, supports and resources to enable them to become the buffer for students who experience adversity and/or trauma.

3.3.3. Safe and positive environments

Educational institutions may reflect, promote, and moderate societal, community, and relational risk factors often revealed in reports of bullying, physical violence, discrimination and disparities in education outcomes (Reyes, Kelcey and Diaz Varela, 2013^[124]). On the other hand, educational institutions also serve as critical protective settings for breaking down societal and community norms that exacerbate disparities through enriched supports and interventions they provide. Therefore, it is very important to educate and support school administrators and educators to be aware of the risk factors that exist in families, schools, and communities, while also creating policies and services that are developmentally and culturally relevant and can strengthen individual and collective resilience ((NCTSN, 2017^[5]); (Darling-Hammond et al., 2020^[143])). For example, adequate teacher/student ratios; school policies against bullying and corporal punishment; and safeguards against sexual abuse and exploitation, psychosocial protection of children, policies and practices that address gender and disability issues, and culturally and linguistically sensitive practices are all important for safe and positive environments (Kaufmann Gouvêa, 2016^[75]). Analyses of PISA 2015 show for most countries, quality of schooling was a more important determinant of academic performance than students' family background, students' own characteristics (gender, age and grade), and school policy (OECD, 2019^[29]).

To build resilience in every child, educational systems need to strive for conditions to create equity so students of different individual and family backgrounds can attain similar levels of performance in key academic domains and similar levels of social and emotional well-being during their school years. A growing number of school systems in the United States, Australia and elsewhere are integrating school-based trauma-sensitive approaches along with teaching of social and emotional skills to address student needs and improve educational outcomes schooling that is restorative rather than punitive ((Howard, 2019^[145]); (Stokes and Brunzell, 2019^[142])). In this kind of holistic approach to education, adults are sensitised to how adversity and/or trauma can affect students' and adults' reactions and interactions collectively, while individual student agency, self-regulation, and relational skills are reinforced as a school-wide approach.

Education policies and practices

The previous sections have explored the causes and effects of adversity and trauma on children and young people as well as the factors that mitigate or exacerbate the effects. In this section we explore the role of the education sector in promoting well-being, learning, and positive educational outcomes amongst children and youth who have experienced adversity and/or trauma.

As discussed in the previous chapters there are many causes of adversity and trauma. In every instance, children need social, emotional, and coping skills; caring adults; and safe and supportive environments to mitigate the effects of an adverse condition or a traumatic event (National Scientific Council on the Developing Child, 2015^[74]). Schools play a central role in meeting each of these needs. Despite overwhelming evidence on risk factors and what promotes resilience, there is a lack of consensus on how to close the substantial gaps in student learning and well-being in OECD countries. After years of effort, most of these gaps have closed only minimally if at all, and generations of children are still growing up facing institutional and social barriers (Spier et al., 2017^[8]).

In today's complex, dynamic, and increasingly diverse societies, policy makers and education administrators need systemic, comprehensive, and multi-level approaches to identify, understand, and support individual students' needs. Therefore, in this section we start our discussion with government-level policies to reduce student disparities and inequalities. Next we talk about school-level frameworks and strategies that promote a positive school climate, so that all students (including those who have experienced adversity and/or trauma) experience a safe and supportive learning environment, including with effective family and student engagement, cultural and linguistic competence, and ongoing progress monitoring. Finally, we review programmes and practices to support students. Then in Section 5, we provide case studies that serve as examples of putting these good practices into action.

4.1. System level

National, sub-national and local education systems play an essential role in the creation and implementation of policies that support and protect the rights and well-being of all students, and particularly the most vulnerable. Frameworks such as the Sustainable Development Goals provide normative guidance, while laws can mandate the support and protection of all learners. Frameworks and laws are a starting point for systems-level strengthening.

International frameworks can support systems-level policies and practices. As noted above, the education target of the SDGs states that “by 2030 ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes” (4.1) (United Nations, 2020^[146]). This includes the aim to “eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, Indigenous peoples and children in vulnerable situations” (4.5) and to “build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all” (4.A) (United Nations, 2020^[146]).

A recent study in OECD countries (Spier et al., 2017^[8]) showed that there is evidence of enabling legal and policy frameworks supporting the inclusion of extreme adversity groups in the education system, resourcing through targeted government and external financing, and the establishment of institutional structures to support better policy coordination and programme implementation. This finding suggests that most countries

have an existing policy framework in place that supports children and youth in extreme adversity, and some have strong intentions to further integrate the needs of these groups in the education system. At the planning level, there are clear strategies being adopted by governments to support marginalised children in the classroom, such as through the curriculum, by the introduction of mother-tongue instruction, specialised teacher training, and parent education programmes. At the same time, barriers included resource constraints, a lack of an ecological perspective and holistic thinking about children’s needs and development, and lack of high-level support as the three major challenges in developing an inclusive education system for children and youth in extreme adversity.

Considering this, we reviewed examples of laws and policies that protect the rights and well-being of children in education systems and help ensure that those from marginalised populations have access to education and needed supports. In this section we address system level anti-discrimination laws (not a comprehensive list); education laws policies for children who are involved in child protection and/or juvenile justice systems; and policies for students who are refugees and migrants. We also address how education systems can establish structures and supports (collaboration, technical assistance, funding) to build local capacities so educators can make good decisions about how to best meet the needs of their students – including those who have experienced adversity and/or trauma.

4.1.1. International and national policies to promote equity and prevent discrimination

UNESCO 1960 Convention against Discrimination in Education demanded that countries address barriers in education. Discrimination is defined as ‘any distinction, exclusion, limitation or preference which, being based on race, colour, sex, language, religion, political or other opinion, national or social origin, economic condition or birth’, results in individuals being treated unequally in education (article 1). In 1990, the World Declaration on Education for All obliged countries to commit ‘to removing educational disparities.’ In 2006, the right to inclusive education was added to the UN Convention on the Rights of Persons with Disabilities (CRPD).

Supporting Indigenous people to reduce the burdens of historical trauma

Twenty-three countries have ratified the 1989 ILO Indigenous and Tribal Peoples Convention. According to UNESCO, the convention “affirmed the relevance of curriculum, the importance of being taught in the mother-tongue and the need for ‘history textbooks and other educational materials [to] provide a fair, accurate and informative portrayal of the societies and cultures of these peoples’ (Article 31).” In addition, 144 countries voted for the United Nation’s 2007 Declaration on the Rights of Indigenous Peoples, which notes the harm Indigenous communities have suffered and recognises their rights to maintain and strengthen their own cultures and traditions, and to determine their own development. Globally, Indigenous children are significantly over-represented in exclusion statistics. This is particularly problematic given their already high school dropout rate ((OECD, 2017_[116])).

Supporting sexual and gender equity

The United Nations Convention on the Rights of the Child (CRC) (1989) establishes the right to be protected from violence, exploitation and abuse, including sexual exploitation (Art.19). The CRC also determines the measures to prevent sexual abuse (Art.34) and “the abduction of, the sale of or traffic in children for any purpose or in any form” (Art.35). The more recent Lanzarote Convention (2007) echoes the CRC and details the measures that Member States of the Council of Europe should apply nationally. It also provides a monitoring mechanism. Articles 18-23 prohibit practices that constitute child sexual exploitation and child abuse, including engagement in sexual activities with children; recruitment or coercion of children into prostitution; production, distribution, procurement, or possession of child pornography; recruitment or coercion of children into pornographic performances; corruption of children through witnessing sexual activities or abuse; and solicitation of children for sexual purposes (Council of Europe, 2007_[147]).

Most countries do not have national policies that can protect sexual minority youth. An OECD study “suggests that pervasive stigmatisation of sexual and gender minorities at school constitutes an important barrier to their educational attainment” (Valfort, 2017_[148]). Anti-discrimination laws are “the most important first step to challenge gender and sexuality norms and promote safe school climates” (Toomey, McGuire and Russell, 2012_[149]). A small number of countries serve as examples for such policies. For example, in Portugal, article 5 of Decree-Law 54/6 on inclusive education “calls on schools to create ‘a school culture where everyone will find opportunities to learn and the conditions for full realisation of this right, responding to the needs of each pupil, valuing diversity and promoting equity and non-discrimination in accessing the curriculum and the progression in the educational system’” (UNESCO, 2020_[123]).

Given the lack of national policies and guidelines, efforts to reduce discrimination and bias against LGBTQ are often at the regional or local level. The Canadian province of Ontario’s Ministry of Education has the “Equity and Inclusive Education Strategy of the Ontario”, which mandates that all schools strive to promote a safer school climate for all students. OECD reports that in 2018, 14 of the 27 European OECD countries were engaged in activities to train educators and promote more inclusive school environments, although these actions were rarely mandated (OECD, 2019_[18]).

Supporting refugees and asylum seekers and eliminating racial discrimination

The international landscape to support the rights of refugees and immigrants has grown considerably in recent years and has created a legislative framework and set priorities to protect the safety and well-being of children during their journey. The priorities include a coordinated approach of risk mitigation, investments and infrastructure and child protection mechanisms (UNICEF Office of Research-Innocenti, 2020_[95]).

European law (Council Directive 2003/9/EC of 27 January 2003) provides standards for EU countries to welcome asylum seekers into their borders. For education, the directive includes provisions of education for asylum seekers, including the provision of psychological assistance for minors and the provision of language education. In the UK, asylum seekers and refugees have the same rights of access to free, government-funded education as nationals and residents. Under the Race Relations (Amendment) Act 2000, schools must “eliminate unlawful racial discrimination and promote equality of opportunity and good relations between persons of different racial groups.” All schools are required to have a race equality policy to facilitate admission practices. The policy is mandated to be linked to an action plan. Under the Swedish Education Act of 1985, refugee and asylum-seeking children have the same right to education as nationals in Sweden from age 7 to 16 years old, and are entitled to mother-tongue education, for which the municipalities are responsible. Chile is in the process of implementing significant structural education reforms aimed at improving educational equity. While it may be too early to measure the impact of the 2015 Inclusion Law in Chile, there are early indications that its regulations around school choice policy are already starting to improve educational opportunities for both native and immigrant students (Guthrie et al., 2019_[83]).

Protections for system-involved children

The relationships among race, ethnicity, poverty, and attendance at low-performing schools are complex; evidence suggests that children in foster care and those in the delinquency system experience more negative outcomes relative to their age-mates. Providing children and youth with stability and safety at home and with caring adults in the school and community who have high expectations is important to build resilience (OECD, 2016_[150]).

The Fostering Connections to Success Act and Increasing Adoptions Act in the United States seeks to address these issues by requiring child welfare agencies to collaborate with education systems so that children can remain in their original school (if it is safe and feasible to do so), and to minimise disruptions in schooling when children must change schools (U.S. Department of Education and U.S. Department of Health and Human Services, 2016_[151]). Another effective policy for children involved in child welfare systems is the active promotion of kinship care. The Fostering Connections to Success Act and Increasing Adoptions Act in

the United States promotes the use of kinship care (Child Welfare Information Gateway, 2019^[152]). In addition, the European Structural Fund has played a key role in promoting deinstitutionalising children in child welfare systems, with an emphasis on placing children with family where possible – although this work is ongoing (Opening Doors for Europe’s Children, n.d.^[153]).

For children and youth involved in juvenile justice systems, gaps in schooling are a significant concern. Guiding principles issued by the United States Departments of Education and Justice recommended that (1) planning for re-entry into mainstream schooling should begin when the child/youth first enters secure custody, and that there should be minimal gaps between release from secure custody and (re)enrolment in school, (2) children/youth should have a concrete plan to continue their education, and (3) youth should have transitional plans to eventually move to higher education or vocational training. A key tenet of these principles is the active engagement of the young person in planning (U.S. Department of Education and U.S. Department of Justice, 2014^[154]).

Supporting learners with disabilities

In advance of the 10th Consultation on the implementation of the Convention and Recommendation against Discrimination in Education, UNESCO convened experts to produce a report on the right to education for persons with disabilities. The authors of the report review the international legal frameworks, analyse efforts by member states, and provide resources to support implementation of the convention (UNESCO, 2019^[155]).

In the United States, the federal law, the Individuals with Disabilities Education Act (IDEA), provides guidance and funding for state educational agencies and educational institutions and provides protections for students with disabilities. For example, if a student is suspended for a total of more than 10 days in one school year, the school must provide special education services to allow the student to make progress on his or her educational goals. Schools are also prohibited from suspending students who have “special education” status, and in situations in which it is determined that their behaviour is a manifestation of their disability (NCLD, 2017^[156]).

Preventing school-based violence

Given the evidence on the significant negative effects of school-based violence on children, including those who experience adversity and/or trauma, an international Safe Schools Declaration was released in 2015 that recognises the need during times of armed conflict to protect students, teachers, and schools; to continue providing education; and to prohibit the use of education institutions for military purposes (Norwegian Ministry of Foreign Affairs, 2015^[157]). Many countries have established national or local legislation and policy frameworks to address school-based violence, as well. For example, Norway launched a Manifesto Against Bullying in 2002 to commit school partners (including governments, teaching unions and parents’ committees) to preventing and combating bullying through Norway’s internationally recognised anti-bullying programmes: ‘Zero’ and ‘Olweus’. Poland’s Ministry of Education launched a ‘zero tolerance’ school reform plan in 2006, in response to the suicide of a girl after she was sexually molested at school, and transitioned to a new policy of ‘Safe and Friendly Schools’, in 2008, which focused on building a positive social climate and addressing problem behaviours including aggression, drug addiction and alcohol abuse (UNESCO and UN Women, 2016^[126]). The Government of South Australia has provided guidelines and a curriculum for schools to help young people develop key skills to become ‘responsible digital citizens’ – Cyber-Safety: Keeping Children Safe in a Connected World. The curriculum focuses on supporting young people to use the internet to learn and explore the world, while gaining the tools that will enable them to use the internet ethically and responsibly and gain an understanding of the potential risks and threats. In particular, the cyber-safety curriculum lays out clear guidance for educators and students about how to cope with bullying and other violence online. It forms part of a broader life-skills-based school curriculum Keeping Safe: Child Protection Curriculum (KS:CPC), which teaches pre-school to Year 12 children the skills to keep themselves safe, including how to recognise abuse, tell a trusted adult and understand what is appropriate and inappropriate touching.

While implementation practices may vary at the local or regional level, lessons learned suggest that effective implementation of these policies requires system-wide reforms, educator training, curriculum changes, collaborating with key stakeholders, monitoring and evaluation (UNESCO and UN Women, 2016^[126])

Mechanisms for knowledge brokering, uptake, and evidence-informed policymaking

As discussed in the previous section, children who have experienced adversity and/or trauma generally need support from various sources that include and extend beyond education. This includes health, economic, and social services. As these services are often delivered by different partners, deliberate approaches to working across sectors is critical to support knowledge transformation, information exchange, and evidence-informed decision-making to provide children with the developmental and educational resources they need. These approaches may include networking and partnership among key stakeholders at the international, national, regional, or local level to build the vision for change and leverage commitment, capacity, and resources.

Networks and technical assistance centres

Cross-sectorial and interdepartmental collaborations at the national level can promote a coordinated approach to addressing student needs. For example, the Interagency Working Group on Youth Programs in the United States is a partnership of representatives from 21 US federal agencies that supports programmes and services focusing on youth development through knowledge management and an online platform⁵ on youth matters.

Technical assistance centres can serve as effective mechanisms of knowledge transformation for practice change and brokering knowledge for educators and policymakers. One example in the United States is the National Center on Safe and Supportive Learning Environments (NCSSLE)⁶, which supports state education agencies to address the comprehensive behavioural and mental health needs of trauma-affected students. NCSSLE reached out to 11 US state education agencies, 300 districts, and more than 1 000 schools in 2019 alone. NCSSLE draws from nationwide expertise, engages key stakeholders, and creates awareness on core issues, and provides technical assistance to departments of education and stakeholders focused on improving student supports, school conditions for learning, trauma-sensitive schooling, and overall student well-being, achievement and academic enrichment.

Peer networks are another model for technical assistance. The Association for Positive Behaviour Support (APBS) has affiliates in several countries. The network in the Netherlands ‘SWPBS Netwerk Nederland’ (School Wide Positive Behaviour Support) brings together Dutch education professionals to collaborate and translate research to practice. An affiliated network in Australia (APBS-Australia) also offers professional development. The network in Canada (Positive Behavioural Interventions and *Supports-Soutien au Comportement Positif*) works “to create positive and predictable school environments” for improved academic and Social and Emotional Learning (SEL) outcomes. In Japan, APBS-Network Japan provides teaching tools and materials to its members and promotes information sharing among schools, universities, welfare facilities and government agencies.

Access to current data

Capturing the adverse and traumatic experiences and conditions that many children are exposed to is critical for guiding the development of international and national policies and resources. For example, the recent Violence Against Children and Youth Surveys (VACS) launched in 23 countries across Africa, Asia, Eastern Europe, Latin, and South America measure the prevalence of sexual, physical, and emotional violence, past 12-month incidence, norms, and outcomes that boys and girls between the ages of 10 and 24 experience

⁵ www.youth.gov

⁶ <https://safesupportivelearning.ed.gov/>

(CDC, 2020_[158]). Led by the United States Center for Disease Control in partnership with Together for Girls and other stakeholders, these national surveys are used in the development of national action plans and guide effective programmes and policies.

A significant gap in the educational field is a systematic review of costs associated with educational strategies, programmes, and practices both at the systems and school level. Despite growing evidence on effective programmes, a discussion of costs and resources required in a variety of educational settings is largely missing. This information will be particularly important in assessing the use of pilot programmes and local strategies that may be emerging during the COVID-19 pandemic.

4.2. School level

International, national, and state laws are important in creating mandates and guidance to protect children; however, they are not sufficient. Local level efforts are key to identifying disparities and addressing student needs. For example, there is evidence that students who are refugees or migrants in EU countries fare better when educators at the district or local level have flexibility to meet their individual needs (versus top-down national models in which all refugee or migrant students receive the same programming) (Nonchev and Tagarov, 2012_[159]). In addition, there is a global effort on improving education systems to foster strong social and emotional skills among students, a cultural shift from the industrial approach to education of the past, that every education system will need to adapt to in order to support their diverse student body for adulthood.⁷ As discussed in Section 3 of this report, schools can and should take steps to mitigate the effects of adversity and/or trauma on student well-being and outcomes by developing and maintaining healthy relationships among staff, students, families and the wider community, and by building cultural and linguistic competence (Colombi et al., 2018_[160]). The section discusses school-level strategies for meeting the needs of learners. This includes school leadership, educator training and supports, identification and assessment of student needs, school-family-community partnership, and student voice and engagement.

4.2.1. School leadership

School leadership has an important role in creating learning environments that are *safe* learning environments (i.e. promoting healthy behaviours and avoiding harmful ones, such as substance use; developing emergency preparedness; physical space that has adequate lighting, clean air, and limited noise) and *supportive* (i.e. setting clear expectations and supports for educators for inclusion and against bullying) (Williamson and Osher, 2018_[139]). There are tools, such as the Comprehensive School Climate Inventory (CSCI), that provide educators and administrators with an assessment of an individual school's climate based on the perceptions of students, parents/guardians, and school staff. The data generated are designed to give stakeholders the insights needed to understand their school climate, plan for needed change, and then check to see if the changes are having the desired effects.

Another step that school leaders can take is to implement school policies to eliminate discrimination and inequalities and build a safe environment for all. For example, studies on sexual minority youth particularly emphasise the role of comprehensive anti-bullying/harassment policies that protect these youth and create an inclusive environment. These include policies such as dress codes and school dances that do not discriminate against LGBTQ students; policies that recognise sexual orientation, gender identity, and gender expression in individual schools and districts; and policies that provide clear and effective systems for reporting and addressing incidents that students experience. Similarly, one study found that anti-homophobia policies were associated with positive attitudes by minority youth, such as lower feelings of victimisation and a readiness to report violations of policy (Kosciw et al., 2018_[58]).

⁷ http://www.oecd.org/education/cei/social-emotional-skills-study/Improving-the-development-of-students'-social-and-emotional-skills_web-only.pdf

4.2.2. Educator training and supports

Educators are core elements of a safe and supportive school environment through their relationships with students and teaching of academic as well as social, emotional, and behavioural competencies. It is critical that educators know how to work with students who have experienced adversity and/or trauma and that educators receive support for their own well-being so that they can meet the needs of others. Too often, though, educators fail to see student behaviour from a developmental perspective to promote student agency and growth mind-set, and their interactions can exacerbate risk and vulnerability. A critical takeaway from research on resilience is that rather than “fixing of children” to meet the demands of the context, our attention should shift towards maximising the “individual-context” best fit (Spencer et al., 2019_[117]) by supporting student agency as well as environmental supports.

Educator training and skill development

Effective problem-solving and interpersonal skills are part of the core competencies needed in today’s diverse societies. Teachers who feel responsible for creating the psychosocial conditions in class are more likely to monitor student interactions and to notice and intervene when vulnerable students are being poorly treated by peers (Kearney and Smith, 2018_[161]). In addition, teachers with strong social and emotional capacity and cultural competency are better able to build positive relationships with students, attune to students’ needs, model appropriate social and emotional competencies, and deal with the stress of teaching ((Jennings, Minnici and Yoder, 2019_[162]); (Benson and Scales, 2011_[163]); (Schonert-Reichl, 2017_[164])). For example, students who have experienced complex trauma or have been traumatised by an event can become extremely anxious if required to do activities that limit their ability to monitor the environment (such as by closing their eyes for a game, or being around others who are wearing masks). Educators can protect students by being aware of these potential stress triggers, and preparing lesson plans that avoid potentially stressful experiences (National Child Traumatic Stress Network Schools Committee, 2008_[165]). Therefore, educator training should create awareness (e.g. recognition of how trauma reveals itself differently in every individual and is shaped by context, cultural practices) and build skills (e.g. trauma-sensitive practices to create safe and supportive conditions that are culturally and contextually relevant) ((National Child Traumatic Stress Network Schools Committee, 2008_[165]); (Osher et al., 2016_[166])). In addition, if educators are expected to recognise signs of trauma, teach and scaffold students’ social and emotional learning, they need to be prepared for this mind-set and competencies starting in pre-service and in-service education (Murano et al., 2019_[167]).

Research shows that training can promote teacher awareness and competencies. For example, a training programme in 16 educational districts in the West Bank and Gaza Strip sought to enhance teacher capacity to deal with children suffering trauma and to reinforce civic education (Murano et al., 2019_[167]). A training-of-trainers approach was used to prepare teachers in counselling, crisis education and civic education, and enhance their skills. Analyses showed that the training improved teachers’ attitudes and knowledge of conflict resolution, civic education and basic counselling concepts related to trauma (Romahi, 2010_[168]). In another study in Philippines with out-of-school youth who were enrolled in an accelerated, non-traditional educational program, 50 teachers were first trained on awareness of their own mental health needs and coping skills who then trained about 5000 youth on coping skills and resiliency over a period of six-months. Outcome analyses suggested that student participation in training led to improved decision-making, changed views on the acceptability of violence, promoted greater consideration of consequences of actions prior to reacting, and improved ability to manage anger (Kar, 2019_[169]).

Ongoing support for educator well-being

Educators are active change agents in a safe and supportive school environment. It is critical that teachers receive support for their own well-being so that they can meet the needs of others. However, overworked and stressed-out educators often have little ability to hear their students’ stories. When a student wants to share personal information about stressful or negative experiences with an educator whose attention is already fully consumed elsewhere, or the educator anticipates hearing something negative given the student’s body,

posture, or gestures, the educator may throw a “circuit breaker” to not overload their own circuits. The educator may do this unconsciously by walking away from the student, telling their own story, or changing the subject. When this happens, the student does not get heard (Izard, 2016_[170]).

The working conditions, at both system and school levels, however, can impact and shape teachers’ well-being, both positively and negatively. Educators can experience psychosocial stress from the larger environment (for example, teaching in an unsafe school or community, or dealing with a natural disaster). Thus, supporting educator well-being is an essential element of building safe, supportive learning environments where adults have the capacity to address student needs associated with exposure to adversity and trauma. In fact, in schools where educators are stressed beyond their coping skills, high teacher turnover rates are likely to develop. Continual changes in teaching staff are not positive for students, and should also alert system and school leaders that the school environment is not sustainable for educators. While some education systems offer pecuniary incentives to attract and retain teachers to schools deemed to be hard-to-staff, these do not address the underlying challenges such schools present for teachers (Viac and Fraser, 2020_[11]).

Thus, supporting educator well-being is an essential element of building safe, supportive learning environments where adults have the capacity to address student needs associated with exposure to adversity and trauma. Educators can experience psychosocial stress from the larger environment (for example, teaching in an unsafe school or community, or dealing with a natural disaster).

The Inter-agency Network for Education in Emergencies (INEE) stresses that it is important to develop a teacher and staff well-being plan, and to provide continued professional guidance and supervision, peer-to-peer support networks, supportive working conditions (e.g. predictable and clearly defined roles and responsibilities). Trainings must be inclusive and participatory, and they should model the behaviours and approaches teachers are expected to replicate in the classroom (McNatt et al., 2018_[171]). Research has indicated that the right interventions can increase teachers’ sense of personal resilience and well-being, and increase their ability to manage stress and work on their daily tasks effectively. In addition, these gains were associated with improved well-being of their learners (Lodi, 2019_[172]). Training and technical assistance centres such as the Readiness and Emergency Management for Schools Technical Assistance Center⁸, provide educational systems, educators, and community stakeholders with resources and supports to better prepare for emergencies and build individual and collective resilience against trauma.

Viac and Fraser (2020_[11]) recently proposed a comprehensive conceptual framework to analyse teachers’ occupational well-being (teacher stress and burnout and motivation to leave teaching) and its linkages with quality teaching (classroom processes and student well-being). The core concept of this framework defines teachers’ well-being around four key components: physical and mental well-being, cognitive well-being, subjective well-being and social well-being. This conceptual framework will be used in collecting PISA data from teachers in participating countries in 2021, and findings will be published in 2023 (Viac and Fraser, 2020_[11]).

Viac and Fraser (2020_[11]) proposed a comprehensive conceptual framework to analyse teachers’ occupational well-being and its linkages with quality teaching. The core concept of this framework defines teachers’ well-being around four key components: physical and mental well-being, cognitive well-being, subjective well-being and social well-being. The working conditions, at both system and school levels, however, can impact and shape teachers’ well-being, both positively and negatively. In addition, training and technical assistance centres such as the Readiness and Emergency Management for Schools Technical Assistance Center⁹, provide educational systems, educators, and community stakeholders with resources and supports to better prepare for emergencies and build individual and collective resilience against trauma.

⁸ <https://rems.ed.gov/TrainingPackage.aspx>

⁹ <https://rems.ed.gov/TrainingPackage.aspx>

4.2.3. Identification and assessment of student needs

Teachers and other education personnel should be trained to understand existing referral mechanisms, to recognise when a learner needs support, and to respect confidentiality when talking to students. Places where referral mechanisms do not yet exist should be identified through the coordination of systems, including education, protection and health systems, working together with other coordination mechanisms and child protection. According to an INEE report (McNatt et al., 2018^[171]), it is important to distinguish between group interventions that can be integrated into existing education activities and separate systems for learners who require specialised services and mental health care. Functional referral mechanisms should be used to connect schools to specialised services, including healthcare. These referral mechanisms should be closely coordinated with sectors such as child protection and physical and mental health and should be monitored periodically to ensure that they properly identify and conform to learners' needs.

Student screening, referral and monitoring are important to identify needs and strengths and make the necessary adjustments in the classroom. Good practices in screening and monitoring include identifying both strengths and deficits, providing a tool for initial screening and ongoing monitoring, focusing attention on data that is relevant to an individual learner's progress, and involving caregivers in the screening and monitoring process (AIR and CalSWEC, 2013^[173]). At the same time, there are risks associated with assessments, which may do more harm than good. These include inaccurate identification of student need, implicit bias, and cultural insensitivity in assessment. It can be challenging to find the right assessment tools for some populations. For example, language can be a significant barrier to identifying and meeting refugee and immigrant students' mental health and educational needs adequately, which may further increase their vulnerability (OECD, 2018^[97]). Guidance counsellors, school social workers and school psychologists may be trained and made responsible for identifying and assessing student needs. To screen and monitor effectively, teachers will need training, resources, support and a mandate so that these important functions do not impose an added burden and instead become routine features of effective teaching. There are some materials for educators to help identify and work with traumatised children. One example is the Child Trauma Toolkit for Educators created by the National Child Traumatic Stress Network (National Child Traumatic Stress Network Schools Committee, October 2008^[174]). The Toolkit provides educators with facts about trauma (including its prevalence and its effects on children), effective strategies for educators of children and youth who have experienced trauma (such as maintaining routines, and warning children in advance of expected disruptions), and guidance regarding when children may need additional help. The Toolkit provides information regarding the manifestation of trauma and how educators can best respond by age group (pre-school, primary, lower secondary, and upper secondary). Finally, it addresses issues of secondary trauma and self-care for educators.

4.2.4. *School, family and community partnership*

Globally, family and community participation in education is considered an important protective mechanism to improve children's engagement in school and their educational outcomes (Burde et al., 2015^[78]); (Colombi et al., 2018^[160]). In reality, however, schools are often "walled in" while the community and families are "walled out" (Anderson-Butcher et al., 2010^[175]). Educators often believe the most important barriers to student educational success are situated outside of the school walls, including a lack of attention, support, oversight and encouragement from adults at home and in the community (Shapiro et al., 2002, as cited in (Hands, 2005^[176])). Fortunately, there is increasing recognition of the need to move past blame and understand that school, community and family partnerships have a collective role in supporting students (Mapp and Kuttner, 2013^[177]).

School-family partnership

Family engagement in children's education contributes to improved school attendance, behaviour and completion ((Barrera and Warner, 2006^[178]); (Lee and Bowman, 2006^[179]); (Henderson and Mapp, 2002^[180])). This is true for families of all backgrounds, regardless of whether the family is able to directly support their

child's academic learning (such as helping with homework). Effective school-family partnership goes beyond the occasional parents' night at school, newsletter or notes sent to parents. Rather, it requires schools and families to equally share responsibility for a child's success and well-being through school-family relationships based on mutual trust and respect (Mapp and Kuttner, 2013^[177]).

In some contexts, schools must first establish a foundation of trust, respect and communication with families. For example, many Alaska Native families perceive schools as unwelcoming (Mackety and Linder-VanBerschot, 2008^[181]). For African American families, there can be issues of mistrust, alienation and isolation from education systems due to a legacy of discrimination (Brown and Brandon, 2007^[182]). School-family relationships can also be shaped by socio-economic status. Amongst families in poverty, there can be a strong sense of powerlessness and lack of influence in relation to their child's schooling (Furomoto, 2003^[183]); (Smrekar and Cohen-Vogel, 2001^[184]). Historical factors can also influence family-school engagement. For example, Roma parents in Scotland want their children to become educated but lack hope that their children will receive the kinds of educational opportunities that will truly better their lives (Sime, Fassetta and McClung, 2014^[185]).

Addressing these barriers requires recognition of the need to build up both educators and families, including:

1. *Capabilities*: Educators are aware of the knowledge that families bring, have skills to engage families in culturally competent ways and know how to build trusting relationships. Families know how the school system works, have information on student learning and know how to be an advocate for their child.
2. *Connections*: Educators and families need access to social capital – that is, networks of individuals that are based on trust and respect.
3. *Cognition*: Educators must believe in the importance of working with families, and that working with families can improve student learning. Families must view themselves as partners in their child's education.
4. *Confidence*: Staff and families must feel confident in their abilities to work in partnership, even in the face of social or cultural differences (Mapp and Kuttner, 2013^[177]).
5. *Communication*: For all families, written materials should be provided at the appropriate reading level.

For immigrant or ethnic-minority families, school-family communication may be limited due to language barriers (Sohn and Wang, 2006^[186]). According to a review of the education provided to refugee and migrant children in the EU, key areas for improvement in some member states include the provision of translation supports and having a strategy to engage refugee and migrant families (Nonchev and Tagarov, 2012^[159]). It is important for schools to make interpreters available to families and allow additional time for them to communicate with teachers during parent-teacher conferences, and to not assume that a parent who has some grasp of the dominant language will be familiar with all of the terms used by educators (Sohn and Wang, 2006^[186]).

School-community partnership

Good school-community partnerships can substantially increase the likelihood that students who have experienced adversity and/or trauma get the supports they need. This cross-sector collaboration is currently well developed in some countries and regions in the OECD. For example, the Irish Republic and Scotland have each developed comprehensive strategies that integrate education, health and other aspects of well-being and opportunities for young people. In Ireland, the Delivering Equality of Opportunity in Schools 2017 Action Plan includes improved collaboration with state-funded agencies outside the formal education systems as a key goal to better support children and young people. This includes strengthening links between schools and child protection services, family supports, early years education and care, mental health and other therapeutic services, including those targeting pre-school age children (Department of Education, 2017^[187]).

Most countries, however, lack this kind of national framework, resulting in fragmented, inefficient supports that vary by school (Spier et al., 2017_[8]). Many schools approach these partnerships in a piecemeal and ad hoc manner, engaging bilaterally with community institutions as needed. However, collective cross-sector engagement amongst schools and community institutions leads to far better support for students than individual efforts or multiple smaller-scale partnerships (Kania and Kramer, 2011_[188]). For many students, the effects of adversity and/or trauma do not solely play out in schools, making it essential that schools and communities work together to address shared concerns (Kettering Foundation and Public Agenda, 2014_[189]). Across sectors, partners should work together to define a common agenda (rather than having the school dictate what is important) and then develop and coordinate a network that will enable better support for children and youth in the community (Roehlkepartain, Pekel and Sullivan, 2013_[190]). This kind of collaboration also allows for the more efficient use of (usually limited) resources through the identification of gaps and duplication in available supports. For “cross-over” students who are in both the child welfare and juvenile justice systems, training staff in trauma-informed interventions and enabling collaboration between the court, the social worker and the probation officer to advocate for youth in the educational system improved school attendance and reduced academic and behavioural problems (Abbott and Barnett, 2016 as cited in (Farn and Adams, 2016_[191])).

Children who are exposed to extreme violence may need a system of care to provide the level of services they need. For example, a study reporting on child soldiers in Colombia suggested that these children needed physical protection from armed conflict and psychological treatment (Boothby and Nichol, 2010_[192]). Many child soldiers also had to overcome the challenges of social stigma and identified educational services as the most important requirement to support their reintegration into community.

4.2.5. Student voice and engagement

The opportunities and challenges that children and youth experience in OECD countries and around the world are changing rapidly due to a more diverse and connected global environment. Active participation in choices and decision-making increases student agency and promotes their learning and development. Student voice refers to student participation in decision-making on the structures and practices that shape their educational experiences. Student voice is about more than student participation in the classroom; it is about elevating student ideas to the level of adults (who are typically in the role of decision maker) about how student learning in formal and informal settings should happen. This includes students being actively involved in their classroom, school environment and beyond the physical boundaries of the school (Rennie Center for Education Research & Policy, 2019_[193]). Many students come to school motivated and ready to learn, but many do not. Educators need to understand the different social, economic and cultural contexts of their students, as well as the adversities they may bring to the classroom and school, which should not be viewed as impediments but as resources that can enhance learning. Effective student-centred approaches move beyond standardised, homogenised curricula and build on student self-regulation, agency and motivation, using students’ personal experiences to enhance their learning (Toshalis and Nakkula, 2012_[194]). In addition, attempts to elevate student voice in school or outside of school (e.g. school council or civic leadership) should empower a diverse pool of students including marginalised, underserved and less extroverted students, not just those students who come to school with social capital (Benner, Brown and Jeffrey, 2019_[195]).

Worldwide, there is growing recognition that it is important to engage young people more actively as key stakeholders and change agents in their communities on matters that directly relate to them, including their education (UN, 2018_[196]). For example, the Council of Europe,¹⁰ a European intergovernmental organisation of 47 member states, adopted the Youth Sector Strategy 2030 in early 2020 and has made progress in intercultural learning and human rights education, empowering young people and youth workers to participate in society through the programmes of European Youth Centres (including, for example, training courses,

¹⁰ <https://edoc.coe.int/en/an-overview/6814-visiting-the-council-of-europe.html>

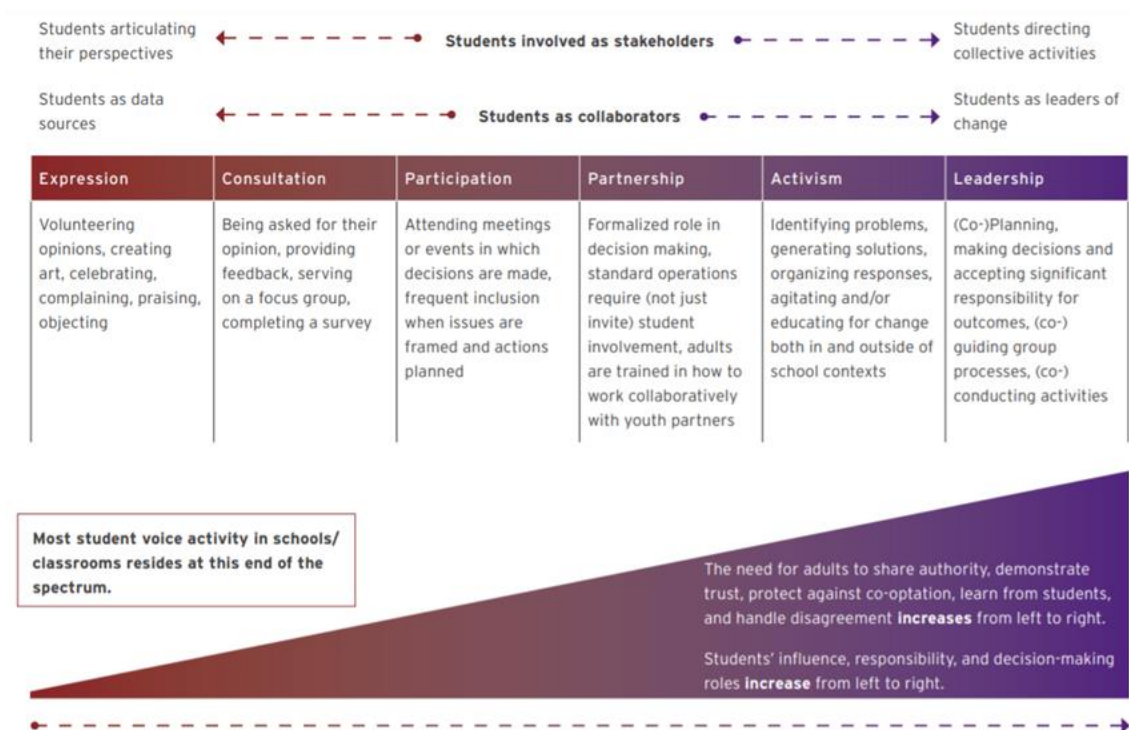
study sessions, expert groups and seminars, symposia, the Living Library methodology) (Council of Europe, 2020_[197]).

Many OECD countries also have evolving national youth policies – in the form of a youth policy framework or dispersed throughout different policy domains – to support efforts to increase youth voice and civic leadership and promote healthy youth development, equity and empowerment. Research indicates that initiatives focused on elevating student voice should have four key elements (Lundy, 2007_[198]):

- a designated opportunity for students to share their views (space)
- facilitated conversation during which students can express themselves (voice)
- an audience to hear students’ thoughts (audience)
- follow-up actions based on students’ expressed ideas and perspectives (influence).

However, national, regional and local authorities vary greatly in their commitment to advancing a framework that includes youth participation in decision-making. This variation is in particular due to different perceptions of how student voice can be conceptualised effectively within educational contexts to give them “space, voice, audience and influence”. Examples of student voice demonstrate a spectrum that ranges from students participating in adult-directed activities (e.g. responding to a survey on school climate) to students taking full leadership (e.g. student-led conferences, youth-led participatory action research, personalised student learning) in the classroom, school or community (Benner, Brown and Jeffrey, 2019_[195]) and there are many different models that schools, districts and states adopt to support student voice (see Figure 3). Case Studies 2 and 4 in Section 5 provide examples of student voice and engagement.

Figure 3. The spectrum of student voice-oriented activity



Source: Toshalis and Nakkula (2012), “Motivation, engagement, and student voice”, The Students at the Center Series, Students at the Center Hub, Cincinnati, <https://studentsatthecenterhub.org/wp-content/uploads/2012/04/Exec-Toshalis-Nakkula-032312.pdf> page 24

4.3. Student level multi-tiered approaches

Globally, a growing number of school systems are adopting a whole-child approach to address students' developmental, psychological and educational needs. This multi-tiered approach uses structured programmes, practices and resources to identify and address student growth ((Barrett, Eber and Weist, 2017_[199]); (Eagle et al., 2015_[200])).

An example of a whole-child approach is found in public schools in Washington, DC, where many students are estimated to have experienced adversity or trauma. The DCPS Becoming initiative (Washington DC Public Schools) actively supports teachers to develop the skills they need to build positive relationships with their students, to develop students' social and emotional skills, and to create safe school environments¹¹.

Box 7. Multi-tiered systems of support for students

Tier 1: School-wide/universal programmes

These focus on creating safe learning environments, promoting student well-being, and actively promoting a trauma-informed school environment for all students regardless of their level of need (NCTSN, 2017_[5]). The universal level provides the foundation for effective strategies across all three levels.

Arts, play and sports should be incorporated where appropriate, while ensuring that attention is paid to gender and cultural sensitivity. Positive peer engagement strengthens children's and youths' confidence, self-esteem and self-efficacy. Activities that encourage discussion and dialogue between learners, as well as peer-to-peer learning activities and mentoring, are especially important and can be part of daily classroom activities (McNatt et al., 2018_[171]).

Tier 2: Small-group/selective programmes

These focus on early identification and intervention with students who are off track or at risk of going off track in terms of their learning, development, behaviour or well-being. Tier 2 interventions are typically delivered at the group level. For example, some groups of students may need extra support to learn the language of instruction, or to address gaps or delays in learning, or to develop their social and behavioural skills.

Tier 3: Individualised/targeted programmes

Interventions are delivered at the individual level to students who have a more extensive need for support than they could receive at Tier 2. At Tier 3, schools assess the strengths and needs of students who are experiencing academic and/or behavioural difficulties and then create a customised plan for that student. Cross-sector partnerships with the community are essential in caring for these students to achieve long-term outcomes. Research indicates that receiving trauma-specific treatment can lead to improved school attendance and academic outcomes, and has shown promising results in reducing trauma symptoms and behaviour problems in children (McInerney and McKlindon, 2014_[47]).

In the past two decades, research on school-based programmes has demonstrated the positive effects of teaching students social, emotional and behavioural skills. These programmes teach self-regulation, conflict resolution and other skills to help meet the developmental needs of a child. Effective SEL programmes include

¹¹ <https://www.dcedfund.org/dcps-becoming>

interactive skills-building activities, such as role plays and modelling in a supportive environment (O’Conner et al., 2017^[80]).

A meta-analysis of 213 school-based SEL programmes found that programmes that improved student outcomes implemented these core practices: (1) they sequenced a series of connected and coordinated activities to achieve their skill development objectives, (2) they used interactive and engaging teaching strategies that afforded students the opportunity to practise skills in authentic situations, and (3) they were based on a model of social and emotional learning that targeted specific SEL skills (Durlak et al., 2011^[141]). A more recent meta-analysis examined studies of 33 universal programmes and 15 targeted interventions implemented in the United States, Canada, the United Kingdom, Portugal, Lebanon, Peru and Thailand (Boncu, Costea and Minulescu, 2017^[201]) and found that SEL programmes were important in developing skills that reduced behavioural problems for children, although the effect size was small. Another meta-analysis of 33 universal and 15 targeted interventions conducted in the United States, Denmark, Portugal, South Africa and Turkey showed that pre-school children benefitted from SEL programmes, particularly those children identified as in need of early intervention (Murano, Sawyer and Lipnevich, 2020^[202]).

Box 8. Examples of effective social and emotional learning programmes

A classroom-based programme – the Promoting Alternative Thinking Strategies (PATHS) social and emotional learning programme, implemented for children from pre-kindergarten to Grade 5 in Cleveland – showed that teaching students social and emotional skills and improving conditions for learning improved perceptions of safety and decreased disciplinary incidents (Osher et al., 2014^[7]).

The Second Step programme has been used with more than 8 million students in over 32 000 US schools. The programme teaches life skills (such as essential communication, coping and decision-making skills) that help young people navigate common pitfalls such as peer pressure, substance abuse and bullying (both in person and online) (UNESCO and UN Women, 2016^[126]).

A number of selective programmes showed positive outcomes regarding students’ skills for coping with traumatic experiences. For example, the Healing and Education Through the Arts (HEART) programme – implemented in Tuzla Canton, Bosnia and Herzegovina for children affected by devastating floods and landslides – improved students’ social and emotional learning (Pisani et al., 2016^[203]). The programme used the arts to help children process and communicate feelings related to their experiences. Other studies found that incorporating culturally appropriate creative arts was effective in meeting the needs of refugee students and those who had experienced natural disasters (Burde et al., 2015^[78]); (Buriel, Morais and Loquet, 2019^[204]). Te Rito Toi is a programme implemented in New Zealand using Indigenous arts to support students who have experienced adversity or trauma, including in returning to classroom learning during COVID-19 (University of Auckland, 2020^[205]).

An example of a targeted programme is the Cognitive-Behavioural Intervention for Trauma in Schools (CBITS), an evidence-supported intervention designed for use in schools in the United States with children who have experienced trauma. CBITS provides “school-based mental health screening and a standardised brief cognitive behavioural therapy for students who have been exposed to violence”. The programme includes group and individual sessions, as well as psychoeducational sessions for parents and training for teachers. Evaluations showed that the CBITS programme was effective in alleviating symptoms of PTSD and depression experienced by students (Gerrity and Folcarelli, 2008^[16]).

4.4. Innovative approaches to traditional schooling

In contexts where traditional forms of schooling are at risk or resources are limited, alternative approaches to schooling can provide the means to continue educational experiences for children. For example, there is scarce but emerging knowledge on the benefits of information and communication technology (ICT) in enhancing educational resources for students in conflict and post-conflict situations, as well as for displaced or geographically dispersed people. While the rapid development of technology use in education means that many programmes are still in pilot phases and conclusive evaluative evidence is scarce, ICT programmes enable the continuation of schooling through many means. Examples include providing access to resources such as school books; enabling learner-centred pedagogy, host country language learning and translation; providing psychosocial supports, social and emotional learning, vocational training and professional development for teachers; enabling data collection, communication with parents to ensure child safety, informal learning opportunities, and inclusive learning ((Dahya, 2016_[206]); (UNESCO, 2018_[207])).

Technology use may range from low-tech solutions, such as educational radio broadcasts provided for out-of-school children during the Ebola crisis (Karki, 2020_[138]); to high-tech solutions using personal technological devices such as home computers, tablets or mobile phones (UNESCO, 2018_[207]); to blended solutions that combine ICT with in-person instruction (Dahya, 2016_[206]). In conflict areas specifically, technology-assisted distance learning has the potential to benefit youths who are not able to access programmes at school or in other physical locations because of the cost of transportation, concerns about safety and security, issues arising from physical or psychological trauma, or obligations to work or otherwise support their families (Dahya, 2016_[206]). However, as has been starkly highlighted by the current COVID-19 pandemic, technology-based programmes can both ameliorate and exacerbate barriers to educational access for disadvantaged populations, necessitating a sharp focus on equity of access in programme planning and management.

In refugee crises, the swell of internally or internationally displaced populations often makes integration into the local school system impossible due to shortages of space or teachers. To mitigate these shortages, communities in Jordan and Nigeria have implemented innovations such as second-shift school days, which allow twice the number of students to access daily instruction in the school space (Culberston and Constant, 2015_[208]). In addition, non-formal learning centres – established in locations such as religious centres, community centres, refugee camp facilities or other common spaces – enable the expansion of education to a large number of students (Creative Associates International, 2017_[209]).

Non-traditional educational approaches are also adopted for youth who are disengaged from formal educational systems. Researchers have noted that alternative education programmes are increasingly used across Australia to educate more than 70 000 students who do not attend traditional schools – such as the use of mobile vans to provide individualised educational supports to youth who had been involved in the criminal justice system (Reimer and Pangrazio, 2020_[210]).

There is also growing evidence on the benefits of using mobile communications technology as a tool to promote psychological well-being and learning in post-conflict areas ((Burde et al., 2015_[78]); (Dahya, 2016_[206]); (UNESCO, 2018_[207])). An important feature is mobile digital storytelling, which supports children who are refugees to reflect on identity and promotes a sense of belonging. Digital storytelling techniques may be particularly relevant in refugee and other low-resource contexts because they can be carried out on basic devices, reducing technical access barriers (UNESCO, 2018_[207]).

Other innovative approaches expand on traditional formal education by engaging mentors, adults or older peers at school or within the community to connect with students through a caring and positive relationship. In the context of trauma and adversity, mentorship provides connections to caring adults – an important protective factor that can buffer the impacts of ongoing and past adversity on youth (CDC, 2019_[21]). Youth in the US juvenile justice system who participated in mentorship programmes were less likely to engage in interpersonal violence and skip school, showed gains in academic grades, reported better relationships with

family members and peers, and had lower rates of recidivism after one and four years, compared with youth in the control groups (NDTAC, 2017^[211]). Programmes working with Native American and Alaska Native groups to address historical trauma and other psychosocial issues emphasise the importance of providing youths with a strong, adult mentor from their tribal communities to model healthy behaviours and act as a support for youth who lack strong parental figures in their lives (Lechner and Blyler, 2016^[77]).

Case studies

In this section, we present five brief case studies that illustrate how educators have implemented some of the key practices we identified in Section 4. We selected this combination of case studies to provide examples of a range of approaches associated with educating students who have experienced trauma and/or adversity, preferencing examples that we believe have broader application and could be replicated in other education systems (once customised for the new context). We elected to focus on the United States, Canada (Ontario) and Australia based on their diverse populations, including Indigenous groups and refugees.

The case studies are as follows:

1. *Alaska's Transforming Schools Framework*: This framework was developed in Alaska in the United States to help schools become trauma-informed for all students (including Alaska Native students). The framework has a strengths-based focus on co-constructing positive school environments in collaboration with families and communities.
2. *Trauma-Informed Schools in Indigenous Friendship Centre Communities*: This project was implemented in Ontario, Canada, and sought to support students and community members in Friendship Centre communities by developing trauma-informed approaches and supports for Indigenous students. Trauma-informed school toolkits were developed by students to meet local needs.
3. *Gift of Gallang: A Program with Indigenous Australian Students*: This programme sought to reduce risk for suicide among Aboriginal and Torres Strait Islander children in Australia by cultivating resilience, well-being and hope within the community. Central to this school-based programme was creating a sense of connection and culture and prioritising collaboration amongst community organisations and members.
4. *A Comprehensive Districtwide Approach to Improving Student Behaviour and School Safety*: This case study is from a large school district in the United States that serves a high proportion of students who are from ethnic-minority groups and live in poverty. The approach includes comprehensive student supports, a focus on building SEL, positive disciplinary approaches and the use of school climate data for decision-making.
5. *Trauma-Focused School-Based Interventions in Treating Unaccompanied Refugee Minors*: This intervention was developed to meet the needs of unaccompanied refugee minors who arrive in the United States. The model shows how schools can effectively provide front-line mental health supports for students who have experienced significant trauma and stress.

For each case study, we introduce the intervention or framework, specify its intended beneficiaries, describe how it works, present any evidence for its effectiveness, discuss scaling and sustainability, and provide a list of associated resources.

Case study 1: Alaska's transforming schools framework

The Transforming Schools Framework in Alaska in the United States was developed over several years and underwent extensive review by more than 200 community members, school board members, school staff, counsellors, nurses and administrators before being made publicly available in January 2019 (Fishel et al., 2019^[212]). It was designed and implemented to improve student well-being and academic outcomes by implementing trauma-engaged policies and practices in Alaskan primary, lower secondary and upper secondary schools, and in communities. The framework was designed in alignment with contextual factors that are important in the education of Alaska Native students, including the need for culturally specific programmes and policies and the integration of best practices developed and identified by elders and community members. In addition, the framework focuses on the need for school administrators, educators and policymakers to understand how trauma can affect children's learning and well-being, and the need for positive and healthy relationships to promote learning and healing for students.

Many Alaska Native communities experience intergenerational trauma that originated in the late 19th century, following the forced removal of children from their homes and communities to boarding schools that were often abusive and sought to erase the children's Alaska Native culture. Schools are uniquely positioned to disrupt patterns of intergenerational trauma and its effects as they sit at the intersection of students, families and communities. Alaska's Transforming Schools Framework pays special attention to the experiences and impacts of historical trauma among Alaska Native people. Its approach recognises the systemic impacts of prior policies that did not attend to culture, language, history, resilience and ways of life, and posits that taking a culturally relevant and responsive approach is necessary for trauma-engaged and transformative school settings.

Objectives and intended beneficiaries

This framework is a resource for Alaskan educators, parents and community members who want to help make their schools places of positive transformation and learning for all children.

How Alaska's transforming schools framework works

The framework consists of 11 modules that highlight policies and practices that teachers, school administrators, school district officials and caregivers can adopt in order to create supportive environments within schools. Developers of the framework provide guidance on how to adapt these modules, allowing them to be used independently or in conjunction with one another, and in a way that meets context- and population-specific needs. These modules include the following:

- *Deconstructing trauma:* This module focuses on defining and explaining the biology of stress in order to help teachers and other school staff understand the relationship between childhood stress and undesirable behaviours and outcomes, and to provide a guide for how they might interrupt those pathways to help repair damaged neural pathways and increase capacity for self-regulation. Suggestions are made for how to assess current discipline policies and practices, identify and augment supports and resources available to students at school and in the community, and share this information more broadly.
- *Relationship building:* Positive and authentic relationships at all levels – among peers, adults in schools, between students and adults, and with family and community members – can positively influence student outcomes and counter the negative impacts of developmental trauma. Guiding principles for building meaningful relationships with students are provided in this framework, focusing on empowerment, unconditional positive regard, high expectations and more.
- *Policy considerations:* This module explains how different policy choices at the federal, state, district and school level might impact student outcomes. The module also gives examples of various state policies that try to address child development and childhood adversity. The module lists key areas for policymakers to consider when enacting policy for Alaska schools.

- *Planning and coordination of school-wide efforts:* Community partners, school staff and families are engaged collaboratively and intentionally in the planning process to create buy-in, integrate different perspectives and engage the broader community in trauma-engaged practice.
- *Professional learning:* This trauma-engaged approach highlights the importance of ongoing and embedded professional learning for all school staff, as well as for all adults in a school community, from tribes and elders to school administration and teachers, cafeteria staff, coaches and school board members.
- *School-wide practices and climate:* Creating a predictable and stable environment allows students who have experienced trauma to focus on learning because their core safety needs are being met. School-wide strategies, structures and routines help create a safe learning environment.
- *Skill instruction:* This module reviews the importance of providing opportunities for students to develop a foundation of social and emotional skills and self-regulation skills, using culturally relevant and place-based approaches in order to make learning more effective.
- *Support services:* Support service providers such as counsellors, nurses and social workers play critical roles in trauma-engaged schools, but Alaska districts often face shortages in these areas. Schools are encouraged to address gaps in support services and work collaboratively to increase and diversify support systems in the school environment.
- *Cultural integration and community co-creation:* Collaboration with community members better allows for integration of cultural knowledge and practices, which in turn supports student achievement and reduces disparities in education. School staff should feel prepared and supported to integrate cultural knowledge into educational content and behaviour management strategies.
- *Family partnership:* Schools and districts should invest in connecting with family members with humility and respect, while seeking understanding and establishing strong and two-directional communication in order to support students' ability to navigate school and heal from trauma.
- *Self-care:* In order to prevent secondary trauma and burnout, adults working with traumatised students are encouraged to engage in self-care practices to tend to their own emotional well-being and provide support and positive role modelling for students.

Research evidence

Alaska's Transforming Schools Framework is built upon an evidence base, with each individual module supported by key research findings. For example, the *Deconstructing Trauma* module is developed based on neurobiology and developmental trauma research conducted by the Center on the Developing Child at Harvard University. Similarly, the module on *Relationship Building* is based on studies that have shown that positive and authentic relationships can counter negative impacts of childhood trauma. In addition to research support for this framework, the developers engaged more than 200 community members, school staff and school board members in the crafting of this framework.

The state of Alaska has 54 school districts, all of which have had exposure to this framework as it has been made widely available during educational summits and gatherings. Additionally, in collaboration with the Association of Alaska School Boards (AASB), an online toolkit to accompany the framework has been provided during weekly professional learning events. Currently, the Alaska Department of Education reports that more than 3,000 copies of the framework have been requested and provided to educators, administrators and school staff. A grant provided by the Substance Abuse and Mental Health Services Administration through Project AWARE (Advancing Wellness and Resilience in Education) will also allow for a formal evaluation of the framework.

Scalability and sustainability

This framework is designed to respond to the needs of Alaskan schools, students, teachers, caregivers and communities. However, the evidence supporting the framework is based on studies conducted in various parts

of the United States. Some of the steps and practices recommended in the study are specific to the Alaskan context, recognising the unique history of Alaskan Native people. If properly adapted, these steps can be implemented in other contexts, and considerations are provided throughout the framework in the form of reflective questions, assessment questions and adaptable suggested steps for each module.

Case study 2: Trauma-informed schools in Indigenous friendship centre communities

The Trauma-Informed School project developed by the Ontario Federation of Indigenous Friendship Centres (OFIFC, 2016^[213]) engaged seven Friendship Centre communities in Ontario, Canada, in a multi-phase community-driven project examining the relationship between trauma and education. Findings reinforced the need for education of Indigenous learners in trauma-informed schools to be inclusive of Indigenous holistic approaches to learning, the need for cultural competency, and the importance of trauma-informed relationships and practices in schools.

Phase I of this project focused on engaging the voices of parents/caregivers and community members, including elders, traditional knowledge keepers and healers. Key themes emerged around the need for increased academic and community supports for students, the recognition and engagement of local knowledge and experience, the development of strategies to address fear and discrimination, and the provision of support around the development of Indigenous cultural competency and cultural identity within the school system. Student engagement sessions were held in Phase II of the project and resulted in the creation of a student toolkit that explores the intersections between historical trauma experienced by Indigenous people in Canada, the impacts of trauma, and how trauma-informed approaches can be implemented in schools.

This project and the resulting Trauma-Informed Schools Toolkit demonstrates the benefit of student and community voice and engagement that are strengths-based, community-driven and community-led and should be prioritised when conducting trauma-informed programme development.

Objectives and intended beneficiaries

The Trauma-Informed Schools project sought to support students and community members in Friendship Centre communities in Ontario – including Red Lake, Niagara, Midland, Sault Ste. Marie, London, Sudbury and Dryden – by developing trauma-informed approaches and supports for Indigenous students. This project contributes to our understanding of the impacts of intergenerational and historic trauma and how they contribute to disparities among Indigenous populations, some of which result in negative student outcomes. It considers how schools can cultivate environments that are safe and accepting by establishing and maintaining healthy and respectful relationships.

How trauma-informed schools works

The Trauma-Informed School Toolkit was designed to be owned, implemented and adapted by students to meet local needs and priorities; however considerations are provided for how students can adapt the toolkit based on needs and preferences (OFIFC, 2016^[213]). Trauma-Informed Wise Practices are provided to further support the toolkit and relate it to the needs and priorities identified by Indigenous students. With input from trauma-informed scholars and Indigenous knowledge keepers, these practices support the implementation of trauma-informed approaches in culturally informed ways.

Student engagement sessions resulted in recommendations from students for how schools can implement trauma-informed approaches, as well as specific practices to support and bolster these trauma-informed approaches. Student recommendations emerged around six key themes:

- *Cultural competency*, including creating inclusive and welcoming school environments and providing training for school staff and students.
- *Indigenous culture in the classroom*, which may include the integration of Indigenous culture into curricula and bringing community elders and knowledge keepers into student education.
- *Indigenous culture in school*, such as the inclusion of Indigenous culture in events, programmes, workshops and school initiatives.
- *Supports for Indigenous students of all ages*. This can include supports such as having access to trauma-informed and trained school staff.
- *Trauma-informed relationships in schools* that are respectful, supportive and positive, and engage student voices and priorities in the development and implementation of trauma-informed practices.
- *Culture-based trauma-informed practices* that recognise and understand Indigenous culture and integrate cultural content into curricula.

To build on the recommendations provided by students, tools to support trauma-informed school environments and education were developed during student engagement sessions and were then curated as part of the Trauma-Informed School Toolkit. Tools focused on addressing particular trauma-informed recommendations and were based on local needs and preferences. Examples of these tools include poems and visual projects that focus on improving the relationship between students and adults in positions of authority; a timeline of Aboriginal history in memes, and an Indigenous Approach to History in Canada using Prezi to promote Indigenous history and culture; artwork to express students' cultural identities; and dioramas to demonstrate what cultural inclusion may look like in a trauma-informed school.

Research evidence

Using community-driven and culture-based research methods, the Trauma-Informed Schools project shared findings that contribute to the literature on how best to support the educational needs of traumatised students, with a special focus on Indigenous students. These findings are in alignment with other research that emphasises the need for trauma-informed educational environments that are culturally responsive and inclusive. A summary of these findings is included here:

- School staff (including teachers) and students are all accountable parties in promoting cultural competency.
- Training for school staff in cultural competency is vital, and special attention must be paid to what and how Indigenous culture is taught in classrooms.
- Students reported that culture-informed classes provide greater opportunities for learning because they are rooted in cultural identity, traditional skills and teachings.
- Schools can better promote inclusivity when Indigenous culture is integrated into school environments.
- More research is needed to identify which practices specifically support the successful inclusion of Indigenous culture in schools.
- Trauma-informed approaches often neglect the needs of adult learners and focus too heavily on certain age groups.
- Respectful and supportive relationships among students, teachers, school staff and parents/guardians are necessary to develop school environments that are trauma-informed.
- Students should be consulted on how trauma-informed practices are developed and implemented in their school.
- In order to support the success of Indigenous students and create trauma-informed schools, policy development and research needs to take a multi-sector approach.

Scalability and sustainability

While many of the recommendations and tools developed through student engagement sessions featured above are context-specific, they provide a structure for other educational communities in engaging students, school staff, parents/caregivers and community members in the creation of trauma-informed school practices and guidance.

Case study 3: Gift of Gallang: A programme with Indigenous Australian students

Following a cluster of youth suicides in 2016, the Gift of Gallang school-based programme was implemented in a primary school in Inala, Australia, with the aim of reducing the risk of suicide among Aboriginal and Torres Strait Islander children and young people. The programme was co-designed with key community stakeholders in an effort to prioritise culturally appropriate programming and positive, sustainable outcomes. Educators, parents and carers were engaged in the development, implementation and evaluation of the Gift of Gallang. Key programme elements included hosting activities such as cultural nights to engage the community, and forming the Committee of Hope – a group of key stakeholders from local and area organisations, community members, school-community members and elders who oversaw the development of the programme.

The Gift of Gallang highlights the value of collaboration among a variety of key stakeholders in education and school-based programming, and the importance of prioritising their ongoing involvement in programme evaluation and evolution. Community connectedness was recognised as central to supporting this group of Aboriginal and Torres Strait Islander youth. Additionally, the approach leveraged an ecological model attending to the complex interaction between students, families, members of the community, organisations and society at large.

Objectives and intended beneficiaries

This programme sought to reduce the risk of suicide among Aboriginal and Torres Strait Islander children by cultivating resilience, well-being and hope within the community. Creating a sense of connection and culture guided the development of activities within this school-based programme.

How Gift of Gallang works

The research and evaluation team at Mission Australia, a Christian human and social services organisation, developed a best-practice framework in order to ensure the programme was culturally appropriate. A cultural worker was employed in a consultant role and was charged with identifying and engaging key stakeholders during the programme development process. As a result, the Committee of Hope was established, and these key stakeholders oversaw further programme development efforts. The goal of Gift of Gallang was to “develop a prevention strategy that would prevent suicide and suicide ideation in Aboriginal and Torres Strait Islander children in the community through healing the mind, body and spirit of children and their families” (Hand, 2018^[214]).

There were two primary programme components:

- *Ongoing community engagement via cultural nights:* Cultural nights served as a mechanism for cultivating connection, communication and collaboration between Committee of Hope and community members in order to build capacity to support Aboriginal and Torres Strait Islander families and children, and to strengthen partnerships and referral networks.

- *A school-based prevention programme targeting primary school children:* Children in Grades 4-6 were engaged in a weekly strengths-based programme that focused on healing mind, body and spirit through activities of cultural connection and self-determination. The programme was run during class time and was facilitated by local Aboriginal and Torres Strait Islander community members. Programme content included strategies to support social and emotional well-being, confidence in self-determination, and connection to community and culture.

Research evidence

Programme evaluation was conducted via a survey, focus groups and individual interviews, assessing metrics such as partnerships, community ownership and engagement, implementation, student engagement, impact, programme content and suggestions for improvement. Findings were promising and demonstrated the importance of and need for cross-organisation collaboration and partnerships, community engagement and participation, and links between government departments and community organisations and members to identify and respond to community need. Key stakeholders identified that the programme was successful in accomplishing several goals, including strengthening cultural pride and identity, and bolstering a sense of connection for families who participated in cultural nights as well as students involved in the school-based programme. In addition, stakeholders believed the programme should remain in the hands of local Aboriginal and Torres Strait Islander community members.

Scalability and sustainability

The school committed significant investment of staff time, use of facilities and administrative support for successful implementation. The evaluation provided key recommendations across a framework for similar programmes to build upon and adapt in culturally relevant and context-specific ways: partnerships, community ownership and engagement, programme implementation and future evaluation.

Case study 4: A comprehensive districtwide approach to improving student behaviour and school safety

Since 2008, the Cleveland Metropolitan School District (CMSD) in Ohio in the United States has engaged in efforts across its 103 schools to improve student outcomes, including student behaviour, competence, attendance and conditions for learning ((Gagnon and Leone, 2001^[215]); (Osher et al., 2014^[89])). These efforts are of particular importance because the district serves students with high rates of adversity, trauma and experiences of marginalisation. These efforts have included (1) data-informed planning, using data on conditions for learning; (2) implementing the PATHS (Promoting Alternative Thinking Strategies) social and emotional learning programme from pre-kindergarten to Grade 5; (3) establishing student support teams to review student needs and connect students to appropriate resources; and (4) opening planning centres as an alternative to in-school suspension in order to reduce escalation of negative student behaviour as well as out-of-school suspension. CMSD rolled out these initiatives universally across the district and they have remained in place since their implementation.

After completing an audit to assess the quality and sufficiency of health and human services provided to students, CMSD leveraged the findings of the audit, the ongoing collection and use of data, and existing research to employ a three-pronged approach to increase the district's capacities to improve conditions for teaching and learning. These efforts were largely in response to the district's high rates of student adversity (100% of CMSD students received free or reduced-price lunch based on low family income in the 2011-12 school year), the need to prevent and address student mental health challenges (including trauma), and an incident of violence involving a student who killed two adults and two students before killing himself after being suspended for fighting in school. The response to this incident included spending millions of

dollars on the installation of metal detectors and hiring new security officers, which raised concerns and questions regarding the appropriate response to underlying student and safety needs within the district.

Objectives and intended beneficiaries

Urban schools are often viewed as unsafe and disorderly, with poor conditions for learning. Osher and his colleagues emphasise the importance of students attending and learning in safe and orderly school settings, without the need for control-oriented, punitive and exclusionary practices. CMSD's districtwide approach aimed to reduce behavioural incidents, improve attendance, and learning conditions by adopting a multi-tiered approach discussed in Section 4 to address risk factors influencing safety and order in its schools.

How CMSD's approach works

Strategies within the first and second tiers focused on resources to support academic achievement planning, such as instructional resources, SEL skills, levels of student support and written curriculum. Top-tier strategies included achievement planning and conditions for learning that support students with the greatest need in an individualised way. Additionally, key stakeholders collaborated to improve conditions for learning and academic achievement for CMSD students by implementing these components:

- *Data-informed school-wide planning that included data on conditions for learning:* Students were given short surveys to assess conditions for learning, including experiences of physical and emotional safety, connectedness and support, challenges, and peer social and emotional competence. Data was used to adapt interventions and adjust plans as needed.
- *Universal social and emotional learning in primary schools:* Teachers from pre-kindergarten through to Grade 5 were trained in PATHS, an empirically validated SEL programme. The PATHS curriculum focuses on teaching self-control, feelings and relationships, and interpersonal cognitive problem-solving and supports students in learning how to understand, regulate and express emotions.
- *Student support teams:* Student support teams are made up of three staff: a building administrator, a qualified teacher, and an assigned support staff member such as a school psychologist or social worker. When students in need of support are identified, a referral process is set in motion, with the aim of responding in a timely and coordinated fashion. Support teams work together to assess the problem, collect necessary information, identify student strengths, review baseline data, set goals, design intervention(s), and establish a method for measuring and review.
- *Planning centres:* In-school suspension was replaced with planning centres that use SEL strategies and are staffed by planning centre instructional aides (PCIA) who provide support to students instead of acting as disciplinarians. The centres provide a space for students to de-escalate and regulate and support the use of healthy coping strategies.
- *Student voice and engagement:* A citywide strategic initiative created by Cleveland's mayor, other civic leaders, and school district leaders in 2012 mandated student engagement, which has become a strong asset for the school district since then. For example, the Student Advisory Committee of 450 students across the 10 high schools in the district meet with the superintendent on a quarterly basis to improve school climate and safety, preparation for college and career, and other issues important to students. The school-based recommendations are then shared with school leadership teams and educators.

Research evidence

Despite significant budget cuts and deficits, CMSD's efforts showed great promise, as demonstrated by findings following four years of data collection. Highlights of programme effectiveness include (Osher et al., 2014^[89]):

- Improved conditions for learning for students in Grades 5-12, including increases in academic challenge, an improved peer social and emotional climate, and improvements in creating a safe and respectful climate as well as student support.
- Improved teacher ratings of student social competence and attentiveness for students in Grades K-5.
- Improved student attendance districtwide by implementing targeted efforts to increase attendance.
- Student behaviour improvements, including a decline in the average number of reported suspendible behavioural incidents per school from 233.1 to 132.4. Reductions were seen in disobedient/disruptive behaviour, fighting/violence, harassment/intimidation and serious bodily injury.
- A 58.8% reduction in out-of-school suspensions districtwide.
- Schools with “medium” or “high” implementation of PATHS, student support teams and planning centres saw a more significant decrease in disciplinary incidents. Perceptions of safety increased when implementation quality was rated higher and these three interventions were in place.

Scalability and sustainability

CMSD’s programme report includes recommendations for programme implementation based on research evidence, cost-effectiveness considerations and the findings of this study. These recommendations include (1) assessing factors contributing to disparities in school safety and discipline; (2) expanding the collection and use of data on non-academic conditions in schools; (3) applying tiered approaches to prevention and addressing mental health challenges, including those related to trauma; (4) implementing evidence-based social and emotional learning; (5) broadening investment in “humanware” student support activities; and (6) supporting the development of individual and organisational capacities to reduce disparities, while building safe, orderly schools with strong conditions for learning.

Based on the success of these efforts, the Conditions for Learning Survey and the planning centres model have been used in districts across the United States. Additionally, PATHS programming has been implemented broadly across the United States and in other OECD countries.

Case study 5: Trauma-focused school-based interventions in treating unaccompanied refugee minors

In this case study, we highlight the benefits of mental health services provided to refugee students highlighting practices that were implemented in a New York City public secondary school serving Mexican and Central American unaccompanied refugee minors (URM) using Trauma-Focused Cognitive Behavioural Therapy (TF-CBT). TF-CBT is a short term, manualised treatment for children who have experienced trauma that integrates and adapts Cognitive-Behavioural Therapy (CBT) techniques such as cognitive processing and reframing, management of stress, trauma exposure, parental treatment, and modifications to meet cultural needs (Franco, 2018_[216]). Nearly 40% of new refugees in the United States are minors (Franco, 2018_[216]). The many unique traumatic stressors experienced by URM before, during and after the migration process, and the increased risk of PTSD and other psychological sequelae, have direct impacts on the challenges faced by this population within the educational system. Exploring how to support these students in trauma-informed and culturally relevant ways is of significant importance.

Migration trauma needs to be understood as a process with three components: pre-migration traumatic stressors, in-journey stressors and post-migration stressors. The complex stressors experienced as part of the three-stage migration process can result in mental health challenges such as PTSD, depression and anxiety. Franco (2018_[209]) argues that URM are more likely than other migrant groups to develop psychiatric symptoms as a result of their experiences. Several mental health interventions have been demonstrated as effective with this population in treating PTSD, anxiety and depression, including TF-CBT, Cognitive-Behavioural Intervention for Trauma in Schools (CBITS) and the Mental Health for Immigrants

Program (MHIP). While these various interventions have demonstrated efficacy, this New York City public school used TF-CBT for its strengths in culturally responsive practices.

Objectives and intended beneficiaries

With hundreds of thousands of immigrant students in the United States, schools are often a primary provider of mental health services to URM youth. School-based mental health services for these youth need to take into account the tripartite process of migration, but also incorporate the cultural values, norms and resiliency of URM.

How trauma-focused school-based interventions work

In order to demonstrate the implementation of a culturally-adapted approach to using TF-CBT with URM, Franco (2018^[209]) describes the experiences of a 16-year-old girl who recently migrated from El Salvador with the assistance of a *coyote* (a human smuggler who is paid to transport people voluntarily across international borders) and was apprehended and detained in a detention centre in Texas prior to beginning school in a New York City public school. This case study provides an example of school-based trauma-informed treatment with cultural adaptations. Due to challenges related to physical space and student programming, it was not possible in this school setting for a manualised intervention (such as TF-CBT or CBITS) to be used with adherence to fidelity standards. Adaptations were made to integrate TF-CBT techniques along with culturally responsive changes, such as facilitating the group in Spanish. This intervention included a group that focused on building trust, psychoeducation and trauma exposure. Additionally, consultation was also provided to caregivers as is a standard within the TF-CBT model.

Some specifics regarding the intervention, as well as cultural and trauma-informed modifications to assessment and treatment, are summarised here:

(1) Teachers participated in the process by initiating referrals after observing concerning behaviours in the school environment. (2) A connection was made with the school social worker to facilitate engagement in the intervention/program. (3) Support services offered to URM, including group and individual sessions, are provided in Spanish and are reviewed with students prior to participation. (4) A 10-month weekly group was offered to Central American secondary school girls. (5) The TF-CBT group intervention paid special attention to certain skills and sequencing considerations based on the students' multiple trauma exposures and migration experiences.

- An example of this was beginning the group with the *Enhancing Safety* skill in the PRACTICE model (P. Psychoeducation and parenting skills, R. Relaxation, A. Affective modulation, C. Cognitive processing, T. Trauma narrative, I. In vivo desensitization, C. Conjoint child/parent sessions, E. Enhancing safety and future skills), which allowed for the development of a safe environment within the group
- Psychoeducation about PTSD, depression and anxiety symptoms (as they relate to the migration experience) was offered. These psychoeducation sessions also included parents and/or guardians to inform them about the purpose of the group, migration trauma and trauma symptoms; identify and address stigma; and encourage parents and guardians to become stakeholders in the students' process of healing.
- Cultural dynamics related to trust, respect, discipline, shame, hierarchy and family dynamics informed treatment considerations and interventions.
- When readiness was assessed, group members were invited to begin sharing and exploring their trauma narrative through journaling, art, music, acting and forms of storytelling. Prompts for constructing narratives were provided, taking into account the unique experiences of URM and group members.

Research evidence

The student highlighted in this case study demonstrated significant improvements in school performance after one month of participating in group and individual sessions with the school social worker and peers. Her attendance became more consistent, she no longer slept during class and her effort in class improved. This paper reviews interventions with an evidence base for supporting URM, including Trauma-Focused Cognitive Behavioural Therapy (TF-CBT), Cognitive-Behavioural Intervention for Trauma in Schools (CBITS) and Mental Health for Immigrants Program (MHIP).

Generally speaking, TF-CBT, CBT, CBITS and MHIP are models with an evidence base that demonstrates effectiveness at reducing trauma symptoms in URM and immigrant youth. The literature identifies an increase in receptiveness to treatment (despite cultural barriers that may arise, such as stigma related to therapy) when interventions are adapted to incorporate cultural norms, values and resilience factors.

Scalability and sustainability

Although this case study presents an intervention that is specific to unaccompanied refugee children, school-based TF-CBT has been successfully implemented with children who have experienced various kinds of trauma. Considerations for providing culturally responsive and trauma-informed treatment to URM in school settings are briefly discussed, as well as practice, policy and research implications. It is proposed that further research is needed around how best to support URM in school settings, including longitudinal, multi-modal and participatory action research.

Conclusion

We began this report by describing the several causes of trauma and/or adversity among children, such as violence or displacement. Next, we discussed the effects of stressful events, such as poor academic performance and substance abuse, and we underscored the damage that chronic and accumulated stress can inflict on children as well as educators. Our discussion then centred on how certain individual or group characteristics expose children and adults to risk factors for adversity and trauma, such as belonging to a minority group, being involved in the foster care or juvenile justice system, or being displaced, as well as the role of age, gender and disability. Our attention then turned to the mitigating factors that increase resiliency in response to adversity and trauma, such as a sense of control, a feeling of safety and strong connections with others.

With this foundation, we explored how to improve education outcomes for students who have experienced adversity and/or trauma. This research established the importance of evidence-informed policies that lay the groundwork for an education that is accessible and relevant to all learners and of high quality, as well as the importance of structures and resources needed to establish resilience and well-being for all learners. We then explored the core ingredients of safe and supportive school environments for all learners, especially for children who have experienced trauma and/or adversity. Teachers' well-being is another important factor, as is their ongoing professional development so that they can use trauma-informed approaches and effective skill-building teaching strategies. At the student level, we discussed various strategies to identify and meet learner needs, as well as methods for effective teaching. We highlighted multi-tiered approaches to student support and learning – a framework for promoting universal, selective and targeted interventions to meet learner needs.

The case studies provide examples for implementing the key practices we explored. *Alaska's Transforming Schools Framework* provided an example of a strengths-based approach for working with families and communities to create a positive school environment. *Trauma-Informed Schools in Indigenous Friendship Centre Communities* demonstrated how trauma-informed approaches can be rolled out. *Gift of Gallang: A Program with Indigenous Australian Students* provided an example of how to make connections with culture to cultivate resilience. *A Comprehensive Districtwide Approach to Improving Student Behaviour and School Safety* demonstrated the importance of social and emotional learning and school climate for decision-making. *Trauma-Focused School-Based Interventions in Treating Unaccompanied Refugee Minors* showed how schools can effectively provide mental health supports for students.

The practices highlighted in these case studies provide evidence to being effective, but further evidence is needed to test them at scale, over longer time frames and in different contexts. Further, while there are many examples of promising practices, we did not find evidence of all these practices coming together in a single locale. Policies, funding, and services to address disparities and inequity are not optimally coordinated (OECD, 2012^[217]). Despite ample research that suggests key ingredients for supporting educational outcomes, there is limited scholarship on culturally responsive practices (Bottiani et al., 2017^[218]). Much of the existing research and evaluations of interventions focused on examining changes in the individual rather than the relationships or the setting. Limited attention is given in research programming to strength-based approaches that appreciate community assets, build social capital, develop collectivism and raise the youth voice.

Building on the guidance provided by INEE (McNatt et al., 2018^[171]), the following should be considered to improve education outcomes for students who have experienced adversity and/or trauma:

- Educational policies and programmes should start by recognising the holistic development and well-being of the child.
- Long-term collective resilience is enhanced through systemic and multi-sectorial policies and programmes that engage all levels of the social ecology, such as parents and the community, in addition to students and teachers at school.
- Linkages should be made between schools and services and supports in other sectors (e.g. child welfare, justice system).
- Teachers should use learner-centred teaching methods that are informed by the latest knowledge on the effects of adversity and trauma, as well as strategies to promote social and emotional skill development, student voice and participation to build individual resiliency.
- Administrators, teachers and learners should create safe spaces in the classroom, a supportive school-wide learning environment, and a climate of safety and respect.
- Teacher education, professional development and support to understand and respond to the adversity and trauma of learners, and to promote their own well-being, need to be prioritised.
- Frameworks, such as multi-tiered approaches, are useful to identify and meet the needs of all learners.
- Technical assistance centres and networks can serve as effective mechanisms of knowledge transformation to share evidence-based practices with educators and help them meet the needs of all students, and to provide guidance about how to meet the specific needs of sub-populations of students.

Together, these approaches should provide better learning experiences for all learners, especially those who have experienced adversity and/or trauma.

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Appendix A. Methods

This working paper is based on evidence gathered through a desk review. Using guidance from OECD, we compiled a comprehensive pool of relevant literature to synthesise the pertinent evidence. First, we present the scope of our work, and then we explain the review process. Our review consisted of several stages: data collection, data extraction and screening, coding and data synthesis.

A.1. Scope

This review focused on children and youth from early childhood through to young adulthood.

Our geographical scope was global (OECD and non-OECD countries) for publications on causes and effects and exacerbating and mitigating factors of adversity and/or trauma experienced by children and youth. However, because effective educational models, initiatives, interventions and policies are context-specific, we limited our sources to OECD and its 37 member countries when considering case studies and strategies of practice.

Our chronological scope was initially limited to studies published since 2010. For OECD and country-level policies and models of educational systems that target students who experience adversity and trauma, we initially limited sources to those published since 2015. However, we considered older pieces of information if we needed to fill in gaps in the research, or based on their importance in the field.

Our approach took into consideration the emerging effects of the 2019 novel coronavirus (COVID-19) on individuals and families. Since experiences with COVID-19 were and are changing on a daily basis and the ultimate impact of the pandemic is still largely unknown, we did not search COVID as a separate topic but were responsive to emerging information in our desktop review and case studies. We only included COVID-19-related documents if their primary focus was on education for students who have experienced trauma and/or adversity.¹²

There were two main limitations of the scope of work for this study. First, due to the limited timeline and resources available for this study, we relied on available publications and resources and did not conduct data collection from individuals. Second, while our approach presents an understanding of OECD countries, the depth of available information varied amongst member OECD countries, and the evidence base for effective policies, initiatives and models was limited.

A.2. Data collection

We collected data through a combination of database and internet searches, and through expert recommendations.

A.2.1. Development of search terms

Our search terms were guided by the three parameters displayed in Table A-1.

¹² Although we recognise that many students may have been negatively affected by the pandemic in a variety of ways, and that the effects of the pandemic may exacerbate other issues, we did not consider COVID-19 alone to be traumatising.

Table A-1. Search terms

Themes	Populations	Locations
Education	Child	OECD Japan
Trauma	Adolescent	Australia Korea
Adversity	Youth	Austria Latvia
Violence	Student	Belgium Lithuania
Abuse	Indigenous / Aboriginal/First Nation/Alaska Native/American Indian	Canada Luxembourg
War	(also defined sub-populations such as Cherokee, Inuit, Saami)	Chile Mexico
Conflict		Colombia Netherlands
Poverty	Refugee and migrant	Czech Republic New Zealand
Stress	Displaced	Denmark Norway
Teaching	Students with disabilities	Estonia Poland
Learning	Students with impairments	Finland Portugal
Education administration	Disadvantaged students	France Slovak Republic
Education policy		Germany Slovenia
Teacher training		Greece Spain
Teacher preparedness		Hungary Sweden
Teacher induction		Iceland Switzerland
Teacher support		Ireland Turkey
Intervention		Israel United Kingdom
Social-emotional		Italy United States
Mentoring		
Classroom		
School climate		
School safety		
Community safety		
Mental health		
Behavioural health		
COVID-19		

A.2.2. Database searches

We retrieved sources from OECD's iLibrary and grey literature from online repositories of disparate organisations, institutions and centres, including:

- The Substance Abuse and Mental Health Services Administration's (SAMHSA) National Child Traumatic Stress Network (NCTSN)
- The United Nations Educational, Scientific and Cultural Organization (UNESDOC Digital Library)
- Education International
- The World Bank Open Knowledge Repository
- The International Rescue Committee (IRC)
- The Inter-agency Network for Education in Emergencies (INEE)
- The Refugee Studies Centre (RSC)
- The International Organization for Migration (IOM)
- The Norwegian Refugee Council (NRC)
- Save the Children
- The US. National Center on Safe and Supportive Learning Environments (NCSSLE).

These organisations provided sources drawn from and/or created for OECD countries, as well as sources producing evidence-based research from a range of contexts outside of OECD countries where students have experienced adversity and/or trauma, which may be especially relevant for OECD countries serving as host countries for refugees and migrants.

Extracted documents varied in purpose, format and audience but included:

- literature reviews, systematic reviews and meta-analyses
- policy papers/briefs that review blueprints and frameworks
- assessment reports
- commentary/discussion papers.

A.2.3. Expert recommendations

We assembled an advisory panel of AIR experts with particularly relevant and complementary expertise who have committed to enhancing the scope and quality of our work. We asked our expert panel to share their recommendations for promising and/or effective models in the following areas, with a particular focus on students who have experienced trauma and/or adversity and (a) are from Indigenous populations, and/or (b) have a disability, and/or (c) are refugee/migrant/displaced:

- identification and assessment for students who have experienced adversity and/or trauma
- interventions and practices for student engagement (focusing on educators as well as students)
- educator capacity development (training, ongoing support, monitoring)
- interventions, initiatives, models and practices to promote stakeholder engagement (parents, communities, etc.).

In addition to providing recommendations for examples of effective approaches, we engaged the expert panel to help us fill any gaps in information that emerged as we completed screening and coding for the documents we had in hand.

A.2.4. Screening and extraction of relevant information

We considered these criteria for inclusion review: (a) evidence of effectiveness regarding the teaching or learning of students who had experienced adversity and/or trauma, and (b) practice-oriented information on lessons learned that will be relevant in diverse OECD countries.

We carried out the initial screening in two steps. First, we conducted a brief screening to ensure that each document was consistent with our timeframe, applied to pre-school to secondary level education, focused (at least in part) on trauma and/or adversity, and addressed a topic relevant to one or more of the research questions.

Next, for documents that passed the initial screening, we coded geographic location(s), whether the document addressed an intervention, whether the document targeted any special populations of interest, and its correspondence to each of the four parts of our working paper. A single researcher conducted the data extraction for each publication; however, all coders were trained in the same coding process before starting coding. In addition, 15% of the screened sources were double coded by different coders for quality assurance purposes and to ensure consistency.

All coding of the compiled sources took place electronically using a programmed Excel spreadsheet with sections and codes aligned with the four objectives of this paper. We stored all our files on the Microsoft SharePoint platform to allow team access and team management.

Following initial rounds of screening and analyses, we supplemented our search with other sources as needed to ensure that we were able to address all four of the key objectives outlined by OECD.

A.3. Information extraction and synthesis

Following the two rounds of screening described above, we engaged in a process of more detailed coding. The purpose of this coding was to extract themes and evidence from the collected documents and prioritise documents for inclusion in our final research synthesis. See Table A-2 for a summary of the information we extracted.

Table A-2. Summary of types of information extracted

Section	Code
Bibliographic data	Title Publication year Source Author(s)' last name, first name
Format	Type of study (research-, policy-, practitioner-oriented) Type of data that is reported in this publication Level of foci (e.g. society, national government and its policies, local government and its policies, community, family, individual) Level of outcome discussed (systems change, multi-sector, school level, individual level)
Demographics	Age group targeted in the publication Is the study gender-specific?
Content for Part 1: Causes and effects	Causes/sources of trauma are discussed in this publication (e.g. event, natural disaster, setting, violence) Types of cognitive outcomes of adversity/trauma (e.g. perception of self and/or others, academic achievement) Types of social and emotional outcomes (e.g. self-regulation, relationship with others, classroom engagement, school climate)
Content for Part 2: Factors that mitigate or exacerbate	Mediators and moderators at the individual and environmental level (e.g. age, grade, individual experiences, social context, classroom/school climate, relationship with peers, relationships with adults)
Content for Part 3: Educational systems in OECD countries	Identification and assessment of students who experienced adversity and/or trauma Interventions and practices for student engagement (teacher and student) Capacity development (training, ongoing support, monitoring) Interventions, initiatives, models and practices to promote stakeholder engagement (e.g. parent, community, teachers)
Content for Part 4: Case studies	Effective models for potential scale-up Effective models that are sustainable Diverse and innovative models to engage students who are disconnected or disadvantaged (e.g. distance learning, modelling, or mentoring and coaching)

Two separate teams of coders participated in this process. Using pre-programmed Excel spreadsheets, the first team looked for evidence in the documents that identified which causes, effects and factors mitigate or exacerbate adversity and/or trauma, and the second team identified practices, policies and effective models that address the needs of students who experience adversity and/or trauma. Evidence and examples from document text that supported observed themes or findings were extracted and compiled in the spreadsheet for later reference, with variations in what was extracted based on the four study objectives. Coded spreadsheets then served as primary references guiding the synthesis of the research.