Kia pounamu te rongo

An exploration of key contextual factors that influence child and youth mental health and substance use in Aotearoa New Zealand

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Kia Pounamu te Rongo

Dr Tai Kake gifted the te reo Māori name of this report ‘Kia pounamu te rongo’ and found inspiration by the whānau at Mana Mokopuna – Children and Young People’s Commission.

Self-care note

This report includes research about contextual factors, including those that promote mental health and wellbeing and those that can have detrimental and harmful influences on children and young people. This includes physical, sexual, and emotional abuse, neglect, family violence, thoughts of suicide, self-harming, and other adverse and traumatic life experiences. If you or your whānau are struggling with any of these issues, please consider if reading this report is right for you at this time.

The report also examines and discusses the likelihood of experiencing these factors and their later impact. While contextual factors may increase the average risk of mental health challenges or problematic substance use in the population, this outcome is not inevitable for individual people.

If you need to talk to someone, free text or call 1737 any time for support from a trained counsellor or peer support worker.

Foreword

In September 2024, the Minister for Mental Health Matt Doocey announced funding for the first study into the prevalence of mental health conditions and addiction in children and youth, with $2 million per annum made available on an ongoing basis for prevalence studies.

Over the last three years, Te Pou has worked with many others to build impetus for a series of interconnected mental health and addiction epidemiological studies to provide more up-to-date and robust information, starting with children and young people.

The funding announcement is a major milestone for all those involved. It is a fantastic example of what can happen when organisations collaborate. A large-scale population study will make a substantive difference to helping ensure the right services and supports are available for children, young people, and whānau.

As well as calling for investment in prevalence studies, Te Pou has undertaken technical scoping work to support the design of future studies. We recommend that studies use a core set of common measures and focus on gathering information in three key areas using a whānau approach:

- quantifying need (peoples' experiences)
- quantifying unmet need (the services, supports, and cultural resources gap)
- measuring contextual influences, including protective factors.

Measuring contextual factors is crucial so that patterns with prevalence rates and access to supports and services can be identified. It also means the drivers of mental health challenges and problematic substance use for children and young people can be better understood. Building in measures for, and the time to analyse, contextual factors will support the focus on prevention and early intervention – an emphasis that government and non-government stakeholders continue to highlight as important.

This narrative review offers insights into 10 key contextual factors, as a starting point for the design thinking needed on the inclusion of contextual factors in prevalence studies for children and young people.

Further review and stakeholder consultation is crucial for determining which contextual factors are a priority to examine. Most importantly, the voices of children and young people, of tamariki and rangatahi, and particularly those who are often misrepresented or misunderstood, are vital in informing the design of the prevalence study.

Te Pou will continue to support this important research. This knowledge is crucial to improving outcomes for children, young people and whānau.

Ngā mihi

Rae Lamb (Chief Executive Te Pou and Blueprint)

Contents

Executive summary

The early stages of life are crucial for health promotion and strengthening protective factors, alongside recognising potential risk factors for mental health challenges and problematic substance use (McGorry et al., 2024).[1] For Māori, the focus on tamariki and rangatahi is a foundational cultural value, an acknowledgement of whakapapa, and an expression of aroha.

To support a greater focus on promotion, prevention, and early intervention across the life course, particularly in the child and adolescent years, the Government's investment in the first ever child and youth mental health and addiction prevalence study in Aotearoa needs to include the measurement of a range of contextual factors (Ministry of Health, 2024b).

Contextual factors encompass a broad range of social, cultural, economic, historical, and environmental influences on mental health, substance use and wellbeing, which are often referred to as risk and protective factors. The inclusion of contextual factors will help to better understand population-level trends, drivers, and inequities in child and youth mental health and substance use. Developing a deeper understanding of the role of contextual factors is vital for planning, targeting and resourcing preventative, holistic, and multi-sector strategies to improve child and youth mental health and addiction, and address inequities (Fleming et al., 2024; Office of the Auditor-General, 2024).

There are many interrelated and interacting factors within the wider context of peoples' lives. This narrative review identifies and describes 10 key contextual influences (including protective factors) that could be considered as part of the child and youth mental health and addiction prevalence study. The information in this review may also help policymakers and practitioners focused on primary prevention and early intervention.

Review method

This review builds on two earlier reports. Te Pou recently conducted a review of the social determinants of mental health and substance use with a focus on adults (Te Pou, 2023). Koi Tū also reviewed factors influencing youth mental health (Stubbing, Rihari, et al., 2023; Stubbing, Simon-Kumar, et al., 2023). This review further explores the key influences on children and young peoples' mental health and substance use.

This review included two stages. A preliminary scan identified 10 contextual factors that were 1) emphasised by young people, 2) frequently reported in the published literature, and 3) shown to have a relatively strong impact on mental health and substance use among children and young people (see Table 1 and Appendix: Preliminary scan).

[1] For the purposes of this review, children or tamariki are aged 0 to 14 years and youth or young people are aged 15 to 24 years. There is overlap with the term 'adolescents' or rangatahi which often include those aged 13 to 19 years.

Table 1. The 10 contextual factors explored in this review that influence child and youth mental health challenges and problematic substance use

Contextual factors explored in this review
1) Adverse childhood experiences (including childhood maltreatment)
2) Bullying
3) Cultural and social identity
4) Experiences of racism and other forms of discrimination
5) Whānau environment
6) Peer relationships, connectedness, and loneliness
7) Engagement with school and work
8) Social media and technology
9) Socioeconomic factors
10) Substance use

A narrative literature review was then undertaken for each individual factor. This brings together local and international data and research on how each factor has been defined in research, and how influential and widespread each factor is within Aotearoa.

Key findings

Based on local and international literature, findings indicate the biggest negative influences on mental health and substance use of children and young people are:

- childhood maltreatment
- multiple childhood adversities
- involvement in bullying
- experiences of discrimination and racism
- a lack of engagement in employment, education or training.

Findings highlight how these contextual factors disproportionately impact children and young people, with some populations experiencing much greater impacts than others.

Childhood maltreatment, particularly sexual and physical abuse, is a major concern. In Aotearoa, young people who have experienced childhood sexual abuse are up to 8 times more likely to experience depression, nearly 5 times more likely to experience anxiety, and up to 5 times more likely to experience problematic substance use (Fergusson et al., 1996). Moreover, the negative influences of childhood maltreatment can persist into adulthood (Fergusson, McLeod, et al., 2013; Lindert et al., 2014; Telfar et al., 2023).

Aotearoa has one of the highest rates of bullying in the OECD. Estimates are that 1 in 3 primary or secondary school students are bullied on a monthly basis (Kljakovic et al., 2015; Mhuru & Ministry of Education, 2021). Bullying victimisation can have a moderate to large impact on developing mental health challenges and problematic substance use (Coggan et al., 2003; Li et al., 2022; Raskauskas, 2009).

From a preventative and strengths-based perspective, protective factors are important to measure to understand what promotes mental health and wellbeing among children and young people. Positive relationships with parents and peers, strong cultural identity, and positive experiences with school all have protective influences (Evans et al., 2023; Fletcher et al., 2023; Stats NZ, 2022a, 2022c; Tait et al., 2023). Such protective factors can contribute to healthy development, prevention, and early intervention for all children and young people, regardless of whether they meet diagnostic criteria for addiction or mental health conditions.

Some population groups are often more impacted by contextual factors than others. This includes children and young people who are Māori, Pasifika, from migrant and refugee backgrounds, identify as rainbow,[2] living with a disability, living in poverty, or involved with the youth justice system or Oranga Tamariki. Multiple forms of inequality or disadvantage can also intersect and compound to impact peoples' mental health and wellbeing. For example, 1 in 10 young people experience racism every year, and this is more commonly reported by Māori, Pasifika and Asian youth (Crengle et al., 2012; Harris et al., 2024). Bullying and harassment affects 1 in 2 rainbow youth in secondary school and 1 in 4 at university (Treharne et al., 2016; Webber & McGregor, 2019). Forty percent of disabled people report experiencing discrimination each year, and disabled children and youth often report experiencing discrimination in healthcare and education settings (UNICEF, 2021).

A better understanding of both positive and negative influences is vital to target preventative supports and services for priority population groups and reduce the prevalence of mental health challenges and problematic substance use for children and young people, and address health inequities. For example, a strong sense of cultural identity reduces the risk of depression, contributes to improved wellbeing and adaptive coping over time, and buffers against the detrimental effects of discrimination.

There are a range of contextual factors that are becoming more widespread and visible over time which may be exerting a greater influence on trends in population prevalence rates than understood from previous research. These factors include, but are not limited to, youth vaping, family harm,[3] unwanted sexual experiences, loneliness, household food insecurity, social media, school withdrawal, and unemployment (Ball, Crossin, et al., 2022; Education Counts, 2024a; Fleming et al., 2021; Ministry of Health, 2024a; New Zealand Family Violence Clearinghouse, n.d.; New Zealand Police, 2024).

[2] Rainbow or LGBTQIA+ refer to people with diverse sexualities, gender identities and expressions, and/or intersex variations.

[3] The New Zealand Police (2024) defines family harm as "a holistic view of issues occurring within a family, and their ongoing detrimental effects. This reflects the many intersecting stressors that can contribute to family harm, including poverty, housing instability, mental illness, and substance issues".

Limitations and research gaps

One limitation of this review is the focus on well researched contextual factors included in review studies.[4] This focus potentially omits new and emerging areas that are bringing large social changes that children and young people are needing to respond to. This includes emerging areas like climate anxiety, intergenerational inequality, sociopolitical changes, the ongoing effects of the COVID-19 pandemic and lockdowns, and increasing access and exposure to pornography, and other potentially harmful internet content.

The criteria for inclusion of contextual factors in this review was guided by research highlighting the views of young people on important influences for them, as well as international reviews. Important factors for tamariki and rangatahi Māori and young people with lived experiences of mental health challenges and problematic substance use in Aotearoa are however likely missed.

This review identifies some local research gaps in understanding contextual factors. In some areas we rely heavily on overseas research, especially for emerging factors, to anticipate their potential influence on child and youth mental health and substance use. For example, vaping and the use of social media and digital technology (like screen time). Whilst we know how widespread the use of vaping, social media, and technology are in Aotearoa, the extent of their influence on child and youth mental health, substance use, and wellbeing is yet to be thoroughly examined.

Other potential areas needing more research include whānau wellbeing, cultural identity, loneliness, school connectedness, and discrimination experienced by rainbow and disabled children and youth in particular. These research gaps have implications for the prevalence study, routine national surveys, and longitudinal studies.

Recommendations

We recognise it is not feasible to include all contextual factors in the first child and youth mental health and addiction prevalence study. Hence, there needs to be a clear rationale for prioritising those included. It is also crucial that sufficient resourcing enables the time and expertise needed to analyse the data gathered. Key aspects that need to be considered when prioritising and determining which contextual factors to include in the prevalence study include stakeholder priorities (including lived experience and cultural perspectives), health inequities, existing information about the factor's influence and spread, and current research gaps.

The voices of children and young people and their unique experiences and challenges of growing up are vital to informing the design of the first mental health and addiction prevalence study in Aotearoa (Fleming et al., 2020; Stubbing & Gibson, 2019, 2021).

[4] Refer to the Appendix for the inclusion criteria for stage one of the review.

To help make decisions on which factors to include in the prevalence study, and to address key research gaps, the following next steps are recommended.

- Collaboration is crucial for designing a prevalence study. Further consultation with children and young people about the drivers (positive and negative, from their perspectives) of mental health and addiction is recommended. This needs to include a particular focus on the views and experiences of priority groups who are frequently misrepresented or misunderstood. A child and youth advisory group needs to be established to inform the design and implementation of the prevalence study, working in partnership with a diversity of lived experience, whānau, Māori, Pacific, Asian, disabled and rainbow communities, and clinical and academic experts.
- Explore opportunities to examine contextual factors through existing national studies or surveys and identify opportunities where existing studies or surveys could be utilised to help fill research gaps. Also explore the potential for existing data sources to be linked with the child and youth prevalence study.
- Review child and youth mental health and addiction epidemiological studies currently being conducted overseas and the contextual factors that have been, or are planned to be, measured. Examine processes used to select these contextual factors, as well as the constructs and measures used to collect data about contextual factors.
- Ahead of the child and youth prevalence study, consider undertaking a feasibility study to test the measures for contextual factors to examine the relevance and utility for Aotearoa.

Background

Childhood, adolescence, and young adulthood (ages 0 to 24)[5] are important times for health promotion and strengthening protective factors, alongside recognising and reducing potential risks for mental health challenges and problematic substance use (McGorry et al., 2024). The onset of mental health challenges tends to peak in late adolescence and early adulthood (Solmi et al., 2022). Mental health challenges during childhood and adolescence can have long-term impacts across life stages (Fergusson & Horwood, 2001; McGorry et al., 2024).

In Aotearoa, children and young people (tamariki and rangatahi) make up about one-third of the population (31 percent were aged 0 to 24 years in 2024) (Infometrics, 2024; Stats NZ, 2024b). Whilst the total population is aging (median age is 38 years), the Māori and Pasifika populations are youthful with a large proportion of people aged under 25 years (median ages are 27 and 25 years respectively) (Infometrics, 2024).

Ethnicity among children and young people is increasingly diverse. Around one-third of children at age 12 identify with more than one ethnicity (Neumann et al., 2023). Among children aged 0 to 14 years, 29 percent identify as Māori, 30 percent as Pacific, and 21 percent as Asian (Infometrics, 2024). Approximately 1 to 2 percent of children at age 12 identify as Middle Eastern, Latin American, or African (MELAA) (Neumann et al., 2023).[6]

The Government is investing in the first ever child and youth mental health and addiction prevalence study in Aotearoa (Ministry of Health, 2024b). This research comes at a critical time as we observe significant changes in symptoms of mental health challenges and substance use among children and youth (McGorry et al., 2024; Menzies et al., 2020; Sutcliffe et al., 2023). Symptoms of depression among secondary school students in Aotearoa have increased from 13 to 23 percent between 2012 and 2019, and the observed increases have been greater for rangatahi Māori, Pasifika, and Asian students and those living in lower socioeconomic neighbourhoods (Clark, Ball, et al., 2022; Sutcliffe et al., 2023).[7] In 2019, 28 percent of rangatahi Māori reported symptoms of depression, highlighting the need to address mental health inequities for Māori (Clark, Ball, et al., 2022).

It is imperative to investigate the reasons behind the rapid changes in child and youth mental health (Menzies et al., 2020; Office of the Auditor-General, 2024). This involves identifying the leading risk and protective factors that influence mental health and addiction. Such

[5] Definitions of child and youth vary across the literature. For the purposes of this review, children are aged 0 to 14 years and youth are aged 15 to 24 years. There is overlap with the term 'adolescents' which often include those aged 13 to 19 years.
[6] Population estimates based on Stats NZ's 2023 Census and 2024 Estimated Resident Population (ERP) which estimates the number of people who usually live in an area at a given date. Where there are reporting gaps for the child and youth population, we have used estimates from the Growing Up in New Zealand and Youth2000 studies.
[7] Changes in child and youth mental health in Aotearoa were observed through brief screening tools. Findings from Sutcliffe and colleagues (2023) were based on the Reynolds Adolescent Depression Scale (RADS-SF).

information is essential for planning and resourcing, particularly for preventative, holistic, multi-sectoral, and targeted strategies to improve child and youth mental health and reduce inequities (Fleming et al., 2024; Office of the Auditor-General, 2024). The importance of identifying protective contextual factors becomes increasingly important to improve the mental health of children and young people.

In this review, contextual factors refer to a broad range of social, cultural, economic, historical, and environmental factors that influence mental health and wellbeing. Table 2 summarises contextual factors that have been identified by young people in Aotearoa (Fleming et al., 2020; Menzies et al., 2020; Stubbing, Simon-Kumar, et al., 2023; Whāraurau, 2022a, 2022b, 2023). It is also important to consider modern and emerging issues arising from societal changes that impact on children and young people. *The Lancet Psychiatry Commission on Youth Mental Health* (McGorry et al., 2024) describes the harmful influences of major societal changes (or 'megatrends'), such as intergenerational inequality, unregulated social media and digital environments, employment insecurity, and climate change. The COVID-19 pandemic is also recognised as having ongoing effects on child and youth mental health (Duan et al., 2024; McGorry et al., 2024). Such emerging factors highlight the need to balance a biomedical approach with a sociocultural epidemiological approach to bring a more holistic understanding of child and youth mental health and substance use (Krieger, 2024).

Table 2. Top contributors to youth wellbeing in Aotearoa as identified by young people (aged 13 to 25 years)

Supports	Challenges
Sense of purpose and belonging	Emotional and mental health issues
Self-esteem and body image	Education and employment pressures
Cultural and self-identity, self-expression, and spirituality	Bullying victimisation (including cyberbullying)
Whānau and intergenerational connections	Inequity, colonisation, racism, and discrimination
Peer relationships and connections	Peer pressure and harmful exposure related to alcohol and other drugs, sex, and pornography
Community support	Adverse effects of social media and technology
Self-care and leisure activities (such as physical exercise, art, music, reading, etc.)	Wider societal factors (such as climate change, COVID-19, financial recession, global politics)

Based on findings from: Fleming et al., 2020; Stubbing, Simon-Kumar, et al., 2023; Whāraurau, 2022a, 2022b, 2023.

Last year, Te Pou reviewed the social determinants of mental health and substance use with a focus on adults (Te Pou, 2023) and Koi Tū examined factors influencing youth mental health (Stubbing, Rihari, et al., 2023; Stubbing, Simon-Kumar, et al., 2023). There is a need to further explore key influences on population mental health and substance use, with a particular focus on children and youth.

While the focus is on reviewing the population-level influences of contextual factors, it is important to note that factors can influence people's lives in different ways and each person's experience is unique. While a contextual factor may increase the risk of mental health challenges or problematic substance use on average, this outcome is not inevitable for individual people. The influence of contextual factors on mental health and substance use is not a simple relationship; it consists of interwoven effects of many factors, positive and negative, and some associations can be bi-directional (Stubbing, Rihari, et al., 2023). For example, mental health and employment can have a bi-directional relationship where mental health challenges impact on people finding and maintaining employment. Employment issues can also impact on people's mental health.

Aim and objectives

This narrative review aims to provide an overview of 10 contextual factors influencing child and youth mental health and substance use to inform the planning and development of the child and youth mental health and addiction prevalence study. The objectives are to examine how widespread the factors are at the population level and the estimated magnitude of influence on child and youth mental health and addiction.

Method

A preliminary literature scan was undertaken to identify the range of contextual factors influencing mental health and substance among children and youth (see Appendix).

A narrative literature review was then undertaken to identify local and international data and research about each factor and the relationship with mental health and substance use.

The electronic search for journal articles, data outputs or dashboards, and grey literature included EBSCOHost (Academic Search Complete, CINAHL Complete, MEDLINE Complete, and Psychology and Behavioural Sciences Collection), Google Scholar, and Google. Due to time constraints, the inclusion criteria were limited to outcomes related to common mental health challenges facing children and youth, particularly depression, anxiety, and problematic substance use. The inclusion criteria included systematic reviews and meta-analyses published between 2014 and 2024, local research between 2009 and 2024 including case-control, cross-sectional, and longitudinal studies, and papers from the Christchurch and Dunedin longitudinal studies. The exclusion criteria were data and research where the full text was not available to the researchers or not in English.

The following key terms were used across multiple electronic searches:

- systematic, meta-analysis, longitudinal
- child, adolescent, youth, indigenous, Māori, rangatahi
- mental health, substance use, depression, anxiety, alcohol, drug, suicide, self-harm
- adverse childhood experiences, abuse
- bullying, discrimination, racism
- socioeconomic, poverty, food insecurity, material hardship
- family environment, family functioning, parent, foster care
- social, peer relationships, loneliness
- school engagement, school connectedness, attendance, not in employment, education, or training (NEET)
- substance use, alcohol, drug
- social media, technology, digital, problematic smartphone use
- cultural identity, cultural belonging, cultural connectedness.

Odds ratios (ORs) and similar statistical effect sizes were used to estimate the strength of influence a contextual factor has on the likelihood of experiencing mental health challenges or problematic substance use. For the purposes of this review, ORs greater than 3.0 are considered medium to large statistical effects (Chen et al., 2010). For example, an OR = 3.0 can be interpreted as people in the exposed group being 3 times more likely to experience mental health challenges or problematic substance use.

Key terms

Prevalence – the proportion of people living with a condition who meet diagnostic criteria at a specific point in time or within a specific period.

Mental health challenges – a strengths-based term preferred by people with lived experience that describes experiences from symptoms through to meeting diagnostic criteria for a mental health condition.

Mental health conditions – a term used instead of mental disorders to describe when people meet specific diagnostic criteria, as outlined in Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, Text Revision (DSM-5-TR).

Problematic substance use – patterns of substance use that negatively impact people's lives, including those not meeting diagnostic criteria for substance use disorders. The terms substance use issues or harms are also used when not talking about a formal diagnosis. Substance use disorder may be used when specifically referring to people who meet diagnostic criteria but is a term not commonly used outside clinical assessment and specialist addiction services.

Substance-related harm – any form of harm arising from substance use to the person using and/or to their whānau or communities.

Key findings

Based on the preliminary literature scan (see Appendix), 10 contextual factors impacting on child and youth mental health and substance use are explored.

These are (in alphabetical order):

1. adverse childhood experiences (including child maltreatment)
2. bullying victimisation
3. cultural identity
4. experiences of discrimination
5. whānau environment
6. peer relationships
7. engagement with school and work
8. social media and technology
9. socioeconomic factors
10. substance use.

For the 10 contextual factors, each section provides a summary. Then overseas and local data and research examining the impact of each factor on child and youth mental health and substance use are explored.

1. Adverse childhood experiences

Section summary

Adverse childhood experiences (ACEs) are stressful and potentially traumatic events experienced in childhood, including but not limited to childhood maltreatment, that is neglect and sexual, physical, and psychological abuse (Karatekin et al., 2022).

Aotearoa and international research shows that childhood maltreatment can increase the likelihood of developing mental health conditions and problematic substance use, with some studies reporting medium to large statistical effects (Fergusson et al., 1996; Fergusson & Lynskey, 1997; Lindert et al., 2014). In particular, sexual and physical abuse are strongly linked to mental health challenges and problematic substance use (Fergusson et al., 1996; Hogg et al., 2023).

Research indicates ACEs can have cumulative effects on mental health and substance use; with people reporting four or more ACEs experiencing poorer outcomes compared to those with fewer ACEs, or no ACEs on average (Hashemi et al., 2021; Hughes et al., 2017).

While population rates of childhood maltreatment are difficult to estimate due to varying measures, Aotearoa and international research suggests that abuse and neglect may affect up to 1 in 4 children and young people. Furthermore, rates of ACEs and family harm may be increasing over time (Hartwell et al., 2023; Lippard & Nemeroff, 2019; New Zealand Police, 2024).

When looking at a wider range of ACEs, local research estimates that 1 in 2 adults experience at least one ACE prior to age 18, and 1 in 8 experience four or more ACEs (Fanslow et al., 2021).

Positive childhood experiences are important to consider but relatively less researched. Research, including from Growing up in New Zealand and the Christchurch Longitudinal studies, have identified positive experiences that can buffer against the detrimental effects of ACEs. These include parent-child relationships, parental wellness, household finances, peer and whānau relationships, and community or neighbourhood characteristics (Buchanan et al., 2024; Karatekin et al., 2022; Lynskey & Fergusson, 1997; Walsh et al., 2019). Among Indigenous populations, an international systematic review indicates cultural identity and connectedness, education, and social support can reduce the negative impact of ACEs (Radford et al., 2022).

Children and young people may experience both ACEs and positive childhood experiences, and their impact on mental health challenges and problematic substance use in later life depends on their cumulative and combined effects.

Overall, ACEs can negatively impact on health and social wellbeing (Karatekin et al., 2022). People who experience childhood trauma are nearly 3 times (OR 2.90) more likely to be

diagnosed with a mental health condition (Hogg et al., 2023). In particular, physical and sexual abuse are strongly linked to meeting diagnostic criteria for a mental health condition later in life (Hogg et al., 2023). This association is potentially explained by severe and prolonged stress that impacts various systems in the body and brain (known as toxic stress) (Lippard & Nemeroff, 2019; Madigan et al., 2023).

There is a wide range of ACEs to consider. Research on ACEs often include psychological abuse, physical abuse, sexual abuse, emotional neglect, physical neglect, parental separation or divorce, household exposure to problematic substance use, mental health challenges, intimate partner violence, and incarceration (Dong et al., 2004; Dube et al., 2003; Felitti et al., 1998). Some studies expand further to include death or loss of a parent, serious illness or accident, bullying victimisation, exposure to violence outside of the household, experiences of discrimination, poverty, war or conflict, and natural disasters (Karatekin et al., 2022). Additionally, many children and young people in Aotearoa have been impacted by the COVID-19 pandemic and natural disasters which are associated with psychological distress (Gawn et al., 2024; Stubbing, Rihari, et al., 2023; Walker et al., 2023). It is important to note there are other adverse events that are stressful but may not be classified in studies as traumatic.

The following subsections examine three key areas in more detail: 1) childhood maltreatment, 2) cumulative effects of ACEs, and 3) positive childhood experiences.

Childhood maltreatment

Childhood maltreatment can include neglect and sexual, physical, and psychological abuse. The definitions of childhood maltreatment, abuse, and neglect appear to be consistent across the literature, however the use of various methods and measures in prevalence studies makes the global prevalence difficult to estimate (Massullo et al., 2023). One review estimates that 1 in 4 people experience child abuse or neglect in their lifetime (Lippard & Nemeroff, 2019).

The New Zealand Victims of Crime and Victims Survey shows rates of family offences and sexual violence are the highest among young people (aged 15 to 19 years) compared to other age groups. Estimates suggest about 3 percent of young people are victims of family offences and 5.1 percent are victims of sexual assaults each year (Ministry of Justice, 2024).

Nearly 1 in 5 (18 percent) secondary school students report ever having had unwanted sexual experiences, sexual violence or abuse (an increase from 14 percent in 2012, particularly among females and those aged 16 and over) (Fleming et al., 2021; Ministry of Social Development, 2022). Among secondary school students, half (51 percent) report being hit or harmed on purpose in the last 12 months, mostly by siblings or other young people (Fleming et al., 2021).

Prior to the COVID-19 pandemic, the Youth2000 surveys indicate a decline in the proportion of secondary school students witnessing physical violence at home (Fleming et al., 2021). In 2019, 6 percent report witnessing physical violence at home between adults and 8 percent

report witnessing adults hurting or harming children in the last 12 months (Fleming et al., 2021). While the rates of family harm since COVID-19 are unclear, service activity data suggests family harm may have increased in recent years (New Zealand Police, 2024).

Local and international research indicates sexual harm and abuse have a greater impact on mental health compared to other types of harm, such as physical abuse, emotional abuse, bullying, discrimination, and witnessing violence in the home (Hogg et al., 2023; Sutcliffe et al., 2024). The Christchurch Health and Development Study found that young people (aged 16 to 18 years) who had experienced childhood sexual abuse were 4.6 to 8.1 times more likely to experience major depression, 4.3 to 4.8 times more likely to experience an anxiety disorder, and 1.4 to 5.1 times more likely to experience problematic substance use (Fergusson et al., 1996). Physical maltreatment in childhood was also associated with significantly higher rates of major depression, anxiety disorders, conduct disorder, and substance use disorder at ages 16 to 18 (Fergusson & Lynskey, 1997). Rangatahi Māori who witness violence at home are 1.8 times more likely to have tried to take their own life (Clark et al., 2011).

The negative effects of childhood maltreatment can persist into adulthood. While not inevitable; childhood maltreatment increases the likelihood of mental health challenges and problematic substance use problems in adulthood by 1.8 to 2.6 times (Fergusson, McLeod, et al., 2013; Telfar et al., 2023). Associations remain after taking into account a range of confounding factors such as whānau dynamics, socio-demographic background, and individual factors (Telfar et al., 2023). Similarly, the Dunedin Multidisciplinary Health and Development Study found that childhood maltreatment increases the odds of depression in adulthood by 1.7 times (Danese et al., 2009). This aligns with international research which indicates childhood maltreatment has a significant influence on the likelihood of experiencing depression, thoughts of taking their own life, and problematic substance use in adulthood (Lindert et al., 2014; Mandelli et al., 2015; Miranda-Mendizabal et al., 2019). Childhood maltreatment is also associated with an increased prevalence in symptoms of psychosis, problematic eating, and personality disorders (Jester et al., 2023; Solmi et al., 2020, 2021).

Cumulative effects of ACEs

There is a growing body of literature looking at the cumulative impacts of experiencing multiple ACEs. While the range of ACE measures used makes it difficult to directly compare results, a common approach has been to examine the total number or count of ACEs (Dong et al., 2004; Dube et al., 2003; Felitti et al., 1998; Karatekin et al., 2022).

International research estimates 60 percent of adults experience at least one ACE and 16 percent report four or more (Madigan et al., 2023). Similarly, local data indicates over half (55 percent) of adults in Aotearoa have experienced at least one ACE and 12 percent have experienced four or more ACEs (Fanslow et al., 2021). Further reports by parents and caregivers indicate around half of young children aged 4.5 years (53 percent) have experienced at least one ACE and nearly 3 percent have experienced four or more ACEs

(Ministry of Social Development & AUT Center for Social Data Analytics, 2019). The most common ACEs experienced by young children in Aotearoa are emotional and physical abuse (Ministry of Social Development & AUT Center for Social Data Analytics, 2019). However, it is important to note that parents and caregivers often under-report ACEs (Ndjatou et al., 2024). ACEs are often associated with other contextual factors such as whānau environment and socioeconomic status (Fanslow et al., 2021; Ministry of Social Development & AUT Center for Social Data Analytics, 2019).

An umbrella review of international research indicates having at least one ACE doubles the odds of experiencing symptoms of anxiety and depression, and thoughts of taking their own life (Sahle et al., 2022). The effect of multiple ACEs is even higher; having four or more ACEs increases the likelihood of symptoms of anxiety and depression by about 4 times, problematic alcohol use by nearly 6 times, and problematic drug use by 10 times (Hughes et al., 2017). The review also found that having four or more ACEs increases the likelihood of people trying to take their own life by up to 30 times.

In Aotearoa, the 2019 New Zealand Family Violence Study looks at the association between retrospective ACEs and self-reported outcomes in adults at a point in time. The study found ACEs increase the subsequent risk of experiencing violence (Fanslow et al., 2021) and multiple ACEs can have cumulative adverse effects on mental health (Hashemi et al., 2021). Adults who reported four or more ACEs were 4 times more likely to report being diagnosed with depression by their doctor, and 3 times more likely to report an anxiety diagnosis (Hashemi et al., 2021).

Methodological considerations are important in the use of ACE measures. The Dunedin Multidisciplinary Health and Development Study found moderate alignment between retrospective (recalled in adulthood) and prospective (recorded throughout childhood) ACE measures. Interestingly, retrospective ACE counts appear to be more predictive of mental health challenges in adulthood, than prospective measures (Reuben et al., 2016). The authors suggests this is potentially due to recall bias, that is, people experiencing mental health challenges may recall more negative childhood memories (Reuben et al., 2016). In addition, overseas research indicates there are discrepancies in self-reported and parent-reported ACEs, and the ability of ACE measures to predict mental health challenges may vary across subpopulations (Cohen & Choi, 2022; Ndjatou et al., 2024).

Positive childhood experiences

Only a relatively small number of studies using different methods and measures have looked at protective factors or positive experiences in childhood that buffer against ACEs, though this is a growing area of research (Han et al., 2023; Karatekin et al., 2022). Positive experiences are often viewed as countering or buffering against ACEs; the inclusion of both positive and adverse experiences in research enables an understanding of their dual effects (Han et al., 2023). Research indicates positive experiences are associated with lower childhood adversity and better mental health (Han et al., 2023). Childhood protective factors

include coping strategies, parental wellbeing, parenting style, whānau relationships, social support outside of the household, socioeconomic characteristics, and school-related and community factors (Karatekin et al., 2022).

Locally, the Christchurch Health and Development Study found the impact of ACEs on mental health conditions in adulthood varied depending on the quality of peer and whānau relationships (Buchanan et al., 2024; Lynskey & Fergusson, 1997). Similarly, the Growing Up in New Zealand study identifies mother-partner and parent-child relationships as protective factors for children at risk of ACEs, along with parent health and wellness, household finances, and community or neighbourhood characteristics (Walsh et al., 2019). Conversely, the 2019 New Zealand Family Violence Study cross-sectional analysis found some positive childhood experiences (of being loved and having strengths recognised) did not alter the detrimental impact of exposure to ACEs on wellbeing (Hashemi et al., 2021).

Among Indigenous populations, an international systematic review indicates cultural identity and connectedness, education, and social support can reduce the negative impact of ACEs (Radford et al., 2022).

The number of protective factors experienced appears to be important. The first Northern Ireland prevalence study on children and young people (aged 2 to 19 years) found that for every additional ‘benevolent childhood experience’ the likelihood of depression, anxiety and self-harming behaviour and suicidal ideation was reduced by 14, 13, and 7 percent respectively (Bunting et al., 2020).

Thus, it is important to recognise that children and youth may experience both ACEs and positive childhood experiences, and their impact on mental health challenges and problematic substance use in later life may depend on their cumulative and combined effects.

2. Bullying

Section summary

Bullying is defined as aggressive behaviour that can deliberately cause physical and/or psychological harm to another person, involves misuse of power, and is repeated over time (Bullying Free New Zealand, n.d.). It can include 'being made fun of' and 'being excluded on purpose from activities', as well as cyberbullying through electronic devices and social media (Mhuru & Ministry of Education, 2021).

Experiences of bullying are common, and Aotearoa has one of the highest rates of bullying in the OECD. Local estimates are 1 in 3 students (in primary and secondary school) are bullied on a monthly basis, with those aged between 11 and 14 most at risk (Kljakovic et al., 2015; Mhuru & Ministry of Education, 2021). Rates of bullying locally have remained relatively steady over time (Kljakovic et al., 2015).

International research indicates that bullying victimisation can have a moderate to large impact on the likelihood of developing mental health conditions and problematic substance use. Longitudinal studies in Aotearoa also indicate bullying in childhood impacts on later depression, anxiety, psychosis, suicidality and substance use issues.

Several national surveys regularly monitor bullying among children and adolescents, including the Youth Health and Wellbeing Survey, Youth Connectedness Project (longitudinal study), and Wellbeing@School surveys (Mhuru & Ministry of Education, 2021). However, the impact on mental health and wellbeing is not often analysed, and a more up-to-date analysis is needed.

Bullying includes verbal, physical, social or relational, and cyber (through electronic devices and social media) bullying. Bullying in school often involves 'being made fun of' and 'being excluded on purpose from activities' (Mhuru & Ministry of Education, 2021). Bullying is related to discrimination, but they are separate concepts (see subsequent Racism and other forms of discrimination).

Across OECD countries, nearly 1 in 4 students (23 percent) on average report being bullied at least a few times a month (OECD, 2019). This rate is higher in Aotearoa and has remained relatively steady over time, where 1 in 3 students report being bullied on a monthly basis (32 to 38 percent, including primary and secondary school students) (Kljakovic et al., 2015; Mhuru & Ministry of Education, 2021).

The most common form of bullying victimisation appears to be in-school, followed by text message, outside of school, and internet victimisation (Kljakovic et al., 2015). This is in line with international research indicating traditional forms of bullying (such as physical, verbal, or relational bullying) are more common than cyber bullying, though they are correlated (Li et al., 2022; Modecki et al., 2014). For example, young people who are bullied in-person are also more likely to experience cyberbullying (Li et al., 2022; Modecki et al., 2014).

The experience of bullying appears to peak around ages 11 to 14 years old, then decreases with age (Kljakovic et al., 2015). Students are more likely to experience bullying victimisation if they have low reading literacy, are male, disabled, socioeconomically disadvantaged, or identify as transgender or rainbow (Mhuru & Ministry of Education, 2021). In contrast, parental support and a sense of belonging in the school environment are associated with lower victimisation (Birchall et al., 2024).

Bullying victimisation and mental health

International research shows bullying victimisation among adolescents increases the likelihood of symptoms of depression by 3.3 to 5.3 times, thoughts of taking their own life by 3.1 to 6.6, self-harm by 2.7 to 5.6, and trying to take their own life by 2.6 to 7.8 (Li et al., 2022). A meta-analysis by Ye and colleagues (2023) indicates the odds of experiencing symptoms of depression are highest among children and adolescents who are both a victim and perpetrator of bullying. Traditional and cyber bullying have similar associations with symptoms of depression (OR 2.4 and 2.9 respectively), whereas a stronger association is observed among children and adolescents involved with both types of bullying (OR 4.5) (Ye et al., 2023).

In Aotearoa, cross-sectional research supports the association between bullying victimisation and symptoms of depression during adolescence (Coggan et al., 2003; Raskauskas, 2009). When comparing across several factors, the Pacific Islands Families Study found that involvement with bullying (both as the victim or person who bullies) is a key factor contributing to depression among Pasifika children (Paterson et al., 2014, 2018).

The negative effects of childhood bullying can influence mental health and substance use later in life (Moore et al., 2017; Ttofi et al., 2016). The Christchurch Health and Development Study found being bullied during adolescence increases the likelihood of mental health challenges and substance use problems in later life. Compared to people who were not involved in bullying, those who were victims of bullying during adolescence were twice as likely to experience anxiety later in life (OR 2.1), and 1.8 times more likely to try to take their own life (Boden et al., 2016; Gibb et al., 2011). Those who bully others are more likely to experience substance use problems in later life (OR 1.4 to 2.0) and 1.2 times more likely to try to take their own life (Gibb et al., 2011). For people who bully, little or no difference in later life experiences of depression or anxiety was found (Gibb et al., 2011).

3. Cultural and social identity

Section summary

Cultural identity includes a broad range of social identities such as age or generation, ethnicity, nationality, gender and sexual identity. Children and youth can have multiple identities that combine to form an overall sense of self. For example, around one-third of children identify with more than one ethnicity (Neumann et al., 2023; Stubbing, Rihari, et al., 2023). Children and youth can experience value as well as forms of discrimination associated with their identities (Srivastava & Srivastava, 2019). Therefore, an intersectional approach in research is needed (N. Simon-Kumar, 2023).

Developing a strong sense of cultural identity is particularly important to the wellbeing of children and youth who are Māori, Pasifika, Asian, MELAA, rainbow, and disabled (Ministry of Social Development, 2022). For rangatahi Māori, this can include involvement with their iwi, kapa haka, mau rākau, waka ama, and kura kaupapa.

Local data indicates MELAA, rainbow, and disabled young people on average feel less able to express their identity and proud of who they are, and report a lower sense of belonging to the communities they live in (Ministry of Social Development, 2022). Though individual experiences may differ among these groups.

Among rangatahi Māori, a strong Māori cultural identity can reduce the likelihood of experiencing symptoms of depression by half (A. D. Williams et al., 2018), and predict positive wellbeing and adaptive coping over time (Fox et al., 2018; Stuart & Jose, 2014). Local and international research also suggests a strong sense of cultural identity helps buffer against the detrimental effects of discrimination (Busby et al., 2020; Logeswaran et al., 2019; Manuela, 2021; Ministry of Social Development, 2022).

Cultural and social identity is an important protective factor for mental health and substance use issues in the Aotearoa context. It is however an under-researched area, particularly in understanding the influences across diverse populations.

Adolescence and young adulthood are important periods for identity development and forming a sense of oneself and who one can become (Srivastava & Srivastava, 2019). Cultural and social identities are diverse and fluid, and can be influenced by community engagement and experiences of prejudice and discrimination (Srivastava & Srivastava, 2019). International research indicates a strong and positive sense of identity can support better mental health in young people (Potterton et al., 2022; Smith & Silva, 2011; Srivastava & Srivastava, 2019). Positive cultural identity and connection are protective factors that improve mental health and wellbeing and can help young people navigate uncertain futures (Anderson et al., 2022; Doery et al., 2023; Hodgson et al., 2022; McGorry et al., 2024).

In Aotearoa, young people recognise the importance of cultural identity to their wellbeing but face challenges in fully understanding and expressing their cultural identity (Whāraurau,

2023). Rangatahi Māori, Pacific, and Asian young people report strong connections to their culture and view it as important to maintaining their ethnic group values, whānau traditions, and cultural heritage (Ministry of Social Development, 2022). On the other hand, rainbow and disabled youth are less likely to feel proud of who they are and to express their identity compared to other groups (Ministry of Social Development, 2022).

The following subsections further explore cultural and social identity for: 1) Indigenous, 2) migrant, 3) rainbow, and 4) disabled youth.

Indigenous youth

Positive cultural identity is protective for hauora hinengaro (mental health) among Māori (Durie, 2001). Aspects of Māori cultural identity[8] include personal ethnic identity, sense of belonging to whānau and social groups, participation in traditional knowledge and practices, and spiritual beliefs (Matika et al., 2020; A. D. Williams et al., 2018). Moreover, hauora wairua (spiritual health) is a fundamental component of Māori health and wellbeing (Durie, 1985; Valentine et al., 2017).

Youth2000 series data indicates around half of rangatahi Māori report high levels of Māori cultural identity (A. D. Williams et al., 2018). At age 12, the Growing Up in New Zealand study found, 83 percent of rangatahi Māori report they 'feel good' about their cultural or ethnic background, 76 percent have a lot of pride in their ethnic group, and 69 percent have a strong sense of belonging with their own ethnic group (Neumann et al., 2023).

Strong Māori cultural identity decreases the odds of symptoms of depression by 50 percent and increases wellbeing by 50 percent among rangatahi Māori (A. D. Williams et al., 2018). The Growing Up in New Zealand study found cultural connectedness was associated with fewer symptoms of depression and better quality of life among rangatahi Māori (Paine et al., 2023). Similarly, two separate longitudinal analyses indicate cultural identity and embeddedness predict adaptive coping and wellbeing among rangatahi Māori over time (Fox et al., 2018; Stuart & Jose, 2014).

Overall, there is a need for more high-quality research on Indigenous cultural identity, particularly quantitative and longitudinal research, as it is often overlooked in Western-based research (Lloyd-Johnsen et al., 2021; Potterton et al., 2022; Srivastava & Srivastava, 2019). Qualitative research overseas shows indigenous youth across Aotearoa, Australia, Canada and the US emphasise the importance of cultural identity, knowledge, and connection to their wellbeing (Anderson et al., 2022; Benton, 2021; Murrup-Stewart et al., 2021). Research in Canada shows cultural connectedness has a strong positive impact on mental health among First Nations youth, and communities who have preserved their own culture experience lower youth suicide rates (Chandler & Lalonde, 1998; Snowshoe et al., 2017). Similarly, an Australian study indicates suicide rates are lower among Aboriginal and Torres

[8] Several measures of Māori cultural identity and connectedness have been developed including the Māori Cultural Identity Scale (MCIS) (A. D. Williams et al., 2018) and the Māori Identity and Cultural Engagement (MMM-ICE3) (Matika et al., 2020).

Strait Islander youth living in communities with higher levels of cultural connectedness (M. Gibson et al., 2021). Cultural identity and connectedness have also found to protect Indigenous peoples from the potentially harmful impacts of ACEs (Radford et al., 2022).

Migrant youth

Aotearoa has seen a significant increase in net migration, with approximately 29 percent of the population being born overseas, including children and young people (Stats NZ, 2024b). Migrant populations in Aotearoa are often categorised as Pasifika, Asian, and MELAA (Middle Eastern, Latin American and African). However, these groups are not homogenous; each group consists of people from various nationalities, ethnicities, and cultures. For example, Pasifika peoples include those who are Samoan, Cook Island Māori, Tongan, Niuean, Fijian, etc.

Migrant youth in Aotearoa experience more symptoms of depression compared to their non-migrant counterparts (Spijkers, 2011). A Youth2000 analysis found migrant youth who feel proud of their ethnic identity and resonate with their ethnic group's values are more likely to report better wellbeing and less symptoms of depression (Spijkers, 2011). The Growing Up in New Zealand study found that at age 12, over 80 percent of Pasifika, Asian and MELAA children 'feel good' about their cultural or ethnic background. Nearly three-quarters (73 percent) of Pasifika and MELAA children feel a strong sense of belonging to their own ethnic group, and over two-thirds of Asian children (69 percent) (Neumann et al., 2023). The General Social Survey indicates 85 percent of young people (aged 15 to 24 years) report a strong sense of belonging to Aotearoa (Stats NZ, 2022c).

For migrant youth, it is important to consider the influence of their place of birth or migrant generation, along with acculturation experiences. For example, migrants who experience integration (adoption of the new culture whilst retaining their own cultural identity) report better mental health compared to those who experience marginalisation (rejection of both the new culture and their own cultural identity) (Choy et al., 2021; Yoon et al., 2013). International research indicates first generation migrants (those who migrated to a new country) are more at risk of mood disorders and psychosis compared to second generation migrants (who were born to migrant parents in the new country) (Bourque et al., 2011; Mindlis & Boffetta, 2017). Similarly, an analysis of the Youth2000 data found that first generation migrant youth in Aotearoa report slightly higher levels of symptoms of depression compared to second generation migrant youth and non-migrants (Spijkers, 2011). The analysis also indicates acculturation and cultural maintenance predict less symptoms of depression (Spijkers, 2011).The difference between generations may be explained by first generation migrants' loss of their whānau, friends, and familiar environments, as well as stressful experiences with adapting to a new cultural environment and language (Spijkers, 2011).

Pasifika

The Pasifika population is young and has a large proportion of young people born in Aotearoa (Teariki & Leau, 2024). *Te Rau Hinengaro* (the New Zealand Mental Health Survey) found Pasifika peoples who migrated as young children or born in Aotearoa are more likely to meet criteria for mental health conditions than those who migrated as adults (Kokaua et al., 2009). Pasifika youth in Aotearoa have a high level of pride in who they are, and their ethnic identity helps buffer against the negative effects of discrimination to their wellbeing (Manuela, 2021; Ministry of Social Development, 2022). Qualitative research involving Aotearoa-born Cook Islands youth indicates pride in Pacific ethnic identities, cultural participation, and language retention are important for positive mental health (Puna & Tiatia-Seath, 2017). Language is an important link between identity and wellbeing (Matika et al., 2021). There is a need for more research looking at the positive influence of cultural identity on the mental wellbeing of Pasifika youth, with consideration for place of birth (Kapeli et al., 2020; Manuela & Anae, 2017).

Asian and MELAA

Qualitative research in Aotearoa highlights the importance of cultural identity, integration, acculturation, and racism in understanding the health and wellbeing of Asian New Zealanders (Wong et al., 2015). For young Asian and MELAA New Zealanders, conflicting cultural values and experiences of discrimination can make it challenging to navigate their cultural identity and sense of belonging (Bhatia, 2023; Kim, 2022). One study found Chinese adolescents in Aotearoa reported higher levels of self-esteem if they integrated their cultural identities compared to those who felt separated or marginalised (Eyou et al., 2000).

The rate of MELAA young people experiencing serious psychological distress is higher than other ethnic groups (Ministry of Social Development, 2022). Findings from What About Me? (the National Youth Health and Wellbeing Survey 2021) indicates MELAA youth often feel less able to express their identity, proud of who they are, belonging to the communities they live in, and are more likely to experience discrimination related to their ethnicity (Ministry of Social Development, 2022). Despite such stark inequities, MELAA young people are often not specifically examined in local research due to the relatively smaller number of participants (Atatoa Carr et al., 2022).

Rainbow youth

Approximately 8 percent of young people aged 18 to 24 years identify as belonging to the rainbow community (Olsen, 2022; Stats NZ, 2024a). International research indicates positive identity development among rainbow youth supports better mental health and can buffer against the negative impacts of discrimination (Busby et al., 2020; Fredriksen-Goldsen et al., 2017).

International evidence consistently shows rainbow youth are more likely to experience mental health challenges compared to non-rainbow peers (Lucassen et al., 2017; Pellicane

& Ciesla, 2022; A. J. Williams et al., 2021). Among transgender and gender diverse people, concealment of gender identity can be associated with symptoms of depression (Pellicane & Ciesla, 2022).

In Aotearoa, rainbow youth often feel less able to express their identity, less proud of who they are, and have a lower sense of community belonging compared to other groups (Ministry of Social Development, 2022). High school students with diverse sexualities in Aotearoa are 3 to 4 times more likely to experience symptoms of depression compared to heterosexual students (Lucassen et al., 2015). Transgender students are 5 to 6 times more likely to experience symptoms of depression (OR=5.7), and to have tried to take their own life in the past year compared to cisgender students (OR=5.0) (Clark et al., 2014). An earlier analysis from the Christchurch Health and Development Study found young adults with diverse sexualities were more likely to experience major depression (OR=4.0), anxiety disorders (OR=2.8), substance use disorders (OR=1.9), and to have tried to take their own life (OR=6.2) compared to heterosexual young adults (Fergusson et al., 1999; Fergusson, Horwood, Ridder, et al., 2005). These inequities are also linked to experiences of social stigma, exclusion, and discrimination (see Discrimination experienced by rainbow youth).

Disabled youth

Positive identity development is important among disabled youth and can support better mental health (Forber-Pratt et al., 2017; Logeswaran et al., 2019; Zapata & Pearlstein, 2022). Globally, about 10 to 13 percent of children and young people have a disability (Olusanya et al., 2022). Similarly, in Aotearoa around 11 to 19 percent of children and young people are disabled (Marks et al., 2023; Whaikaha Ministry of Disabled People, 2024). Approximately 1 in 7 children also have a disabled parent or main caregiver and 29 percent of whānau experience some form of disability (Marks et al., 2023).

In Aotearoa, disabled young people often feel less able to express their identity, less proud of who they are, and have a lower sense of community belonging compared to other groups (Ministry of Social Development, 2022). Disabled children and youth are more likely to experience high levels of psychological distress and symptoms of depression and anxiety compared non-disabled counterparts (Marks et al., 2023; Ministry of Social Development, 2022). Approximately 1 in 3 disabled youth experience symptoms of depression and thoughts of taking their own life (Clark et al., 2021). These inequities are also linked to experiences of social stigma, exclusion, and discrimination (see Discrimination experienced by disabled youth).

4. Experiences of racism and other forms of discrimination

Section summary

Discrimination is the unfair treatment of a socially defined group. Racism and other forms of discrimination are increasingly recognised as factors influencing mental health and wellbeing (Krieger, 2001).

In Aotearoa, around 1 in 10 young people experience racism each year, which is more common among Māori, Pasifika, and Asian youth (Crengle et al., 2012; Harris et al., 2024). Around 1 in 2 rainbow youth in secondary school and 1 in 4 in university experience bullying and harassment (Treharne et al., 2016; Webber & McGregor, 2019). About 40 percent of disabled people report experiencing discrimination each year; children and youth often experience this in healthcare and education settings (Stats NZ, 2021).

International research suggests discrimination has a larger impact on the mental health of children and young people (relative to adults), although all age groups are impacted (Schmitt et al., 2014). Discrimination is also experienced by some population groups more than others, and where people have multi-identities, discrimination can come in multiple forms. In line with international research (Vargas et al., 2020), young people who experience racism and other forms of discrimination in Aotearoa are more likely to experience psychological distress and symptoms of depression (Crengle et al., 2012).

More research is needed looking at the direct effects of discrimination on mental health and substance use, particularly for rainbow and disabled youth.

Findings highlight the need to reduce young people's experiences of discrimination and ensure access to support that affirms their identity, particularly for rainbow and disabled children and youth (Roy et al., 2021).

Discrimination can be interpersonal (perceptions and interactions between people), institutionalised (embedded within organisations and systems), and structural (embedded within laws, policies, and societal practices) (Acevedo-Garcia et al., 2013). In Aotearoa, colonisation, discrimination, and exclusion are key drivers that disempower people and shape the inequitable distribution of resources, including socioeconomic disadvantage and access to quality housing and healthcare (Curtis et al., 2023; Waitangi Tribunal, 2019). This can lead to differential treatment and poor health and wellbeing outcomes for children and young people (Acevedo-Garcia et al., 2013; Kirkbride et al., 2024; Maung et al., 2024). Moreover, children and youth are often discriminated against because of their age and often lack visibility and voice in vulnerable situations (Maung et al., 2024).

Compared to adults, perceived discrimination among children has a larger negative impact on their mental wellbeing (Schmitt et al., 2014). Perceived discrimination also has a bigger influence on the mental wellbeing of disadvantaged groups, compared to advantaged groups (Schmitt et al., 2014).

The majority of research looking at discrimination focuses on the impacts of racism and sexism on mental health (Emmer et al., 2024). This includes local data from longitudinal studies and national youth surveys on experiences of racism among children and youth (R. Simon-Kumar et al., 2022; Talamaivao et al., 2020). Discrimination based on sexual orientation and disability have received relatively less focus in research (Schmitt et al., 2014).

The following sections focus on: 1) racism, 2) discrimination experienced by rainbow youth, 3) discrimination experienced by disabled youth, and 4) intersectionality.

Racism

Racism is discrimination based on race or ethnicity, and is increasingly recognised as a risk factor for poor mental health (Paradies et al., 2015). In Aotearoa, around 6 to 11 percent of adolescents and young adults report exposure to racism in the past year, and lifetime exposure ranges from 14 to 21 percent (Harris et al., 2024). Experiences of racism are more common among Māori, Pasifika, and Asian youth compared to those who identify as New Zealand European (Crengle et al., 2012; Harris et al., 2024).

Cross-sectional research indicates Māori youth who experience racism are 2.2 to 3.4 times more likely to experience symptoms of depression and 2.5 times more likely to have a previously tried to take their own life (Crengle et al., 2012; A. D. Williams et al., 2018). Migrant youth who perceive ethnic discrimination are more likely to report symptoms of depression (Spijkers, 2011). Pasifika and Asian youth who experience racism are 2.9 and 2.3 times more likely respectively to experience symptoms of depression, than those who do not (Crengle et al., 2012).

Discrimination experienced by rainbow youth

Rainbow youth are more likely to experience poorer mental health due to experiences of social stigma, exclusion, and discrimination (Russell & Fish, 2016; Stevens, 2013; Wittlin et al., 2023). Overseas, experiences of victimisation (bullying and hate crime) are nearly 4 times higher (OR 3.7; prevalence rate of 36 percent) among rainbow youth compared to cisgender, heterosexual youth (A. J. Williams et al., 2021). Discrimination is strongly associated with transgender people's experiences with mental health challenges and trying to take their own life (McNeil et al., 2017; Pellicane & Ciesla, 2022). Moreover, the current socio-political climate and structural transphobia can have a negative impact on transgender people's mental health (Flaskerud & Lesser, 2018; Price et al., 2023)

In Aotearoa, 1 in 2 rainbow secondary school students report having ever been bullied (Webber & McGregor, 2019). Among university students, 1 in 4 rainbow youth (25 percent) have experienced harassment as a result of their gender or sexuality (Treharne et al., 2016). The most common forms of harassment include derogatory remarks and threats (direct or indirect) (Treharne et al., 2016). The New Zealand Crime and Victims Survey indicates rainbow adults (aged 18 to 79 years) report higher rates of crime victimisation compared to

non-rainbow adults (46 percent and 32 percent, respectively) (Plum & Zhuge, 2024). Rainbow adults are more likely to experience negative consequences related to victimisation, such as physical injuries and taking time off work (Plum & Zhuge, 2024).

High school students with diverse sexualities in Aotearoa are about 3 times more likely to experience school bullying on a weekly basis and transgender students are about 5 times more likely to experience school bullying on a weekly basis (OR=4.5) compared to their non-rainbow peers (Clark et al., 2014; Fenaughty et al., 2021; Lucassen et al., 2015). The Counting Ourselves survey found transgender people who experience high levels of discrimination are more likely to experience psychological distress in the past month (OR=1.3) and to have tried to take their own life in the past year (OR=1.4) compared to their peers who reported fewer experiences of discrimination (Tan et al., 2021). More local research is needed looking at the association between discrimination and mental health and wellbeing.

Support from whānau and friends is a key protective factor against mental health challenges among rainbow youth (Tan et al., 2021). However, transgender and diverse gender students are less likely to report having at least one parent who cares about them a lot compared to cisgender students (64 percent and 94 percent respectively) (Clark et al., 2014; Fenaughty et al., 2021). Rainbow youth are more likely to have tried to take their own life when whānau and religious leaders have suggested sexual orientation and gender identity change efforts (SOGICE) which are harmful practices based on discriminatory beliefs that disrupt positive identity development (Fenaughty et al., 2023).

Discrimination experienced by disabled youth

Globally, UNICEF estimates disabled children are 40 percent more likely to feel discriminated against compared to non-disabled children (UNICEF, 2021). Local data suggests experiences of discrimination among disabled people are increasing (Stats NZ, 2021). In Aotearoa, 40 percent of disabled adults reported experiencing discrimination in 2020, compared to 19 percent among non-disabled people (Stats NZ, 2021). Disabled children and youth experience multiple forms of discrimination, including racism, ableism, and disablism[9] (Ingham et al., 2022). Internationally, disabled children are twice as likely to experience violence compared to their non-disabled peers (Fang et al., 2022).

The Youth19 study shows young disabled youth are more likely to experience discrimination when accessing healthcare (Clark et al., 2021). Parents of disabled children (2 to 14 years) are 9 times more likely to report their child having an unmet need for mental health or addiction support in the past 12 months, compared to non-disabled children (Ministry of Health, 2024a).

Discrimination and exclusion in education settings are common (Kearney, 2016). Among parents of disabled children and young people, about half say teacher and school principal

[9] Discrimination of disability includes ableism (societal bias favouring people without disabilities) and disablism (overt discriminatory actions against disabled people).

attitudes are barriers to the availability and accessibility of education (Kearney, 2016). Parents are often concerned about physical segregation at school and feel pressured to keep their children at home due to a lack of school support and resources (Kearney, 2016). Similarly, disabled youth find it challenging to access the same resources and opportunities as their non-disabled counterparts (Barwick, 2024).

Disabled students are 1.6 times more likely to be bullied than non-disabled students (Mhuru & Ministry of Education, 2021). Disabled adults in Aotearoa are more likely to be victimised compared to the national average, and experience deliberate use of force or violence than non-disabled adults (Ministry of Justice, 2024). However, the influence of disability-based discrimination on mental wellbeing is yet to be examined locally, and there is also a need to understand the factors that could help protect children and young people against the negative effects of discrimination.

Intersectionality

Many children and young people have multiple social identities and are part of various communities. This can compound exposure to different forms of discrimination and oppression. An intersectional approach that considers multiple identities and various forms of discrimination is therefore needed to fully understand the contexts of child and youth wellbeing (N. Simon-Kumar, 2023).

International research shows people who experience multiple forms of discrimination are more likely to report symptoms of depression (Vargas et al., 2020). Locally, symptoms of depression are more common among rainbow rangatahi Māori and Pasifika youth (compared to their non-rainbow counterparts), and more common among disabled rangatahi Māori and Pasifika youth (compared to their non-disabled counterparts), as well as disabled rainbow youth (compared to non-rainbow and non-disabled youth) (Roy et al., 2021, 2023).

5. Whānau environment

Section summary

Positive whānau relationships and environment are protective factors for mental health and wellbeing (Whitaker et al., 2022). Whānau connectedness and wellbeing are also important cultural components of Māori health and wellbeing (Durie, 1985; Stuart & Jose, 2014; Te Maringi Mai o Hawaiiki et al., 2024).

In Aotearoa, most children and young people report having positive and supportive whānau relationships, especially with their parents (Evans et al., 2023; Ministry of Health, 2024a; Stats NZ, 2022a).

Local research indicates positive parenting and whānau relationships are associated with better mental health and wellbeing (Ball, Zhang, et al., 2022; D'Souza et al., 2019; Fletcher et al., 2023; Raja et al., 1992). Parental setting of rules around alcohol use is a protective factor against risky drinking by adolescents, while low parental monitoring is associated with very high-risk drinking (Sharmin, Kypri, Khanam, Wadolowski, Bruno, Attia, et al., 2017; Sharmin, Kypri, Khanam, Wadolowski, Bruno, & Mattick, 2017; Yap et al., 2017).

Longitudinal studies in Aotearoa indicate that authoritarian and punishing parental styles, poor maternal mental health, and lower parental attachment, contribute to increased risks of mental health challenges and problematic substance use.

Family structure can impact wellbeing, with higher levels of stress and psychological distress found among adolescents and parents living in one parent and step-families (Gath, 2022). Young people who have been involved with Oranga Tamariki are also more likely to report symptoms of depression and having tried to take their own life in the past year (Fleming et al., 2022).

Overall, there is a need for more high-quality research in Aotearoa using consistent measures of whānau relationships and the environment to better understand the protective role in mental health and wellbeing. Regular monitoring of whānau wellbeing has only recently commenced in the New Zealand Health Survey and General Social Survey, so currently there is not sufficient data to observe trends over time and understand the effects on mental health.

This section examines: 1) whānau relationships and parenting factors, 2) household structure, 3) parental mental health, and 4) involvement with social services.

Whānau relationships and parenting factors

Research uses varying definitions and measures for whānau relationships and parenting (McLeod, Weisz, et al., 2007). For example, whānau dynamics can include whānau

connectedness, flexibility, outlook, emotional sharing, or collaborative problem solving (Ramaswami et al., 2022).

The International Survey of Children's Well-Being indicates most adolescents report high levels of whānau connection (care, support, safety, respect, and participation) (Whitaker et al., 2022). Similarly, young people in Aotearoa generally experience positive and strong whānau relationships. Over 90 percent of young people in the Growing up in New Zealand study (at age 12) report feeling they can always or often count on their parents to help them when they have a problem (Evans et al., 2023). Similarly, 95 percent of young people (aged 15 to 24) feel they can turn to whānau for support in times of crisis, and over 80 percent report high or very high levels of whānau wellbeing (Ministry of Health, 2024a; Stats NZ, 2022a). In line with this, 79 percent of parents and caregivers feel they are coping well or very well with the demands of raising children, and 93 percent have emotional support for parenting (Ministry of Health, 2024a).

The quality of whānau relationships depends in part on other contextual factors. International research indicates whānau connection tends to be stronger among young people living with both parents and those who have never experienced household financial worries or food insecurity (Whitaker et al., 2022). While the closeness of child-parent relationships is similar across ethnic groups in Aotearoa (Evans et al., 2023), transgender and non-binary young people report having less trusting and communicative relationships with parents compared to their cisgender counterparts (Evans et al., 2023). The Growing Up in New Zealand study found young people living in the most deprived neighbourhoods experienced less trusting and communicative relationships with their parents (Evans et al., 2023). Increasing rates of poverty and food insecurity in Aotearoa can negatively impact on whānau relationships. Some evidence suggests single parent families find it harder to ask for support than other family types, including financial and emotional support (Stats NZ, 2022a).

Both local and international research has examined the impact of whānau relationships and dynamics on mental health. Meta-analyses looking at whānau relationships and dynamics have not found large pooled odds ratios (Guerrero-Muñoz et al., 2021; McEvoy et al., 2023). While this largely reflects the need for more high-quality research using consistent measures to enable greater comparability of findings across studies, some key studies are described below. Moreover, whānau can have a broader meaning in the Aotearoa context which needs to be taken in consideration.

Looking at parenting factors, depression and anxiety symptoms among children and adolescents tend to be higher among those who experience low parental warmth, abusive parenting, high aversiveness (such as harsh criticism and parent-child conflict), over-involvement (such as excessive control and interference with autonomy), and conflict between parents (Yap et al., 2014; Yap & Jorm, 2015). Parenting factors appear to influence symptoms of depression more than anxiety, however, this might reflect the greater research focus on depression (McLeod, Weisz, et al., 2007; McLeod, Wood, et al., 2007; Yap et al., 2014).

Locally, the Christchurch Health and Development Study found elevated rates of mental health challenges, substance use and offending in young people exposed to negative whānau environments during childhood (Fergusson et al., 1994; Fergusson & Horwood, 1998). When children in the Growing Up in New Zealand study were aged 4.5 years, behavioural difficulties, measured using the Strengths and Difficulties Questionnaire, were associated with poor maternal mental health, physical punishment, and authoritarian parenting styles (D'Souza et al., 2019). These relationships are complex and often bidirectional. When the cohort were aged 12 years, those with less supportive child-parent relationships were more likely to experience symptoms of depression and anxiety (Fletcher et al., 2023). The Dunedin Multidisciplinary Health and Development Study also found low levels of parental and peer attachment increased the likelihood of poorer mental health in adolescence (Raja et al., 1992). The analysis indicates parental attachment may be a more important predictor than peer attachment for some aspects of mental wellbeing.

For Pasifika children, positive parenting and parental relationships are key protective factors against symptoms of depression (Paterson et al., 2014, 2018). Conversely, poor quality relationships with mothers increases the chances of symptoms of depression among Aotearoa-born Pasifika adolescents (Gossage et al., 2022).

For substance use, parental supply of alcohol is associated with risky drinking in adolescents (OR 2.0), whereas parental setting of rules around alcohol use is a protective factor for risky drinking (OR 0.7) (Sharmin, Kypri, Khanam, Wadolowski, Bruno, Attia, et al., 2017; Sharmin, Kypri, Khanam, Wadolowski, Bruno, & Mattick, 2017). Parental drinking and favourable parental attitudes towards alcohol use is also associated with risky drinking among adolescents (Yap et al., 2017).

In the Youth2000 study, the likelihood of very high-risk drinking was 2 to 3 times higher among secondary school students who reported low parental monitoring (OR=2.9), not always feeling safe at home (OR=2.6), getting enough quality whānau time (OR=2.4), and having trusted whānau to share their feelings with (OR=1.9) (Ball, Zhang, et al., 2022). The Youth2000 study also found that rangatahi Māori who had a whānau member or close friend die by suicide are 4.2 times more likely to also have tried to take their own life (Clark et al., 2011). On the other hand, a Youth 19 study found whānau acceptance lowered the likelihood of symptoms of depression and anxiety, and thoughts of taking their own life among Asian rainbow youth (Koh et al., 2024).

Parental mental health

Parental mental health can contribute to child and youth mental health through a combination of genetic and environmental factors (Manning & Gregoire, 2006).

In the Growing Up in New Zealand cohort, symptoms of depression in mothers were significantly associated with symptoms of depression in children (Fletcher et al., 2023). This aligns with international literature showing maternal depression and anxiety during pregnancy and childhood can negatively impact on the child's socio-emotional development

(Goodman et al., 2011; Morales et al., 2023; Rogers et al., 2020). Paternal depression can also negatively impact children's emotional development (Sweeney & MacBeth, 2016). The association between parent and child mental health may be partially mediated by parenting factors (such as involvement in the child's care, hostility, harsh or ineffective discipline), parent-child relationship (such as attachment style), and marital conflict (Honda et al., 2023; Śliwerski et al., 2020; Sweeney & MacBeth, 2016).

Household structure

Across all family types (such as living with two biological parents, single-parent, and step-families), whānau belonging predicts adolescent wellbeing (including symptoms of depression) (King et al., 2018). Adolescents in single-parent and step-families report lower levels of wellbeing compared to those living with two biological parents (King et al., 2018). Locally, recent analysis of longitudinal data from the Survey of Families, Income and Employment (SoFIE), further indicates parents and late adolescents living in one parent and step-families report higher symptoms of stress and psychological distress, along with lower physical health, compared to those living in two parent families (Gath, 2022). The link between living in sole parent household and child mental health is complex and partly depends on parental wellbeing and socioeconomic status (Gath, 2022; Tobias et al., 2010).

Involvement with social services

Whānau circumstances, such as abuse and neglect (Karatekin et al., 2022; Scully et al., 2020), may contribute to poor mental health and involvement with social services.

Overseas, young people who receive foster care tend to be more likely to experience mental health problems and 3.9 times more likely to experience self-harm (Dubois-Comtois et al., 2021; McEvoy et al., 2023).

The Youth19 study shows young people who have been involved with Oranga Tamariki are 2.9 times more likely to report symptoms of depression and 4.7 times more likely to report having tried to take their own life in the last year compared to those who have never been involved with Oranga Tamariki (Fleming et al., 2022). Young people who have been involved with Oranga Tamariki highlight the importance of having a voice in decision-making about their lives, having people who love and care about them, being treated fairly in school and community settings, and access to basic material needs, such as food and housing (Fleming et al., 2020).

Negative experiences whilst under State care are associated with poor mental health. The Abuse in Care – Royal Commission of Inquiry (2024) shows many people who were in State and faith-based care when they were young have experienced abuse and neglect. This has led to long-term negative impacts on their mental health and emotional wellbeing, relationships, physical health, education and employment opportunities, and access to housing.

6. Peer relationships, connectedness, and loneliness

Section summary

Relationships with peers (including friendships) are an important protective factor for children and young peoples' mental health as they provide social and emotional support outside of the home environment (Mitic et al., 2021).

In Aotearoa, most young people report having regular contact with friends and trusting friendships (Stats NZ, 2022b). However, less than half feel they can confide in friends about their problems and nearly 1 in 10 feel lonely most or all of the time (Evans et al., 2023; Stats NZ, 2022b). There are concerns that loneliness among young people is increasing, but more data is needed to monitor trends over time.

Local research shows social connectedness and supportive peer relationships are associated with fewer symptoms of depression and anxiety (Fletcher et al., 2023). In contrast, negative peer relationships and peer coercion can potentially lead to greater symptoms of depression and problematic substance use (Jose, 2015; Jose et al., 2012; McDonough et al., 2016). Research also identifies differences in peer connectedness across groups.

Overall, there is a need for more research using consistent measures looking at the impact of peer relationships on child and youth mental health and substance use (De Risio et al., 2024; Pearce et al., 2023; Wickramaratne et al., 2022).

A range of social constructs and measures are used across the literature to look at peer relationships, including connectedness, loneliness, social support, and social capital (De Risio et al., 2024; Pearce et al., 2023; Wickramaratne et al., 2022). The Ministry of Social Development identifies three interrelated core components of social connectedness that influence wellbeing: socialising (such as interacting and spending time with people), social support (such as received support or perceived availability of support), and sense of belonging (such as feeling valued by others and not feeling lonely).

In Aotearoa, most young people report having regular contact with friends and trusting friendships. Young people often use social media and technology to support social connection and community building (Duffy et al., 2024; Te Hiringa Mahara, 2022). The 2021 General Social Survey indicates 80 to 90 percent of young adults (aged 15 to 24 years) have weekly contact with friends, which is more regular compared to other stages of adult life (Stats NZ, 2022b). The Growing Up in New Zealand study further indicates 85 percent of young people (at aged 12) report almost always or often trusting their friends (Evans et al., 2023). However, less than half of young people feel they can often tell their friends about their problems and troubles, and that their friends encourage them to do so (Evans et al., 2023). Cisgender girls tend to report stronger peer relationships compared to other genders (Evans et al., 2023).

Internationally, there are growing concerns that loneliness is increasing among young people (World Health Organization, n.d.). A meta-analysis indicates the pooled prevalence of loneliness among adolescents in the Western Pacific region is around 10 percent, though the study included no data from Australia or New Zealand (Surkalim et al., 2022). Locally, the 2021 General Social Survey indicates young adults experience higher rates of loneliness compared to other adult age groups, with 7 percent reporting feeling lonely most or all of the time (Stats NZ, 2022b).

Impact on wellbeing

Across the international literature, positive peer relationships and social support networks contribute to children's subjective wellbeing, while negative peer interactions can have the opposite effect (McPherson et al., 2014; Moreira et al., 2021). The quantity and quality of friendships and peer attachment have also been found to influence symptoms of depression in young people (De Risio et al., 2024). While there is consistent support for the link between social connectedness and depression, more high-quality research using consistent measures of peer relationships is needed (De Risio et al., 2024; Pearce et al., 2023; Wickramaratne et al., 2022).

In Aotearoa, social connectedness protects against symptoms of depression and anxiety among adolescents (Jose, 2015; Jose et al., 2012; McDonough et al., 2016). Similarly, among Pasifika children, positive peer relationships protect against symptoms of depression (Gossage et al., 2022; Paterson et al., 2014, 2018). In contrast, low quality peer relationships were associated with symptoms of depression and anxiety at age 12 in the Growing Up in New Zealand cohort (Fletcher et al., 2023). The Dunedin Multidisciplinary Health and Development Study also found social isolation during childhood increases the likelihood of major depression in adulthood by 1.8 times (Danese et al., 2009).

Perceived popularity among peers is associated with higher rates of general substance use in adolescents (Cole et al., 2024). Other local research shows negative peer relationships and peer coercion predict increased use of substances (Jose, 2015; Jose et al., 2012; McDonough et al., 2016). Similarly, the Christchurch Health and Development Study found young people who affiliate with peers who engage in antisocial behaviours and/or substance use are more likely to experience problematic substance use and major depression (Fergusson et al., 2002, 2003).

7. Engagement with school and work

Section summary

School environment and engagement influences child and adolescent mental health and wellbeing.

Most students in Aotearoa report positive school engagement experiences. Local research indicates school connectedness is associated with fewer symptoms of depression and anxiety and thoughts of taking their own life (Garisch et al., 2016).

On the other hand, disconnection from school and work are often related to challenging whānau and social circumstances (Clark, Gontijo de Castro, et al., 2022). Only half of students across all ages attend school for more than 90 percent of the term (Education Counts, 2024b). This rate appears to be stable over time. COVID-19 appears to have impacted the rate of students leaving school early, with 1 in 2 students leaving school without completing the final stage of secondary education (Education Counts, 2024a).

Disconnection from school is common in Aotearoa, with around 1 in 8 young people (aged 15 to 24 years) not in employment, education, or training (NEET) (Stats NZ, 2024d). Young people in Aotearoa who are NEET are twice as likely to report symptoms of depression and anxiety, and self-harm compared to secondary school students (Clark, Gontijo de Castro, et al., 2022). They are also 3.5 times more likely to report having previously tried to take their own life in the past year (Clark, Gontijo de Castro, et al., 2022). Young people who leave school without qualifications are also more likely to experience problematic substance use in early adulthood (Boden et al., 2006).

Whilst there are likely to be multiple mechanisms by which school engagement impacts on mental health and substance use, this is an important contextual factor.

International research indicates school contributes to young people's social capital and is an important setting for implementing population-level mental health initiatives for children and adolescents (Kirkbride et al., 2024). School engagement includes behavioural, emotional, and cognitive engagement in learning (Tait et al., 2023). While the OECD has previously monitored school engagement, this indicator appears to be discontinued. OECD data from 2012 indicates around 9 in 10 students express positive attitudes towards school (OECD, 2024). In Aotearoa, the Ministry of Education monitors rates of attendance, stand-downs, suspensions and exclusions. In 2024, around half of students across all ages attended school regularly (defined as more than 90 percent of the term) (Education Counts, 2024b).

At age 12, most students (over 80 percent) report positive school engagement experiences (Tait et al., 2023).[10] At this age, student engagement is strongly associated with student-teacher relationships and academic achievement (Tait et al., 2023). Teachers are often

[10] Primary education includes primary and intermediate schools.

identified as a special adult relationship outside of whānau members (Evans et al., 2023). School engagement differs for some groups. Cisgender girls report high school engagement, whereas transgender and non-binary young people report lower engagement. Rangatahi Māori report lower school engagement compared to other ethnic groups (Tait et al., 2023). Lower school engagement is also found for disabled children and those with specific learning needs (Tait et al., 2023).

The OECD average for completing upper secondary education is around 70 to 80 percent (OECD, 2023). In Aotearoa, nearly 80 percent of students remained in school until their 17th birthday in 2023, but half left school without completing the final stage of secondary education (NCEA Level 3) (Education Counts, 2024a).[11] Ministry of Education data indicates declining rates of NCEA attainment and students remaining at school until at least 17 years of age (Education Counts, 2024a).[12] The Ministry attributes decreased student retention to increased living costs, a strong labour market, and disruptions to learning due to COVID-19 (Education Counts, 2024a). Student engagement appears to decrease in secondary education (ages 13 to 17 years) as rates of stand-downs, suspensions and exclusions tend to peak around the ages of 13 to 15 (Education Counts, 2024b).

Overseas research shows the positive impact of school connectedness on youth mental health and substance use (A. Arango et al., 2024; Rose et al., 2024; Yuen & Wu, 2024). Youth with high school connectedness are less likely to have thoughts of taking their own life (OR=0.5) or to try taking their own life (OR=0.6) (Marraccini & Brier, 2017). In contrast, young people who experience school withdrawal are 6.4 times more likely to self-harm, and school absenteeism increases the likelihood of thoughts of taking their own life by about 20 percent (McEvoy et al., 2023; Richardson et al., 2024).

In Aotearoa, the Christchurch Health and Development Study found young people who leave school without qualifications are more likely to experience problematic substance use in early adulthood (Boden et al., 2006). The Youth Wellbeing Study further indicates school connectedness is associated with lower rates of symptoms of depression and anxiety and thoughts of taking their own life (Garisch et al., 2016).

School connectedness appears to be particularly important for the mental health of students with poorer parental attachment (Garisch et al., 2016). A Youth19 analysis focused on Asian rainbow youth found feeling safe at school reduces symptoms of depression and anxiety and thoughts of taking their own life (Koh et al., 2024). For Pasifika children, school connectedness and high performance at school are protective factors against symptoms of depression (Gossage et al., 2022; Paterson et al., 2014). Conversely, the Youth2000 series indicates secondary school students who feel their teachers don't care about them are 2.7 times more likely to report very high-risk drinking (Ball, Zhang, et al., 2022).

[11] Ministry of Education states: "Students are legally required to attend schooling until age 16, unless they are granted an early leaving exemption."

[12] Note that NCEA (National Certificate of Educational Achievement) is the main secondary school qualification in Aotearoa, but some schools offer other qualifications such as Cambridge Assessment International Examinations.

Alternative education options are available for young people who are disengaged or alienated from mainstream schooling. The Youth19 study found female students in alternative education are 2.5 times more likely to experience self-harm and have tried to take their own life compared to female secondary school students (Clark et al., 2023).

Homeschooling rates are increasing in Aotearoa (Education Counts, 2025). Overseas research indicates homeschooling can be beneficial for child and adolescent mental health and patterns of substance use (Guterman & Neuman, 2017; Schepis et al., 2020; Vaughn et al., 2015). However, homeschooling may negatively impact on parental mental health and substance use (Baker, 2019; Deacon et al., 2021).

Youth not in employment, education or training (NEET)

Rates of youth in Aotearoa who are NEET is around 8 percent for 15 to 19 year olds and 14 percent for 20 to 24 year olds, similar to the OECD average (OECD, 2022). Rates of young adults (15 to 24 years) NEET have been fairly steady over recent years (Stats NZ, 2024d). Some groups are more likely to be NEET. The NEET rate among disabled young people (46 percent) is more than four times higher than for non-disabled young people (11 percent) (Whaikaha - Ministry of Disabled People, 2024). Locally, disabled youth are more concerned about unemployment and finding a job compared to young people in general; 3 in 4 disabled young people report their job seeking experience as poor (Ministry of Youth Development, 2011).

Internationally, young people who are NEET are more likely to experience mental health challenges, substance use problems, and co-existing problems (28, 43 and 38 percent higher respectively) (Gariépy et al., 2022). Similarly, the Youth19 study in Aotearoa shows young people who are NEET are about twice as likely to report symptoms of depression (OR=2.4), anxiety (OR=1.8), and self-harm (OR=2.1) compared to secondary school students (Clark, Gontijo de Castro, et al., 2022). They are also 3.5 times more likely to report having tried to take their own life in the past year (Clark, Gontijo de Castro, et al., 2022). Young people who are NEET are more likely to have experienced challenging whānau and social circumstances (Clark, Gontijo de Castro, et al., 2022).

8. Social media and technology

Section summary

The use of social media and technology is an important contextual factor, with emerging evidence of its role as a risk and protective factor (Duffy et al., 2024; Te Hiringa Mahara, 2022).

Young people have described both harmful and beneficial aspects of social media and technology. Around half of young people in Aotearoa agree social media is a big issue facing young people (Youthline & Kantar Public, 2023). Only 1 in 8 children meet current screen time guidelines, and the risk of exposure to harmful digital communications is higher locally than many other countries (Netsafe, 2018; Wilkinson et al., 2021).

International research suggests both too much and too little screen time can be detrimental to mental health (Wilkinson et al., 2021). Problematic levels of smartphone use and social media are associated with increased symptoms of depression and anxiety (Huang, 2022; Sohn et al., 2019; Yang et al., 2020).

There is increasing attention on the extent and impact of harmful digital communication. Exposure to harmful digital communication or content is considered high in Aotearoa. More than two-thirds of teenagers experienced at least one unwanted digital communication in the past year.

Overall, there is very little research in Aotearoa exploring the impact of social media and technology on child and youth mental health and substance use.

The body of literature focused on technology and its impact on child and youth mental health has grown since 2011 (Basu & Banerjee, 2020; Byrne et al., 2021). The relationship between child and youth mental health and digital environments is complex and requires further research using standardised measures of screen time and technology use (Byrne et al., 2021).

A Youthline survey shows nearly half of young people (49 percent) in Aotearoa agree that social media is a big issue facing young people (Youthline & Kantar Public, 2023). Young people are particularly concerned about social media's impact on mental health and social issues, the unrealistic or fake content, and expectations it sets for young people, and the addictive and pervasive nature of social media (Youthline & Kantar Public, 2023). Young people want to access tools and develop skills to keep themselves safe online, as well as safeguards and legislation to protect them from online harm (Te Hiringa Mahara, 2022). While young people identify social media and technology as an important issue, it can also be a beneficial tool for self-expression, social connection, education, community building, access to health advice, and emotional support (Cullen et al., 2024b; Duffy et al., 2024; Te Hiringa Mahara, 2022).

Time spent using technology

Estimates are only 1 in 8 children in Aotearoa meet the Ministry of Health's screen time guidelines (Wilkinson et al., 2021).[13] Compared to many countries, internet use is high among young people in Aotearoa at approximately 42 hours per week on average (OECD, 2021). In comparison, the OECD average for internet use among young people was approximately 35 hours per week in 2018. High screen time rates could partly reflect the country's early adoption of digital technologies in schools and home confinement during the COVID-19 pandemic (Cullen et al., 2024b, 2024a).

Nearly 1 in 4 (23 percent) children and young people are estimated to experience problematic smartphone use, which is characterised by excessive or problematic use, negative impacts on daily life, and distress when unable to use their phone (Sohn et al., 2019). Internet gaming disorder (recognised in the DSM-5-TR) is estimated to affect around 1 in 10 adolescents and young adults (Gao et al., 2022).[14]

Screen time and mental health are thought to have an inverse U-shaped relationship, where too much or too little screen time can be detrimental to mental health (Wilkinson et al., 2021). Research focused on digital access shows adolescents without internet access are more likely to report lower subjective wellbeing (Grimes & White, 2019). Digital exclusion may limit young people's social connection, school engagement, and access to information (Metherell et al., 2022). Lack of internet access can reflect household circumstances which can also impact wellbeing; it is more likely to affect people living in social housing and low income households and disabled people (Grimes & White, 2019). On the other hand, problematic smartphone use triples the odds of experiencing symptoms of depression and anxiety (Sohn et al., 2019; Yang et al., 2020). Problematic social media use (characterised as excessive use, preoccupation, and compulsion with negative impacts on daily life) is moderately correlated with stress and symptoms of depression and anxiety (Boer et al., 2020; Huang, 2022; Shannon et al., 2022).

In Aotearoa, there is a need for more cross-sectional and longitudinal research examining the relationship between technology use and mental health among children and youth. In the 1980s, the Dunedin Multidisciplinary Health and Development Study looked at the amount of television viewing during the cohort's childhood and adolescence. Excessive television viewing is associated with an increased risk of anxiety, problematic substance use and gambling, and antisocial behaviours in adulthood (McAnally et al., 2019, 2024; Robertson et al., 2013). The Growing Up in New Zealand study is yet to look at the psychological impacts of screen time, but an earlier analysis indicates high levels of screen time at age 2 can negatively impact children's cognitive development before age 5 (Corkin et al., 2021).

[13] The Ministry of Health recommends: no screen use for children under 2 years of age, less than 1 hour per day for children aged 2 to 5, and less than 2 hours per day for children aged 5 to 17.
[14] The American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR)* is a diagnostic tool used by mental health professionals.

Exposure to harmful digital communications

The use of digital technology can expose children and youth to harmful digital communications. Globally, 67 percent of children (aged 8 to 18 years) were exposed to cyber risks in 2023. This includes cyberbullying, exposure to inappropriate content, and contact with strangers (DQ Institute, 2023). Adolescents who experience cyberbullying victimisation are more likely to experience depression (OR=2.7) and externalising problems such as substance use and aggression (Fisher et al., 2016; Tran et al., 2023).

In Aotearoa, the risk of exposure to harmful digital communications is higher than many other countries; 70 percent of teenagers report experiencing at least one unwanted digital communication in the past year. Moreover, 4 in 5 of these teenagers had a negative emotional response to the unwanted digital communication (Netsafe, 2018).

9. Socioeconomic factors

Section summary

Low socioeconomic status can negatively influence child and youth mental health and problematic substance use, through limiting access to resources, financial stressors and material hardship (Kirkbride et al., 2024; Reiss, 2013).

Aotearoa has child poverty rates slightly above the OECD average. Local data indicates household food insecurity rates have increased since COVID-19 and the global recession (Ministry of Health, 2024a). Currently 1 in 4 children experience household food insecurity where food runs out often or sometimes (Ministry of Health, 2024a).

Children and youth in Aotearoa living in poverty or the most deprived areas are more likely to experience symptoms of depression compared to those who are not experiencing socioeconomic disadvantage (Denny et al., 2016; Fletcher et al., 2023). This may reflect in part factors such as parental stress, whānau conflict, and limited access to high-quality schooling and health care (K. Gibson et al., 2017; Yoshikawa et al., 2012).

Socioeconomic status reflects social stratification and unequal access to resources (Kirkbride et al., 2024). It is a multifaced construct that includes education, employment, and income. Socioeconomic disadvantage can manifest as financial stress and material hardship such as access to food, housing, and healthcare (Kirkbride et al., 2024).

The child poverty rate in Aotearoa (14 percent) is slightly above the OECD average and is being closely monitored under the Child Poverty Reduction Act 2018.

In the year ended June 2024, Stats NZ (2024) reports the following child poverty estimates.

- About 13 percent of children live in households with less than 50 percent of the median household equivalised disposable income *before* housing costs (the Government's target is to reduce this rate to 5 percent by 2027/28). The percentages are highest in Southland, Auckland and Waikato regions, with MELAA and Asian (followed by Māori and Pacific) more affected.
- Eighteen percent of children live in households with less than 50 percent of the median household equivalised disposable income *after* housing costs (the Government's target is to reduce this rate to 10 percent by 2027/28). The population groups most affected are MELAA and Asian peoples.
- Thirteen percent of children live in households in material hardship (based on the DEP-17 index) (the Government's target is to reduce this rate to 6 percent by 2027/28). The populations most affected are Pacific and Māori. [15]

[15] These measures and targets are defined in the Child Poverty Reduction Act 2018. Data is collected through the Household Economic Survey. The 'median household equivalised disposable income' is the median disposable income for the year which is equivalised by taking into account household size and composition.

New Zealand Health Survey data from 2023/24 indicates 1 in 4 children (27 percent) experience household food insecurity (where food runs out often or sometimes), which has significantly increased since 2019/20 (Ministry of Health, 2024a). Further data from the Growing Up in New Zealand study indicates 1 in 10 young people (aged 12) experienced material hardship and 1 in 14 experienced homelessness (Grant et al., 2023; Lai et al., 2023). Measures of material hardships are higher among Māori, Pasifika, and disabled children and children living in households with a disabled parent or sibling, which reflects the inequitable access to resources underpinned by societal prejudice and discrimination (Duncanson et al., 2022; Gerritsen et al., 2024; K. Gibson et al., 2017; Leadley, 2023).

The Growing Up in New Zealand found young people living in the most deprived areas were more likely to experience symptoms of depression compared to those living in the least deprived areas, but no differences were found for symptoms of anxiety (Fletcher et al., 2023). Similarly, the Youth19 study indicates secondary school students experiencing poverty are 2 to 3 times more likely to report symptoms of depression compared to students not experiencing poverty (Denny et al., 2016). This is in line with international research which shows socioeconomically disadvantaged children and young people are 2 to 3 times more likely to experience mental health challenges compared to those who are not experiencing socioeconomic disadvantage (Reiss, 2013).

A range of factors may explain the relationship between socioeconomic factors and mental health. International research suggests this includes whānau factors (such as parental stress and mental health, parenting factors, and trauma exposure), institutional factors (such as poor access to quality health care, schooling, and employment), and community factors (such as levels of violence and social cohesion) (K. Gibson et al., 2017; Yoshikawa et al., 2012). Similarly, a Growing Up in New Zealand analysis indicates maternal stress and screen time partly explain the association between lower household income and children's behavioural challenges (Monk et al., 2024). They found children in lower income households tend to have higher levels of maternal stress, screen time, and behavioural challenges (Monk et al., 2024).

10. Substance use

Section summary

Harmful use of substances among young people is an important contextual factor that influences the likelihood of later developing mental health challenges and ongoing problematic substance use.

Young people are concerned about potential harms related to access to alcohol and drugs, particularly vaping (the use of electronic cigarettes or vape devices) (Fleming et al., 2020; Youthline & Kantar Public, 2023). The use of alcohol, tobacco, and cannabis in Aotearoa among adolescents has declined in recent years, though binge drinking rates remain high, and vaping is increasing (Ministry of Health, 2024a).

The relationship between mental health and substance use is bi-directional and can co-occur. There is also a dose-response relationship for alcohol and cannabis use; where higher levels of alcohol or cannabis use are associated with greater risks of mental health challenges and problematic substance use (Fergusson, Boden, et al., 2013; Fergusson et al., 2009; Horwood et al., 2012; McGee et al., 2000; Poulton et al., 2020; Wells et al., 2004).

International research shows vaping can increase the likelihood of depression, anxiety, and thoughts of taking their own life among children and young people (Javed et al., 2022; Khan et al., 2023; Livingston et al., 2022). However, there is little local research looking at the psychological effects of vaping on mental health and substance use.

Access to alcohol and drugs and their harmful effects are key concerns among young people in Aotearoa (Fleming et al., 2020). Māori and Pacific adolescents are more likely to be concerned about their alcohol use compared to their New Zealand European peers (Ameratunga et al., 2019).

Globally, while alcohol is the most consumed substance among young people, trend data indicates alcohol consumption is declining among adolescents living in high-income countries (Vashishtha et al., 2021). Internationally, more than half of 15 year olds report having tried alcohol (57 percent), while one-third (32 percent) have tried vaping, and 12 percent cannabis (World Health Organization, 2024).

In Aotearoa, adolescent use of alcohol, tobacco, and cannabis has declined since the early 2000s, though vaping is increasing and rates of binge drinking remain high (Ball, Crossin, et al., 2022). These patterns are in line with international trends (Ball, Crossin, et al., 2022). A Youthline survey suggests youth are currently more worried about vaping than use of alcohol and other drugs (Youthline & Kantar Public, 2023). In the 2023/24 New Zealand Health Survey, around 1 in 2 young people aged 15 to 24 report having ever tried vaping and 1 in 5 report vaping daily (21 percent) (Ministry of Health, 2024a). For alcohol, nearly 1 in 5 young people report heavy episodic or binge drinking in the past month (19 percent) and

hazardous drinking patterns (17 percent). Nearly 1 in 4 young people report cannabis use in the past year (24 percent) and 8 percent uses cannabis weekly (Ministry of Health, 2024a).

Mental health challenges and problematic substance use often occur together and influence each other (Cairns et al., 2014; Esmaeelzadeh et al., 2018). This may be due to a range of reasons including similar underlying causes or contextual factors, use of substances to help cope with mental health symptoms, and substances that can lead to mental health symptoms (Substance Abuse and Mental Health Services Administration, 2023). Alcohol use, binge drinking, and cannabis use are associated with developing higher levels of depression in longitudinal studies (Cairns et al., 2014). Cannabis use can increase the likelihood of developing depression by 17 to 33 percent (62 percent for heavy cannabis use) and anxiety by 28 per cent (Esmaeelzadeh et al., 2018; Kedzior & Laeber, 2014; Lev-Ran et al., 2014). One review indicates cannabis use is more likely to lead to depression than the other way around (Esmaeelzadeh et al., 2018). Young people are more likely to engage in self-harm if they use cannabis or other drugs (OR=4.4) or experience harmful alcohol use such as binge drinking (OR=2.7) (McEvoy et al., 2023).

In Aotearoa, higher levels of substance use are associated with greater symptoms of depression, self-harm, and thoughts of taking their own life among secondary school students (Fleming et al., 2014). High levels of substance use also impact subsequent mental health challenges and problematic substance use in early adulthood. The Christchurch Health and Development Study found substance use disorders are more likely to lead to depression rather than the other way around (Fergusson, Boden, et al., 2013; Fergusson et al., 2009, 2011). Whereas substance use disorder and anxiety appear to have a more reciprocal relationship (Fergusson et al., 2011).

Alcohol use appears to have a dose-response relationship with mental health, where higher levels of alcohol use are associated with greater risks of mental health challenges (Fergusson, Boden, et al., 2013; Fergusson et al., 2009; McGee et al., 2000; Wells et al., 2004). Both the Dunedin and Christchurch longitudinal studies found that while problematic alcohol use predicts depression in early adulthood, general alcohol consumption did not (Fergusson, Boden, et al., 2013; Fergusson et al., 2009; McGee et al., 2000; Wells et al., 2004). Age of first drinking has been linked with subsequent problematic substance use, however, the impact appears to depend on factors such as household socioeconomic status, whānau dynamics, and parental alcohol-related attitudes (Newton-Howes & Boden, 2016). Age of first drinking does not appear to be associated with subsequent depression or anxiety (Newton-Howes & Boden, 2016).

For cannabis use, there is a dose-response relationship where higher levels of cannabis use are associated with greater risks of mental health challenges, particularly psychosis and depression (Horwood et al., 2012; Poulton et al., 2020). The Dunedin Multidisciplinary Health and Development Study found cannabis use led to subsequent mental health conditions in early adulthood, but in adolescence mental health conditions are likely to lead to cannabis use (McGee et al., 2000). Daily cannabis use increases the likelihood of

symptoms of psychosis by 1.6 to 1.8 times in young people compared to no cannabis use (Fergusson, Horwood, & Ridder, 2005). In young adulthood, more frequent cannabis use is associated with thoughts of taking own life among males, and a higher risk of illicit drug use (Fergusson et al., 2006; van Ours et al., 2013).

While vaping is seen as a harm reduction strategy for reducing use of tobacco cigarettes, it is important to understand its impact on youth mental health. There is a need for more high-quality research both internationally and locally, particularly longitudinal studies, to understand the psychological impacts of vaping on children and youth (Beckert & Jones, 2018; Javed et al., 2022). The available international research indicates vaping increases the risk of depression, anxiety, and thoughts of taking one's own life among children and young people (Javed et al., 2022; Khan et al., 2023; Livingston et al., 2022). Moreover, a US study found more frequent and sustained vaping among adolescents is associated with greater symptoms of depression (Lechner et al., 2017).

Discussion

This narrative review provides a deeper understanding of 10 key contextual factors driving mental health challenges and problematic substance use among children and young people. The review identifies several emerging factors, as well as those specific to Aotearoa which have been less well researched.

The findings emphasise the importance of contextual factors in understanding, preventing and responding more effectively to mental health challenges and problematic substance use among children and young people. Contextual factors need to be included in child and youth mental health and addiction prevalence studies, as well as other national children and youth studies, in order to inform population prevention and early intervention strategies, and achieve health equity (Menzies et al., 2020; Office of the Auditor-General, 2024).

The following sections summarise key findings and discuss potential next steps to better understand the contextual factors influencing child and youth mental health and substance use in Aotearoa.

Key findings

This review brings together international and local research on a wide range of contextual factors that influence and impact on mental health and substance use among children and young people. The 10 key contextual factors explored are (in alphabetical order): 1) adverse childhood experiences (including child maltreatment), 2) bullying victimisation, 3) cultural identity, 4) experiences of discrimination, 5) whānau environment, 6) peer relationships, 7) engagement with school and work, 8) social media and technology, 9) socioeconomic factors, and 10) substance use.

This review identifies the protective effects of having positive and supportive whānau and peer relationships, a strong sense of cultural identity, and being engaged with school or work. These factors contribute to the strengths and wellbeing of children and youth (Han et al., 2023; Karatekin et al., 2022). These protective factors are widespread; most young people in Aotearoa have positive relationships with parents and peers, as well as positive experiences with school (Evans et al., 2023; Stats NZ, 2022a, 2022c; Tait et al., 2023).

Many of the contextual factors examined in this review have negative influences, and for some at least double the likelihood of mental health challenges and problematic substance use among children and youth. Consistent and strong impacts were found for childhood maltreatment (particularly sexual harm and abuse), multiple childhood adversities, bullying victimisation, experiences of discrimination, and a lack of engagement in employment, education or training (Clark, Gontijo de Castro, et al., 2022; Crengle et al., 2012; Fergusson et al., 1996; Fergusson & Lynskey, 1997; Hashemi et al., 2021; Li et al., 2022; Tan et al., 2021; A. D. Williams et al., 2018). These are the strongest negative influences for children and youth. Particular consideration should be given to examining trauma and adverse

childhood experiences in any prevalence study of mental health challenges and problematic substance use.

Contextual factors disproportionately impact on children and youth (Dizon et al., 2024; Fleming et al., 2024). Many of the factors are driven by underlying structural and socioeconomic circumstances that are crucial to understand to achieve health equity. Children and youth who are Māori, Pasifika, from migrant and refugee backgrounds, identify as rainbow, living with a disability, living in poverty, or involved with Oranga Tamariki are often more impacted by contextual factors. Taking collective action on contextual factors and large-scale social issues (such as housing, food, and discrimination) is key to addressing inequities in mental health (Fleming et al., 2024). It is also important to ensure services and support are whānau-centred, holistic, and culturally safe for children and young people (Fleming et al., 2024).

The most prevalent factors among children and young people that can negatively impact wellbeing include excessive screen time and internet use, unwanted digital communications, loneliness, binge drinking, and vaping (Ministry of Health, 2024a; Netsafe, 2018; Wilkinson et al., 2021). Understanding the association between these negative contextual factors and the experience of mental health challenges and problematic substance use in children and youth is important to consider for future studies.

Due to societal changes, some contextual factors are becoming more widespread over time and subsequently changing trends in the prevalence of child and youth mental health challenges and problematic substance use in the population. Local data indicates rising rates of youth vaping, family harm, unwanted sexual experiences, loneliness, household food insecurity, school withdrawal, and unemployment (Ball, Crossin, et al., 2022; Education Counts, 2024a; Fleming et al., 2021; Ministry of Health, 2024a; New Zealand Family Violence Clearinghouse, n.d.; New Zealand Police, 2024). Given their influence on mental health and substance use, consideration needs to be given to how frequently these contextual factors are monitored over time.

Gaps in the literature

This review relies heavily on overseas evidence for some contextual factors, especially emerging influences arising from societal changes. This includes factors such as vaping, social media and technology (such as screen time) where more local research is needed to understand the long-term impacts on children and youth. Consideration should be given to inclusion of emerging factors into the child and youth prevalence study given the current lack of evidence. Other areas requiring further research in Aotearoa include whānau wellbeing, cultural identity, disability, loneliness, school connectedness, and bullying victimisation, as well as discrimination experienced by rainbow and disabled youth. While population data is being collected for many of these factors, more analysis is required to examine their impact on mental health challenges and problematic substance use.

There has been robust research from the Christchurch and Dunedin longitudinal studies looking at well-established contextual factors. However, both cohorts were born in the 1970s which means study findings are becoming less relevant to younger generations. We need updated research around childhood maltreatment, socioeconomic disadvantage, whānau environment, peer relationships, education, and substance use. Moreover, some emerging contextual factors which are increasingly recognised as important (Maessen et al., 2023), were not present at the time these cohorts were studied (such as social media, vaping, and climate anxiety).

These research gaps have important implications for the prevalence study, routine surveys, longitudinal studies, and other public health research in Aotearoa. There needs to be a clear long-term plan for understanding and monitoring the impact of contextual factors on mental health, substance use and wellbeing. Further analysis of local data sets may help fill these research gaps, particularly data collected through the Growing Up in New Zealand study and New Zealand Health Survey.

In examining the literature, we observed a lack of consistent definitions and methods for measuring some contextual factors. For example, while the ACEs questionnaire is commonly used across the published literature, many ACE studies adapt the questionnaire to include different types of childhood adversities (Karatekin et al., 2022). The use of varying constructs and measures across studies means it can be difficult to compare results and draw clear conclusions about the associations between contextual factors and mental health challenges and problematic substance use. This means the prevalence study needs to carefully consider which constructs and measures are used to examine contextual factors, including their cultural appropriateness (Ellison-Loschmann, Jefferys & McKenzie, 2024)

Limitations

Many contextual factors are likely missed in this review. Factors examined largely reflect international research interests, research availability, and the scopes of the review papers which guided selection of factors. For example, international research has less focus on colonisation and disability compared to local literature. Research is also often focused on detrimental rather than positive or protective influences. Since our selection of factors was heavily guided by international research, the review likely misses important factors for Māori and young people with lived experience of mental health challenges and problematic substance use in Aotearoa.

Important contextual factors missing from this review include, but are not limited to, perinatal and parental mental health, self-care, community factors (such as neighbourhood safety), access to good-quality health services, and commercial determinants (such as commercial regulations around the sale of food and alcohol and regulation of gambling products). Additionally, other emerging factors arising from societal changes not included here are climate anxiety, intergenerational inequality, political unrest, the ongoing effects of the

COVID-19 pandemic, and increasing access and exposure to pornography, artificial intelligence, and other potentially harmful internet content.

While physical health, physical activity, diet, and sleep did not meet the criteria for the review, they are important contextual factors for mental health, substance use and wellbeing. This partly reflects the range of constructs and varying measures used in studies. Globally, long-term physical health conditions affect 10 to 12 percent of children and young people (Thabrew et al., 2018). Children and young people with a long-term physical health problem, are more likely to report symptoms of depression compared to their healthy peers (Pinquart & Shen, 2011). The effects of chronic physical illness in childhood have been found to persist into adulthood, with higher risks of depression and anxiety (Secinti et al., 2017).

Mental health among children and young people is linked with physical activity (Rodriguez-Ayllon et al., 2019). While the positive effects of physical activity interventions are emerging, findings are not consistent. The effects of physical activity may depend on age, with some evidence indicating interventions have a more positive effect on older children (Andermo et al., 2020). For diet, there is growing evidence supporting an association between consumption of a healthy diet and lower levels of depression and greater wellbeing among children and young people (Collins et al., 2022; Guzek et al., 2020; Khalid et al., 2016). While reported effect sizes tend to be small, the impact may be higher for anxiety (Collins et al., 2022; Khalid et al., 2016).

This review was limited by review studies that predominantly have a focus on identifying prevalence rates, diagnoses, and symptoms. So, the findings may not effectively capture the full mental health continuum, such as those who are flourishing, with or without diagnosed mental health conditions and problematic substance use. These reviews also do not substantially contribute to our understanding of the factors that promote and support positive wellbeing. In addition, the focus for the review was limited to higher prevalence mental health challenges and substance use problems, such as depression, anxiety, suicide, and substance use disorders. Even so, most of the findings were focused on depression and anxiety, which likely reflects the larger research focus in relation to contextual factors. This means the findings do not include research looking at contextual factors influencing mental health conditions such as bipolar disorder, psychosis, anorexia, bulimia, or factors influencing neurodevelopmental conditions, gambling harm and other types of addiction experienced by children and young people. Consideration needs to be given in the design of the prevalence study as to whether it can help to identify associations between contextual factors and specific diagnostic groups, or whether this can be addressed through longitudinal studies, or specifically funded research.

This review mainly captures research about adolescents and young adults, rather than infants and children aged under 10 years. This may reflect the research availability and different types of contextual measures and outcome measures in the infant and child

literature, which may not have aligned with our key search terms. It will be important to identify the priority contextual factors for children in Aotearoa.

Next steps

We recognise it is not feasible to include all contextual factors in the first child and youth mental health and addiction prevalence study. Hence, there needs to be a clear rationale for prioritising those included. It is also crucial that sufficient resourcing enables the time and expertise needed to analyse the data gathered. Key aspects that need to be considered when prioritising and determining which contextual factors to include in the prevalence study include stakeholder priorities (including lived experience and cultural perspectives), health inequities, existing information about the factor's influence and spread, and current research gaps.

To help make decisions on which factors to include in the prevalence study, and to address key research gaps, the following next steps are recommended.

- Collaboration is crucial for designing a prevalence study. Further consultation with children and young people about the drivers (positive and negative, from their perspectives) of mental health and addiction is recommended. This needs to include a particular focus on the views and experiences of priority groups who are frequently misrepresented or misunderstood. The establishment of a child and youth advisory group is important to inform the design and implementation of the prevalence study, working in partnership with a diversity of lived experience, whānau, Māori, Pacific, Asian, disabled and rainbow communities, and clinical and academic experts.
- Explore opportunities to examine contextual factors through existing national studies or surveys and identify opportunities where existing studies or surveys could be utilised to help fill research gaps. Also explore the potential for existing data sources to be linked with the child and youth prevalence study.
- Review child and youth mental health and addiction epidemiological studies currently being conducted overseas and the contextual factors that have been, or are planned to be, measured. Examine processes used to select these contextual factors, as well as the constructs and measures used to collect data about contextual factors.
- Ahead of the child and youth prevalence study, consider undertaking a feasibility study to test the measures for contextual factors to examine the relevance and utility for Aotearoa.

Conclusion

An in-depth understanding of contextual factors is vital for planning and resourcing preventative, holistic, multi-sectoral, and targeted strategies to improve child and youth

mental health, substance use and to reduce inequities (Fleming et al., 2024; Office of the Auditor-General, 2024).

It is imperative that the upcoming child and youth mental health and addiction prevalence study includes contextual factors (Menzies et al., 2020; Office of the Auditor-General, 2024). This narrative review collates available data and research about 10 key contextual factors that are important for the prevalence study to consider. We also recommend next steps to help further our understanding of contextual factors and guide the planning and development of the child and youth mental health and addiction prevalence study.

Most importantly, children and young people need to be heard and have their perspectives valued and acted upon (Fleming et al., 2020). Their voices are vital for understanding the unique experiences and challenges of growing up in an increasingly complex world and for designing services and systems that can support them through such challenges (Fleming et al., 2020; Stubbing & Gibson, 2019, 2021). Child and youth leadership is vital in the ongoing design and implementation of the prevalence study (Azzopardi et al., 2024).

Appendix: Preliminary scan

A preliminary scan of high-level review studies was undertaken to examine the range of contextual factors influencing mental health and substance use among children and youth. This involved scanning local research and review studies of international research (such as umbrella reviews, systematic reviews, meta-analyses, and narrative reviews).

Search terms included:

- Review, umbrella, systematic, meta-analysis, effect size
- risk factors, determinants, contextual factors
- children and youth, young people
- Aotearoa New Zealand.

To help appraise and prioritise the contextual factors for inclusion in the next stage of the review, we set the following criteria to examine whether factors are:

1) identified as important by young people (based on local research of the Aotearoa context)
2) frequently reported in reviews as having an important influence on mental health and addiction (based on the number of mentions in reviews)
3) reported to have a relatively strong influence on mental health and addiction (based on statistical effect sizes in reviews and meta-analyses that compared across multiple factors).

Table 3 shows the range of factors identified in the preliminary scan and their alignment with the three criteria. Factors that met all three criteria are: adverse childhood experiences, bullying, discrimination, socioeconomic factors, whānau environment, peer relationships, school engagement, and substance use. Digital environment and cultural identity were also selected for this review as these factors have been identified as important by youth in Aotearoa.

Based on our approach, there were many factors that did not meet the criteria for this review due to not being frequently reported by young people or in the review studies or not being found to have large effect sizes. However, it is important to note that the excluded factors can have huge importance in the context of people's lives and population wellbeing. This includes factors such as perinatal factors, institutional care, involvement with justice services, commercial determinants, climate change, and recreation. These are potentially areas that have been less researched or new and emerging areas with a smaller body of evidence.

Table 3. Contextual factors for child and youth mental health and substance use

Contextual factors	Frequently reported by research	Relatively stronger impact [16]	Contextual factors reported by young people
1) Abuse and neglect	✓	✓	✓
2) Bullying victimisation	✓	✓	✓
3) Cultural identity*			✓
4) Experiences of discrimination	✓	✓	✓
5) Whānau environment	✓	✓	✓
6) Peer relationships and social connectedness	✓	✓	✓
7) School or study factors	✓	✓	✓
8) Social media and technology*	✓		✓
9) Socioeconomic factors	✓	✓	✓
10) Substance use	✓	✓	✓
Parental mental health and addiction	✓	✓	
Diet, exercise, and sleep	✓	✓	
Physical health	✓		✓
Recreation, play, and creativity			✓
Local neighbourhood	✓		
Self-esteem			✓
Body image			✓
Climate change			✓

Note. *Cultural identity and the use of social media and technology did not meet all three criteria but were selected for the review due to their significance in the Aotearoa context. The table is likely to reflect international research interests as the evaluation methods are limited by research availability and the scopes of the included review papers. Most frequently reported factors were identified in over half of the high-level review papers focused on child and youth mental health and addiction, strength of associations is based on relative effect sizes in papers that compare across several factors, key concerns reported by young people are based on a mix of quantitative and qualitative data.

[16] In studies that compare across multiple factors.

Key factors reported by young people

Young people believe the biggest problems for youth in Aotearoa today are emotional and mental health issues, social media and technology, uncertain or bleak futures (such as lack of job opportunities and affordable housing, economic instability, and climate change), racism and discrimination (including the impacts of colonisation), and risky choices (such as sex and substance use) (Fleming et al., 2020; Menzies et al., 2020; Te Hiringa Mahara, 2022). In contrast, whānau wellbeing, intergenerational and cultural connections, and community support, and recreational activities and groups are important factors for young people (Fleming et al., 2020; Te Hiringa Mahara, 2022).

Frequently reported factors

Across the lifespan, the most frequently reported influencing factors for mental health and addiction include, but are not limited to, adverse life experiences, socioeconomic factors, experiences of discrimination, whānau and social relationships, and the neighbourhood and physical environment (Alegría et al., 2018; Compton & Shim, 2015; Dragioti et al., 2022; Gnanapragasam et al., 2023; Huggard et al., 2023; Jester et al., 2023; Kirkbride et al., 2024; Lund, 2023; Silva et al., 2016).

Other factors often recognised in the literature include cultural identity and connectedness, institutional care in childhood, interactions with the justice and social services, incarceration, war and conflict, and access to healthcare (Alegría et al., 2018; Compton & Shim, 2015; Dragioti et al., 2022; Gnanapragasam et al., 2023; Huggard et al., 2023; Jester et al., 2023; Kirkbride et al., 2024; Lund, 2023; Silva et al., 2016).

In the child and youth literature, there is additional focus on parental mental health, perinatal factors, parenting factors, bullying, school or study factors, self-esteem, and digital environment (such as screen time) (Basu & Banerjee, 2020; Stubbing, Rihari, et al., 2023).

Strongly influential factors

Across the lifespan literature, mental health challenges and problematic substance use are strongly associated with adverse life experiences (including childhood abuse, bullying, and intimate partner violence) (Alon et al., 2024; C. Arango et al., 2021; Dragioti et al., 2022; GBD 2019 Mental Disorders Collaborators, 2022; Institute for Health Metrics and Evaluation, 2024; Te Pou, 2023). Relatively strong associations have also been reported for gender, financial and material hardship, substance use, parental mental health and substance use, low social support, bereavement or grief, experiences of discrimination, physical health problems, and job stress (Alon et al., 2024; C. Arango et al., 2021; Dragioti et al., 2022).

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