Growing Up in New Zealand
Now We Are Twelve
Life in early adolescence

Snapshot 7 of 9
June 2023

Mental health

Young people's experiences of depression and anxiety symptoms

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What do we know about young people's mental health?

Mental health includes emotional, psychological, and social wellbeing and affects how we think, feel, and behave in daily life. It includes a range of negative (depression, anxiety, stress, trauma, addiction) and positive (happiness, flourishing, quality of life, life satisfaction) outcomes.

This snapshot focuses on depression and anxiety, two of the most common mental health conditions.

If you think you, or someone you know, may be experiencing symptoms of depression, there are several **free** tools or services that can help.

See the Ministry of Health website for a list of resources or click below for information or support:

- From a trained counsellor (or text or call 1737)
- Wellbeing support
- Support for rangatahi for hauora, identity, culture, and mental health
- Healthcare providers near you
- LGBTIQ+
- Depression
- Anxiety

Growing Up in New Zealand

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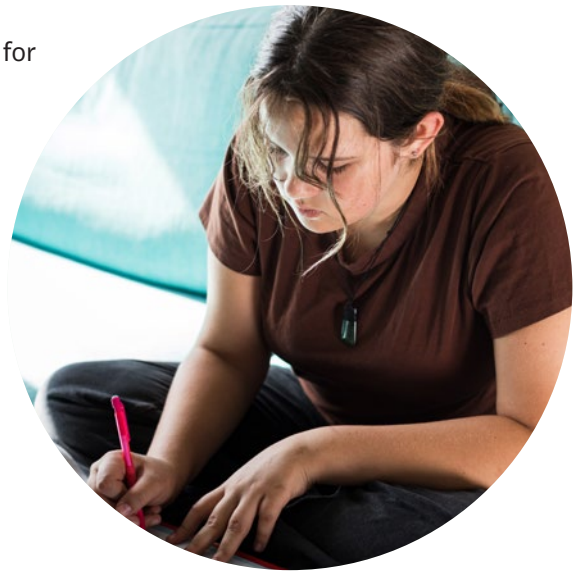
What is depression?



Individuals experiencing depression typically report multiple symptoms for two or more weeks and describe feeling sad, worthless, or guilty, less enjoyment in activities they used to enjoy, low energy, trouble sleeping or sleeping too much, changes in appetite and weight, difficulty concentrating or making decisions, and thoughts of death or suicide, among other symptoms (1).

Depression describes a variety of mood related concepts and a spectrum of difficulties (2). Some people may experience depression without a clinical diagnosis. Some people may recover through a combination of self-care, lifestyle changes, and support from loved ones. However, many people who experience poor mental health do not seek help or may be unable to access mental health services. A lack of support can lead to more severe symptoms and other adverse mental and physical health outcomes later in life.

What do we know about young people's depression?

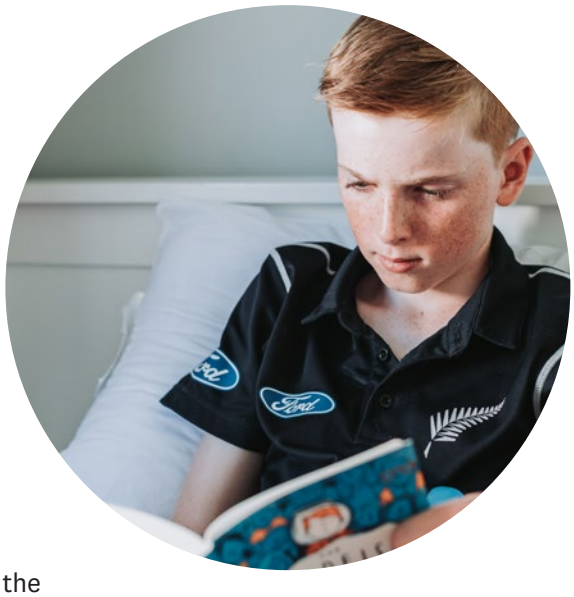
Depression is one of the most prevalent mental health conditions worldwide and affects approximately 20% of people in Aotearoa, New Zealand (3). Globally, youth depression rates have increased by over 50% between 2009 and 2017, with further increases following the COVID-19 pandemic (4-7).

Experiencing depression symptoms during adolescence is associated with declines in health-promoting behaviours, quality of life, cognitive and socioemotional development and increased risk of self-harm and suicidal behaviour (1, 8, 9). Several risk factors are associated with depression symptoms, including environmental stressors such as deprivation, bullying, and poor social relationships. There is also an unequal burden within populations. For example, gender differences can emerge during adolescence, with females reporting higher rates of depression (10). In Aotearoa, New Zealand, 53% of same- and multiple-sex attracted high school students reported significant depression symptoms (11). There are also ethnic health inequities in Aotearoa, New Zealand, related to colonisation, intergenerational trauma, and systemic racism (12). Typically, rangatahi Māori and Pacific young people have higher prevalence of depression symptoms compared to Pākehā youth (13, 14).

Experiencing childhood or adolescent depression can have long-term effects into adulthood, such as a higher risk of suicidal behaviour, substance abuse, unemployment, poorer academic performance, work-related problems, and chronic illnesses. Additionally, adults are more likely to experience other mental health conditions such as anxiety, substance disorders, or major depression disorder (15-23).

Understanding factors associated with depression symptoms for young people is critical for informing interventions, public health programmes, and policies that may reduce the prevalence of depression symptoms in early adolescence and help mitigate any adverse long-term health outcomes.

What is anxiety?



Anxiety is a natural, healthy response to stressful situations that can be beneficial. It can help motivate a person to act, solve problems, or stay alert and focused. However, stressful feelings can be problematic if they do not go away, are extreme for the situation, feel uncontrollable, or impact a person's social, family or work/school life.

Anxiety symptoms may include feeling restless or on edge, muscle tension, fatigue, being irritable, trouble falling or staying asleep, and difficulty concentrating, among other symptoms (1). It can impact people's ability to cope with daily activities, perform at work or school, maintain relationships, and avoidance of anxiety-provoking situations may impact multiple domains of young people's lives.

If left untreated, anxiety symptoms may worsen over time and impact a person's quality of life and development. Understanding factors associated with anxiety at an early age is critical to help prevent the development of more serious mental health conditions later in life. Supportive relationships with family, peers and adults can help reduce anxiety symptoms. There are also evidence-based treatments for anxiety that can help children learn healthy coping skills to manage anxiety symptoms.

What do we know about young people's anxiety?

Although young people typically report a decrease in anxiety symptoms during adolescence, it is among the most prevalent mental health conditions worldwide (24, 25). It affects approximately 11.6% - 12.9% of youth populations (26, 27), with lifetime prevalence rates of up to 31% (28). Globally, since the COVID-19 pandemic, one in five youth experienced clinically elevated anxiety symptoms (4).

In Aotearoa, New Zealand, 19% of 12 to 19-year-old youth met multiple indicators of anxiety (29). These rates are concerning as anxiety can affect an individual's quality of life, ability to perform daily tasks, maintain relationships, or enjoy activities. Experiencing anxiety symptoms presents a challenge as adolescents are at an increased risk for developing future mental health conditions or comorbid conditions, such as depression and bipolar disorders (30-37). If left untreated, anxiety can be associated with significant impairments (31, 38, 39). For example, anxiety has been associated with suicidal and disruptive behaviours and substance abuse or dependence, which can contribute to adult economic disadvantages (40). Assessing anxiety during childhood and adolescent development is critical to ensure timely intervention, which may help improve Aotearoa, New Zealand youth's mental wellbeing and mitigate the adverse long-term impact on a population level.

What can *Growing Up in New Zealand* add?

This snapshot reports young people's experiences of depression and anxiety symptoms, explores key demographic factors (e.g., gender, ethnicity, and deprivation) and examines changes in mental health from 8 to 12-years-old through four questions:

- What proportion of young people have a parent-reported diagnosis of depression or anxiety or have engaged with mental health services in the last 12 months?
- What are young people's experiences of depression and anxiety symptoms?
- How have young people's experiences of depression and anxiety symptoms changed from age 8 to 12?
- What factors are associated with depression and anxiety symptoms for young people at 12 years of age?

Key findings

Mother-reported diagnosis of depression and anxiety and engagement with mental health services

- Approximately 5% (n = 227) of young people had been diagnosed by a doctor with depression and/or anxiety.
- In the last 12 months, 8.8% (n = 373) of young people had contact with mental health services.
  - Over half (57.6%; n = 215) of young people who engaged with mental health services "received all they needed".
  - For young people who had contact with mental health services but did not receive all they needed (39.4%; n = 147), the most frequent barriers to engagement with mental health services included COVID-19 restrictions or lockdowns, the child was not eligible, and not being able to get an appointment/the service was not accessible.

Young people's experiences of depression symptoms

- Depression symptoms slightly increased from 8 to 12-years-old.
  - Over 52% of young people had an increase in depression symptoms.
  - Higher depression symptoms at age eight were significantly associated with higher depression symptoms at age 12.
  - Transgender or non-binary young people reported the highest levels of depression symptoms at 12-years-old as well as the largest increase in depression symptoms from 8 to 12-years-old.
  - Individuals who lived in the most socioeconomically deprived neighbourhoods had higher depression symptoms.
  - Rangatahi Māori reported higher levels of depression symptoms at 12-years-old compared to European young people.

Young people's experiences of anxiety symptoms

- Anxiety symptoms slightly decreased from 8 to 12-years-old.
  - While most young people had a decrease in anxiety symptoms, over one-third (37.2%) had an increase in anxiety symptoms from 8 to 12-years-old.
  - Higher anxiety symptoms at age eight were significantly associated with higher anxiety symptoms at age 12.
  - Transgender or non-binary young people reported the highest levels of anxiety symptoms and an increase in anxiety symptoms from 8 to 12-years-old compared to a decrease observed for cisgender girls and cisgender boys.

Factors associated with young people's experiences of depression symptoms and anxiety symptoms at 12 years old

- Stronger peer and parent relationships were associated with lower depression and anxiety symptoms.
- Being bullied and having poorer mental health at 8 years old was associated with higher depression and anxiety symptoms for young people at 12-years-old.

Measuring diagnosis of depression and anxiety and engagement with mental health services

Young people's diagnosis of depression or anxiety and their engagement with mental health services were reported by the participants' primary caregiver, usually their mother.

Diagnosis: Mothers reported if their child had ever been diagnosed by a doctor with anxiety and/or depression.

Engagement with mental health services: Mothers report if their child, in the past 12 months, had contact with mental health services (e.g., psychologist, psychiatrist, specialist mental health nurse, specialist mental health community worker, counsellors, social worker).

Experiences with mental health services: Only participants who reported their child had contact with mental health services in the last 12 months were asked about the child's experience (i.e., the child; "Received all they needed"; "Received some of what they needed"; "Did not receive what they needed at all"; "Don't know").

Barriers to engagement: Only participants who reported their child "received some they needed" or "did not receive what they needed" were asked about barriers to engagement with mental health services. See Supplementary material for more information.

Measuring Depression Symptoms

Depression symptoms were measured using the self-reported 10-item Centre for Epidemiologic Studies Depression Scale for Children (CES-DC-10) (41) at the 8-, 10- (COVID19 survey) and 12year data collection waves (DCWs). Young people rated items on a four-point scale ranging from 0 (Not at all) to 3 (A lot). Two items (happy and hopeful) are reverse-coded. All ten items are summed to create a depression score ranging from 0 to 30, with higher scores indicative of greater depression symptoms. See Supplementary material for more information.

Measuring Anxiety Symptoms

Anxiety symptoms were measured using the 8-item Patient-Reported Outcomes Measurement Information System (PROMIS) Paediatric Anxiety - Short Form 8a questionnaire (using Item Bank v2.0) at the 8-, 10- (COVID19 survey) and 12-year DCWs (42). The 8-items can be summed to create a score in which higher scores indicate higher anxiety symptoms. Scores were converted into T-scores according to the PROMIS Health Organization (2016) scoring guide. T-scores range from 33.5 to 83.3. It is important to note that these T-scores are based on the US general population. See Supplementary material for more information.

Mother-reported diagnosis of depression and anxiety and engagement with mental health services for young people

- 5.3% (*n* = 227) had been diagnosed by a doctor with depression or anxiety.
  - 55.1% (*n* = 125) with a diagnosis engaged with mental health services in the last 12 months.
- In the last 12 months, 8.8% (*n* = 373) of the cohort's youth had contact with mental health services.
  - In the last 12 months, 6.1% (*n* = 244) of young people without a diagnosis of depression or anxiety had engaged with mental health services.
- Over half (57.6%, *n* = 215) of young people who engaged with mental health services "received all they needed", 31.1% (*n* = 116) "received some of what they needed", and 8.3% (*n* = 31) "did not receive what they needed at all". Only 2.9% (*n* = 11) of mothers reported they "don't know" if their child got the help they needed.[1]
- For young people who had contact with mental health services but did not receive all they needed (39.4%; *n* = 147), barriers to engagement with mental health services included COVID-19 restrictions or lockdowns (33.3%, *n* = 49), not being able to get an appointment or the service was not accessible (29.2%, *n* = 43) or the child was not eligible (15.0%, *n* = 22). Other reasons included previous bad experiences with mental health services, unclear how to access services, the service did not meet their needs, not finding a therapist or counsellor they thought understood them, and the cost of services being too high.[2]

[1] *Note: Engagement with mental health services in the last 12 months includes both public (free) and private (paid) mental health services.*

[2] *Note: Barriers to engagement with mental health services only includes young people who had any contact with mental health services and did not receive the help they needed (*n *= 147) – this does not include those who may need help but did not or could not reach out to mental health services.*

Depression symptoms for young people at 12-years-old

Young people reported an average level of depression symptoms of 8.50 on a scale from 0 (no depression symptoms) to 30 (high depression symptoms).

- Transgender or non-binary young people reported the highest levels of depression symptoms, followed by cisgender girls and then cisgender boys (Figure 9A).
- Young people living in the most socioeconomically deprived neighbourhoods (NZ Deprivation Index quintile 5) reported the highest depression symptoms at 12-years. Young people living in the least deprived neighbourhoods (quintile 1) reported the lowest levels of depression symptoms (Figure 9B).
- Depression symptoms were patterned by ethnicity. Mean depression scores were higher for rangatahi Māori than for the Sole European group (Figure 9C).

See Supplementary material for more information.

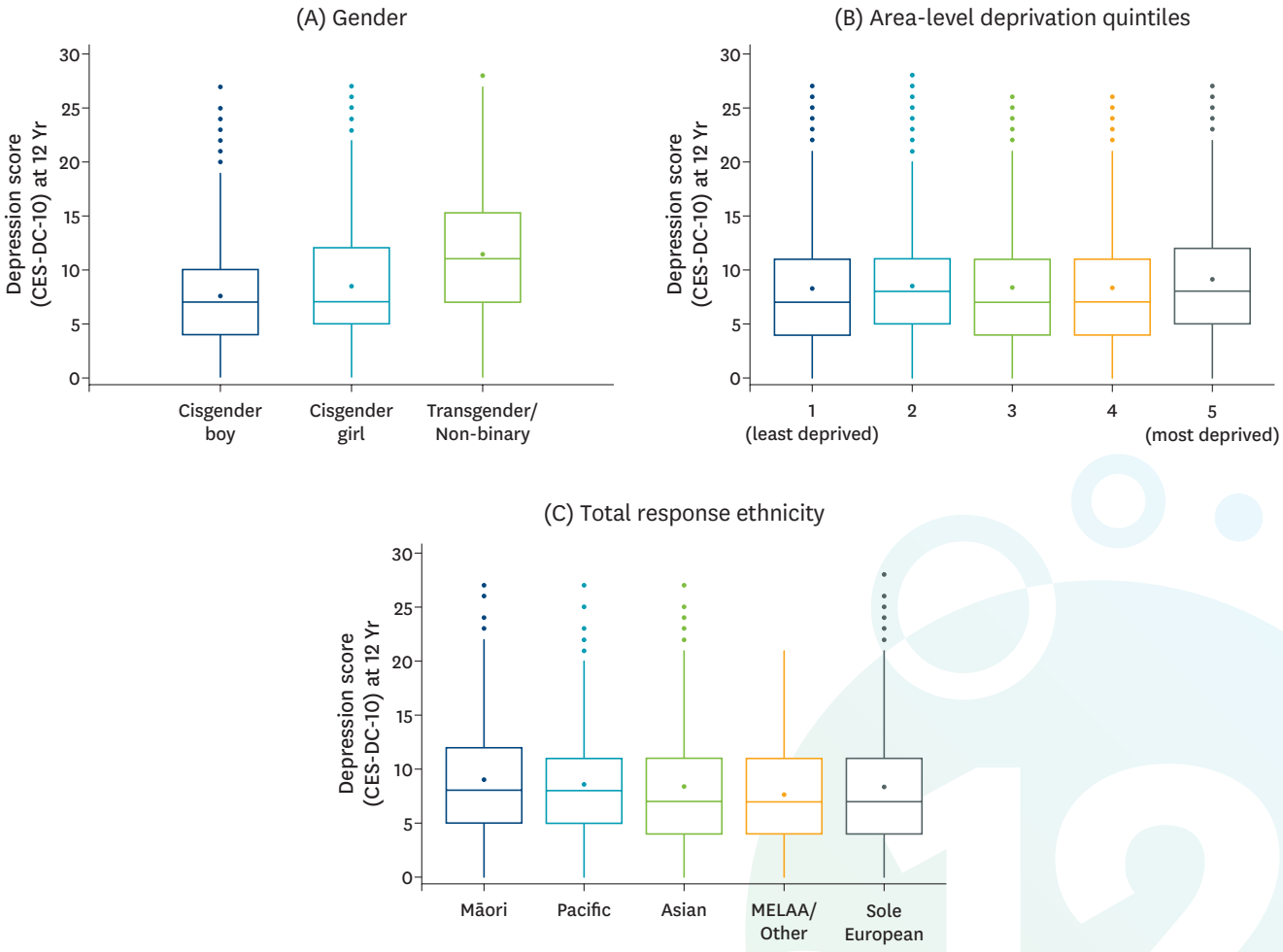


Figure 1. Boxplots of young people's depression scores (CES-DC-10) by gender (A), area-level deprivation (B), and total response ethnicity (C).

Note: Participants who reported more than one ethnic group are counted once in each group reported, except for the "Sole European" group which includes those young people who only identified as European. The middle line represents the median value. The dot in the middle represents the mean value, and the ends of the box represent the 25th and 75th quartile, respectively. Coloured dots represent outliers for each group.

Anxiety symptoms for young people at 12-years-old

Young people reported an average level of anxiety symptoms of 46.0 on a scale from 33.50 (no anxiety symptoms) to 83.3 (high anxiety symptoms).

- Transgender or non-binary young people reported the highest levels of anxiety symptoms, followed by cisgender girls and then cisgender boys (Figure 10A).
- There were no differences in mean anxiety symptoms by socioeconomic deprivation (Figure 10B).
- There were no differences in mean anxiety symptoms by ethnicity (Figure 10C).

See Supplementary material for more information.

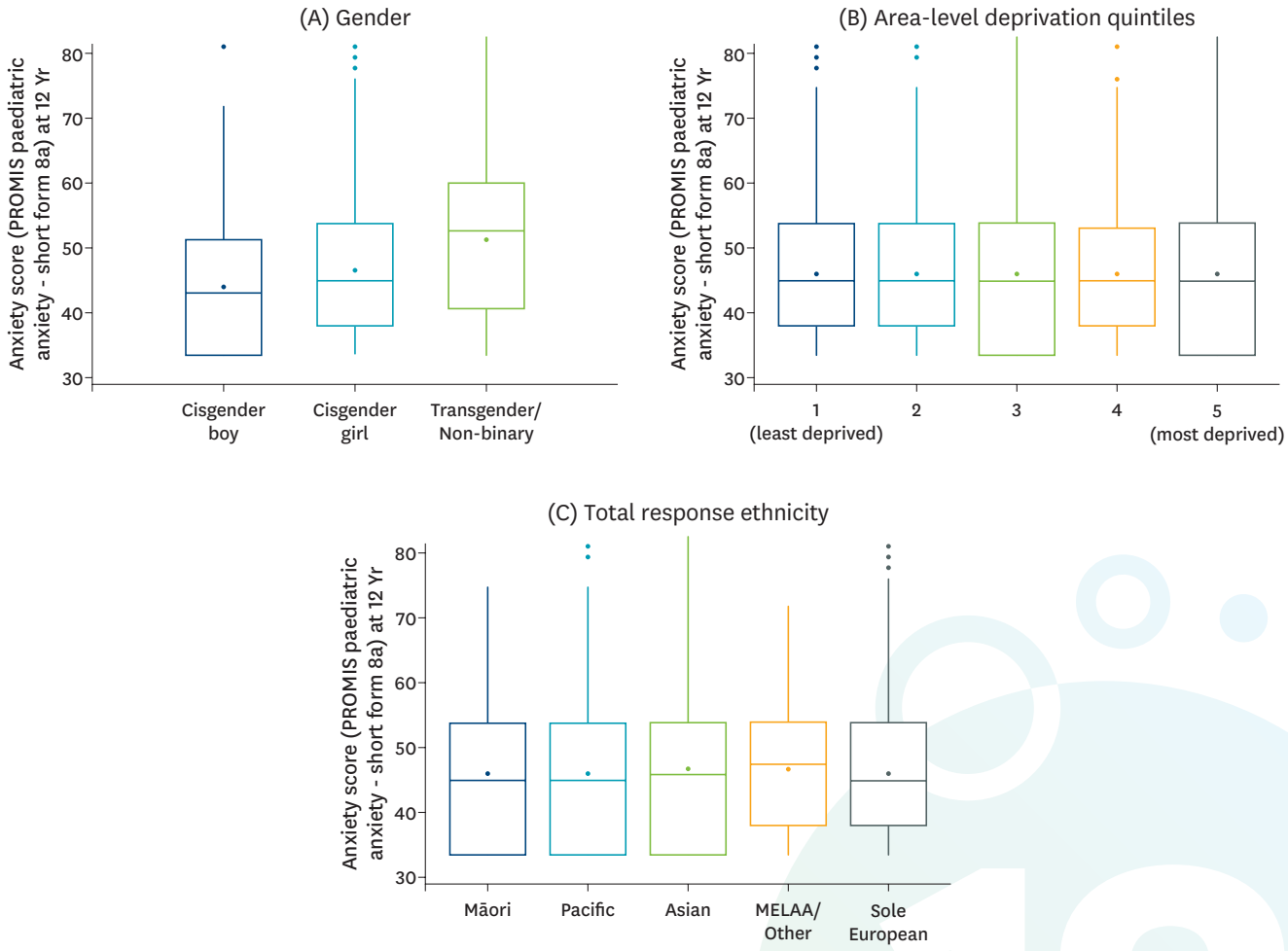


Figure 2. Boxplots of young people's anxiety scores (PROMIS Paediatric Anxiety - Short Form 8a) by gender (A), area-level deprivation (B), and total response ethnicity (C).

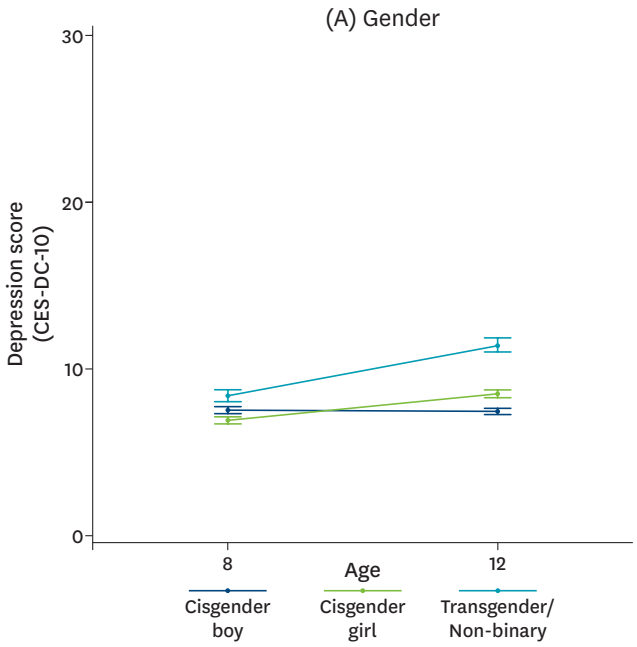
Note: Participants who reported more than one ethnic group are counted once in each group reported, except for the "Sole European" group which includes those young people who only identified as European. The middle line represents the median value. The grey dot in the middle represents the mean value, and the ends of the box represent the 25th and 75th quartile, respectively. Coloured dots represent outliers for each group.

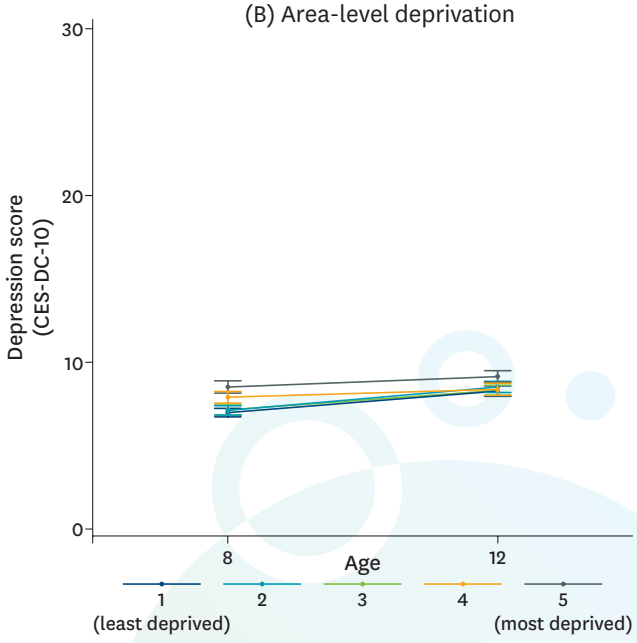
Changes in young people's depression symptoms from 8 to 12-years-old

On average, young people reported a one-point increase in depression symptoms from 8 to 12 years old on a scale from 0 (no depression symptoms) to 30 (high depression symptoms). Higher depression symptoms at age eight were significantly associated with higher depression symptoms at age 12. Over half (52.4%; *n* = 2146) of young people in GUiNZ had an increase in depression symptoms from age 8 to age 12.

- Transgender or non-binary young people and cisgender girls reported significantly higher levels of depression symptoms than cisgender boys, after adjusting for depression symptoms at age 8 (Figure 3A).
- Young people experiencing the highest area-level deprivation had marginally higher depression symptoms compared to those experiencing the lowest area-level deprivation at 12 years of age, after adjusting for depression symptoms at age 8 (Figure 3B).
- Differences in depression symptoms between ethnic groups from age 8 to age 12 were small. Rangatahi Māori had marginally higher depression symptoms compared to Europeans at 12 years of age, after adjusting for depression symptoms at age 8 (Figure 3C).

See Supplementary material for more information.





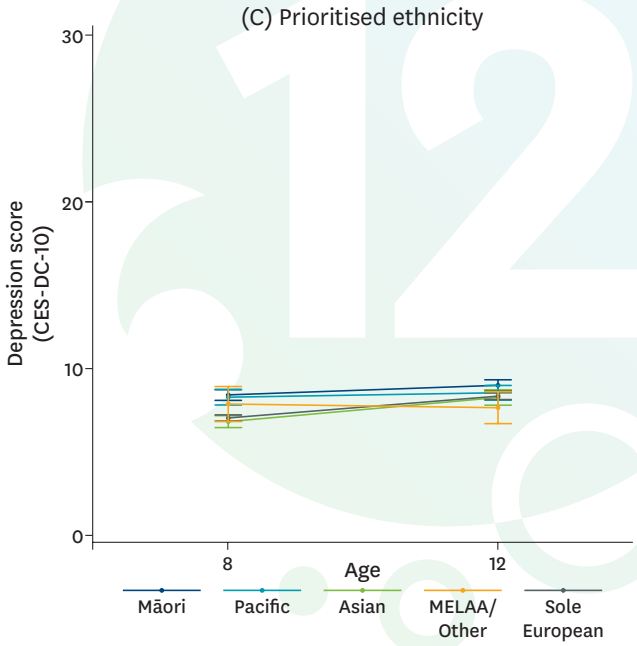


Figure 3. Young people's change in depression symptoms from age 8 to age 12 by gender (A), area-level deprivation (B), and prioritised ethnicity (C), and with 95% confidence intervals

Note: Total response ethnicity was prioritised to create exclusive categories for statistical analysis. The Ministry of health protocol originally developed by Statistics New Zealand was used to allocate each participant to a single Level 1 ethnicity.

Changes in young people's anxiety symptoms from 8 to 12-years-old

On average, young people had a 2.4-point decrease in anxiety scores from 8 years old to 12. However, higher anxiety symptoms at age 8 significantly predicted higher anxiety symptoms at age 12. While most young people reported a decrease in anxiety symptoms, 37.2% (n = 1535) reported an increase in anxiety symptoms.

- Transgender or non-binary young people reported an increase in anxiety symptoms from 8 to 12-years-old. Transgender or non-binary and cisgender girls had significantly higher levels of anxiety symptoms compared to cisgender boys at age 12 when adjusting for anxiety symptoms at eight years of age (Figure 12A).
- No differences were observed for anxiety symptoms when comparing area-level deprivation quintiles (Figure 12B).
- Differences in anxiety symptoms between ethnic groups were small, and these differences tended to become less pronounced over time. Over time, rangatahi Māori and Pacific young people had a marginal decrease in anxiety symptoms compared to Europeans who reported the lowest level of anxiety symptoms at 8 year and similar levels to rangatahi Māori at 12 year (Figure 12C).

See Supplementary material for more information.

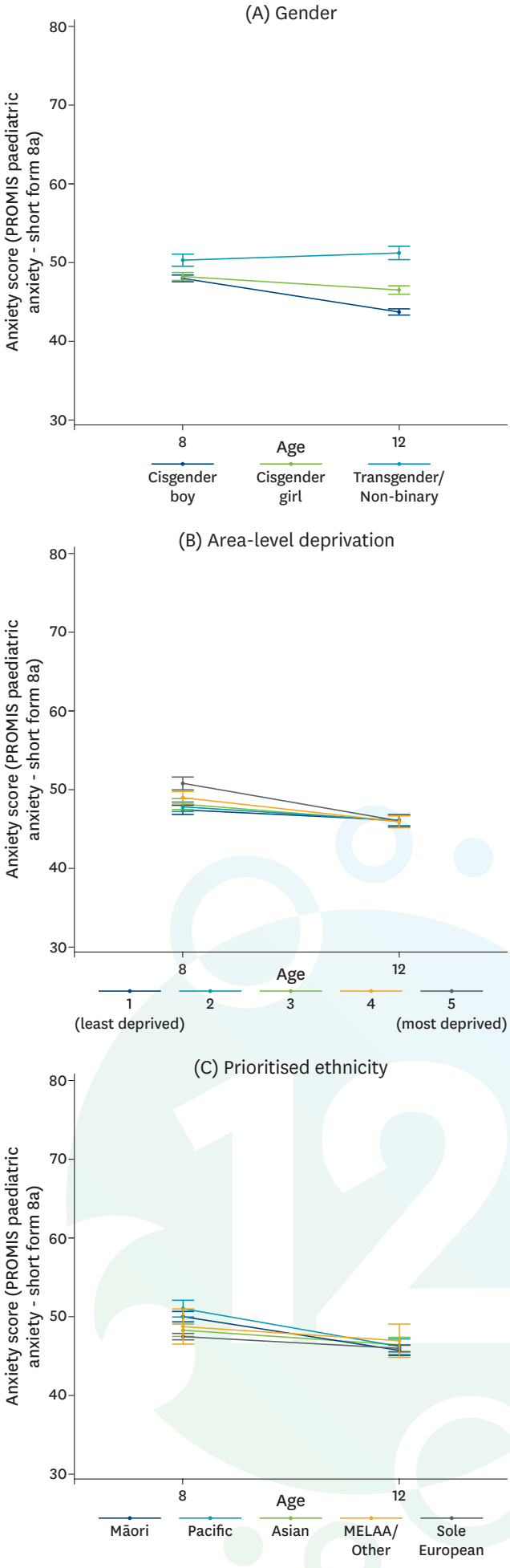


Figure 4. Young people's change in anxiety symptoms from age 8 to age 12 by gender (A), and area-level deprivation (B), and prioritised ethnicity (C) with 95% confidence intervals

Note: Total response ethnicity was prioritised to create exclusive categories for statistical analysis. The Ministry of health protocol originally developed by Statistics New Zealand was used to allocate each participant to a single Level 1 ethnicity.

Factors associated with depression and anxiety symptoms at 12-years-old

It is well known that several factors are related to mental health across the life course. There are some critical demographic variables which have a known relationship with mental health such as ethnicity, gender, and deprivation. Thus, these variables have been explored (reported above) and were included in the multivariate modelling. To investigate some other factors, univariate regression was conducted to assess which factors were associated with depression and anxiety symptoms at 12-years-old, including: anxiety or depression symptoms at 8-years-old, material hardship, household structure, residential mobility, child-parent relationships, peer-child relationships, bullying, mothers' age during pregnancy, mothers' education, mothers' antenatal perceived stress, and mothers' depression symptoms. This list is not exhaustive, but captures some important factors related to mental health outcomes. Factors that were significant at the univariate level were included in multivariate analysis along with critical demographics (gender, ethnicity, deprivation). Factors associated with either an increase (blue) or decrease (green) in depression and anxiety symptoms at 12-years-old in the multivariate analysis are presented in Figures 5 and 6, respectively.[3]

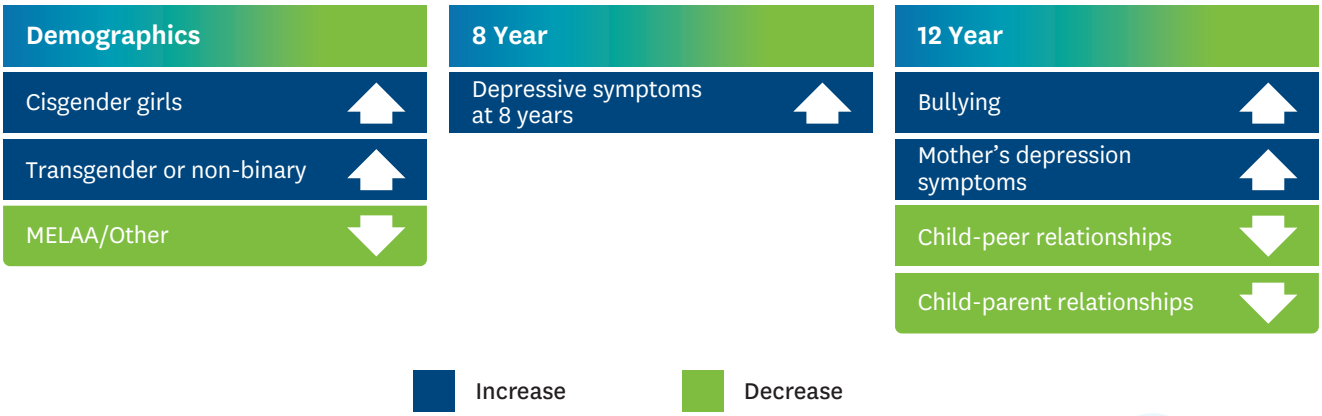


Figure 5. Factors associated with depression symptoms for young people at 12-years-old from the final multivariate regression model

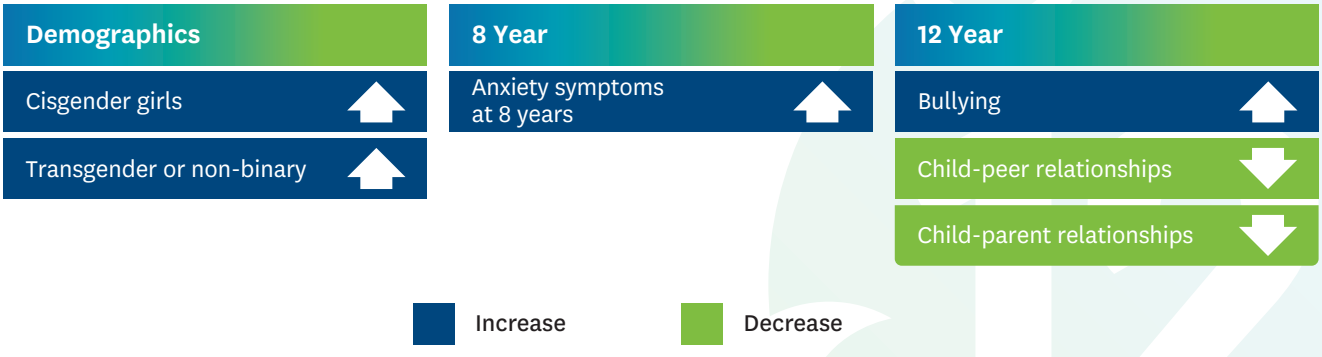


Figure 6. Factors associated with anxiety symptoms for young people at 12-years-old from the final multivariate regression model

[3] *Full multivariate modelling can be found in Supplementary material.*

Relevance for Policy and Practice

This snapshot examined two important aspects of young people's mental health experiences: depression and anxiety symptoms at age 12 in Aotearoa, New Zealand. Further research is required to assess other mental health outcomes.

Young people's experiences with mental health services

Over half (57%) of young people who engaged with public or private mental health services "received all they required".[4] For those who did not receive all they required, 28.5% could not get an appointment or the service was not accessible. The New Zealand mental health and addictions non-urgent waiting times report (April 2021 to March 2022) suggested that over 20% of young people aged 0-19 years old had a wait time of three to eight weeks and over 11% of young people had a wait time of more than eight weeks for new clients to be seen by mental health and addiction services. Accordingly, improving access to primary mental health and addiction services is a Ministry of Health 2022-2026 strategic intention and an objective of the Child and Youth Wellbeing Strategy. Furthermore, 15.8% of young people were not eligible for mental health services. This suggests a need for services supporting individuals experiencing mental distress who may not meet the threshold for some mental health services. Improving accessibility and availability of mental health services and expanding choice is critical to reduce the burden of mental health conditions.

Why is it important to provide mental health support early?

Experiencing depression and anxiety at age 8 is associated with more symptoms at 12. As 52% showed an increase in depression symptoms, and 37% reported an increase in anxiety symptoms there is a need for mental health initiatives (e.g., Access and Choice programme, Integrated Primary Mental Health and Addiction Services, or School-Based Health Services). Additional avenues include increasing knowledge of free primary mental health services, online services, and gamification of mental health tools that may appeal to younger people, greater access to school counsellors and more mental health experts and training. We need to ensure that teachers and caregivers are aware that mental health concerns can start early and are often undiagnosed or untreated in younger people. Providing mental health support from an early age reduces adverse outcomes and promotes mental wellness.

Reports of depression and anxiety symptoms show disparities by gender

Transgender or non-binary young people had the largest increase in depression and anxiety symptoms, regardless of ethnicity, deprivation, or other demographic factors. Therefore, it is crucial to ensure that mental health support is accessible and responsive to the diverse gender identities of young people in Aotearoa, New Zealand. A range of research demonstrates that trans and non-binary youth are more likely to experience bullying and less supportive relationships in adolescence (43). A continued effort to prevent transphobic and homophobic bullying in schools and provide support to help families be a positive place for trans and non-binary young people, is critical to reduce these stressors and improve their mental well-being.

[4] The question asking if young people received what they needed from mental health services is subjective. Mental health services aim to provide people with coping tools, not necessarily to 'cure' them, which may lead to dissatisfaction if expectations differ. Mental health is complex and is influenced by several factors (e.g., parental, societal, cultural, and biological factors). Mental health services can be beneficial, but individuals may also benefit with help from friends, family, and other support networks in conjunction.

Experiences of depression symptoms for rangatahi Māori

Rangatahi Māori had consistently higher depression symptoms from 8- to 12-years-old compared to European young people. However, this association was no longer significant when other factors were accounted for. This may suggest that the higher burden of depression symptoms experienced by rangatahi Māori may be accounted for by deprivation, relationships, bullying, or other factors. Regardless, policies and interventions are needed to address the root causes of mental health inequities for rangatahi Māori, such as systemic racism and discrimination. Equitable access to services, levels of service, and health outcomes for all of Aotearoa, New Zealand, is one of the Ministry of Health strategic intentions for 2022-2026.

"Promoting mental wellbeing, together"

Stronger relationships with parents and peers are independently associated with lower depression and anxiety. Nurturing these conditions and acknowledging multiple sources of social support is critical to increase mental wellness. Fostering a sense of belonging and community is important and highlights the need for programmes such as Positive Behaviour for Learning (PB4L), Incredible Years via Vote Education, or Kahu Taurima in Health.

Bullying also increased depression and anxiety symptoms, regardless of other factors, underlining the importance of addressing and preventing bullying in school and other settings. In addition, mothers' mental health influenced depression symptoms, suggesting a need for holistic family approach to mental health, in which not only the young person experiencing distress is supported but also providing tools for their loved ones.

"The best thing about being me is that I am secure with a great family with stable money & jobs, and I am happy with who I am. It gives me a sense of safety."

"I'm worried that my friend with depression will get worse and it will make our friendship hard and make me stressed."

"That my family and friends are so funny, supportive and loving. Because it makes me happy, feel safe and that I am always loved."

1. American Psychiatric Association. Diagnostic and statistical manual of mental disorders: DSM-5. Vol. 5. American Psychiatric Association Washington, DC; 2013.
2. Thapar A, Eyre O, Patel V, Brent D. Depression in young people. The Lancet. 2022.
3. Ministry of Health. New Zealand Health Survey 2022. Available from: https://minhealthnz.shinyapps.io/nz-health-survey-2021-22-annual-data-explorer/_w_c38a8dfd/#!/home
4. Racine N, McArthur BA, Cooke JE, Eirich R, Zhu J, Madigan S. Global prevalence of depressive and anxiety symptoms in children and adolescents during COVID-19: a meta-analysis. JAMA pediatrics. 2021;175(11):1142-50.
5. Liu Q, He H, Yang J, Feng X, Zhao F, Lyu J. Changes in the global burden of depression from 1990 to 2017: Findings from the Global Burden of Disease study. Journal of psychiatric research. 2020;126:134-40.
6. Twenge JM, Cooper AB, Joiner TE, Duffy ME, Binau SG. Age, period, and cohort trends in mood disorder indicators and suicide-related outcomes in a nationally representative dataset, 2005–2017. Journal of abnormal psychology. 2019;128(3):185.
7. Walker N, Dubey N, Bergquist M, Janicot S, Swinburn B, Napier C, et al. The GUiNZ COVID-19 Wellbeing Survey: Part 1: Health and Wellbeing. [Internet]. Auckland2021.
8. Luciana M. Adolescent brain development in normality and psychopathology. Development and psychopathology. 2013;25(4pt2):1325-45.
9. Maughan B, Collishaw S, Stringaris A. Depression in childhood and adolescence. Journal of the Canadian Academy of Child and Adolescent Psychiatry. 2013;22(1):35.
10. Salk RH, Hyde JS, Abramson LY. Gender differences in depression in representative national samples: Meta-analyses of diagnoses and symptoms. Psychological bulletin. 2017;143(8):783.
11. Fenaughty J, Sutcliffe K, Clark T, Ker A, Lucassen M, Greaves L, et al. A Youth19 brief: Same-and multiple-sex attracted students. 2021.
12. Reid P, Cormack D, Paine S-J. Colonial histories, racism and health—The experience of Māori and Indigenous peoples. Public Health. 2019;172:119-24.
13. Clark TC, Ball J, Fenaughty J, Drayton B, Fleming TT, Rivera-Rodriguez C, et al. Indigenous adolescent health in Aotearoa New Zealand: Trends, policy and advancing equity for rangatahi Maori, 2001–2019. The Lancet Regional Health-Western Pacific. 2022;28:100554.
14. Fleming T, Tiatia-Seath J, Peiris-John R, Sutcliffe K, Archer D, Bavin L, et al. Youth19 Rangatahi Smart Survey, Inifial Findings: Hauora Hinengaro/Emofional and Mental Health. The Youth19 Research Group, The University of Auckland and Victoria. 2020.
15. Hauenstein EJ. Depression in adolescence. Journal of Obstetric, Gynecologic & Neonatal Nursing. 2003;32(2):239-48.
16. Nemeroff CB. The burden of severe depression: a review of diagnostic challenges and treatment alternatives. Journal of psychiatric research. 2007;41(3-4):189-206.
17. Copeland WE, Shanahan L, Costello EJ, Angold A. Childhood and adolescent psychiatric disorders as predictors of young adult disorders. Archives of general psychiatry. 2009;66(7):764-72.
18. Fergusson DM, Horwood LJ, Ridder EM, Beautrais AL. Subthreshold depression in adolescence and mental health outcomes in adulthood. Archives of general psychiatry. 2005;62(1):66-72.
19. Katon WJ. Epidemiology and treatment of depression in patients with chronic medical illness. Dialogues in clinical neuroscience. 2022.
20. Fergusson DM, Woodward LJ. Mental health, educational, and social role outcomes of adolescents with depression. Archives of general psychiatry. 2002;59(3):225-31.
21. Keenan-Miller D, Hammen CL, Brennan PA. Health outcomes related to early adolescent depression. Journal of Adolescent Health. 2007;41(3):256-62.
22. Birmaher B, Arbelaez C, Brent D. Course and outcome of child and adolescent major depressive disorder. Child and Adolescent Psychiatric Clinics. 2002;11(3):619-37.

23. Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. Archives of general psychiatry. 2005;62(6):593-602.
24. Hale III WW, Raaijmakers Q, Muris P, Meeus W. Developmental trajectories of adolescent anxiety disorder symptoms: A 5-year prospective community study. J Am Acad Child Adolesc Psychiatry. 2008;47(5):556-64.
25. Bandelow B, Michaelis S. Epidemiology of anxiety disorders in the 21st century. Dialogues in clinical neuroscience. 2015.
26. Lu W. Adolescent depression: national trends, risk factors, and healthcare disparities. American journal of health behavior. 2019;43(1):181-94.
27. Tiirikainen K, Haravuori H, Ranta K, Kaltiala-Heino R, Marttunen M. Psychometric properties of the 7-item Generalized Anxiety Disorder Scale (GAD-7) in a large representative sample of Finnish adolescents. Psychiatry research. 2019;272:30-5.
28. Kessler RC. The National Comorbidity Survey: preliminary results and future directions. International Journal of Methods in Psychiatric Research. 1995.
29. Social Wellbeing Agency. Youth Mental Health Project – Summative evaluation report 2016 (pdf). Wellington: Social Policy Evaluation and Research Unit (Superu); 2016 1.
30. Grant DM. Anxiety in adolescence. Handbook of adolescent health psychology. 2013:507-19.
31. Wehry AM, Beesdo-Baum K, Hennelly MM, Connolly SD, Strawn JR. Assessment and treatment of anxiety disorders in children and adolescents. Current psychiatry reports. 2015;17(7):1-11.
32. Hill RM, Castellanos D, Pettit JW. Suicide-related behaviors and anxiety in children and adolescents: a review. Clinical psychology review. 2011;31(7):1133-44.
33. Weissman MM, Wolk S, Wickramaratne P, Goldstein RB, Adams P, Greenwald S, et al. Children with prepubertal-onset major depressive disorder and anxiety grown up. Archives of general psychiatry. 1999;56(9):794-801.
34. Essau CA, Lewinsohn PM, Olaya B, Seeley JR. Anxiety disorders in adolescents and psychosocial outcomes at age 30. J Affect Disord. 2014;163:125-32.
35. Woodward LJ, Fergusson DM. Life course outcomes of young people with anxiety disorders in adolescence. J Am Acad Child Adolesc Psychiatry. 2001;40(9):1086-93.
36. Garber J, Weersing VR. Comorbidity of anxiety and depression in youth: implications for treatment and prevention. Clinical Psychology: Science and Practice. 2010;17(4):293.
37. Moffitt TE, Harrington H, Caspi A, Kim-Cohen J, Goldberg D, Gregory AM, et al. Depression and generalized anxiety disorder: cumulative and sequential comorbidity in a birth cohort followed prospectively to age 32 years. Archives of general psychiatry. 2007;64(6):651-60.
38. Ranøyen I, Lydersen S, Larose TL, Weidle B, Skokauskas N, Thomsen PH, et al. Developmental course of anxiety and depression from adolescence to young adulthood in a prospective Norwegian clinical cohort. European child & adolescent psychiatry. 2018;27(11):1413-23.
39. Copeland WE, Angold A, Shanahan L, Costello EJ. Longitudinal patterns of anxiety from childhood to adulthood: the Great Smoky Mountains Study. J Am Acad Child Adolesc Psychiatry. 2014;53(1):21-33.
40. Asselmann E, Wittchen HU, Lieb R, Beesdo-Baum K. Sociodemographic, clinical, and functional long-term outcomes in adolescents and young adults with mental disorders. Acta Psychiatr Scand. 2018;137(1):6-17.
41. Andresen EM, Malmgren JA, Carter WB, Patrick DL. Screening for depression in well older adults: Evaluation of a short form of the CES-D. American journal of preventive medicine. 1994;10(2):77-84.
42. Irwin DE, Stucky B, Langer MM, Thissen D, DeWitt EM, Lai J-S, et al. An item response analysis of the pediatric PROMIS anxiety and depressive symptoms scales. Quality of Life Research. 2010;19(4):595-607.
43. Fenaughty J, Sutcliffe K, Fleming T, Ker A, Lucassen M, Greaves L, et al. A Youth19 Brief: Transgender and diverse gender students. 2021.

Growing Up in New Zealand

Now We Are Twelve

Life in early adolescence

Further Details

Supplementary material for this snapshot is available to download.

The introduction to the 12-year data collection wave and the methodology used to analyse the 12-year data can be downloaded as a PDF.

About the *Growing Up in New Zealand* Now We Are Twelve snapshot series

The Now We Are 12 Snapshots are accessible summaries of policy-relevant research findings from *Growing Up in New Zealand*, this country's largest longitudinal study of child health and wellbeing. Other snapshots in this series can be found **here**. An **introduction** to the 12-year data collection wave and the **methodology** used to analyse the 12-year data can be downloaded as a PDF. **Supplementary material** for this snapshot can also be downloaded.

Suggested Citation: Fletcher, B.D., Walker, C., Cha, J.E., Neumann, D., Paine S.J., Park A., Fenaughty, J., Bird, A.L., Waldie, K.E. 2023. Now We Are 12: Young people's experiences of depression and anxiety symptoms. Snapshot 7. Auckland: *Growing Up in New Zealand*.
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