



# **Mental Health and Problematic Substance Use**

New Zealand Health Survey:  
2016/17 and 2021–23



## **New Zealand Health Survey**

## Acknowledgements

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# Key findings

- The New Zealand Health Survey included a module on mental health and problematic substance use (tobacco, alcohol and illicit substance use) in 2016/17, 2021/22 and 2022/23. Because the sample sizes achieved were smaller in 2021/22 and 2022/23, data from these years have been pooled (combined) to produce more precise estimates.
- The prevalence of adults experiencing mild or greater anxiety and/or depression symptoms in the two weeks before the survey has increased from 25.0% in 2016/17 to 34.8% in 2021–23. Moderate or greater symptoms of anxiety and/or depression increased at a greater rate than mild symptoms over the period.
- The prevalence of moderate or high risk of problematic substance use decreased between 2016/17 and 2021–23 (from 32.6% to 27.0%). The prevalence of moderate or high risk of problematic use of both tobacco and alcohol decreased over the same period (from 20.7% to 14.6% for tobacco and 15.8% to 13.0% for alcohol). However, the prevalence of moderate or high risk of problematic use of illicit substances increased over the same period (from 10.1% to 11.2%).
- Increases in the prevalences of mild or greater anxiety and/or depression symptoms and moderate or high risk of problematic illicit substance use were greater for young adults aged 15–24 years.
- Overall, women were more likely to experience depression and/or anxiety symptoms than men. Conversely, men were more likely to experience moderate or high risk of problematic substance use than women.
- Some population groups, such as Māori and disabled adults, were more likely to experience anxiety and/or depression symptoms and to be at risk of problematic substance use than those not in the population group.
- In 2021–23, 41.1% of adults used some type of service, such as primary health care, or support for concerns about their emotions, stress, mental health or substance use in the 12 months before the survey. This is an increase from 35.3% in 2016/17.
- Unmet need for mental health and addiction services also increased over the same period. In 2021–23, 8.4% of adults felt that, in the 12 months before the survey, they needed professional help for their emotions, stress, mental health or substance use, but did not receive that help, from 4.9% in 2016/17.
- The prevalence of children aged 2–14 years likely to have emotional symptoms increased from 9.2% in 2016/17 to 13.0% in 2021–23.
- Use of services and support for children remained relatively unchanged between 2016/17 and 2021–23. However, children’s unmet need for mental health and addiction services did increase over this period (from 4.8% to 6.8%).

# Introduction

Mental health covers a continuum from optimal wellbeing to a disabling mental health disorder (World Health Organization 2022). An individual's mental health will fluctuate across the continuum over their lifetime in response to stressors. About half of all adult mental health disorders start by age 14 years, and three-quarters by age 24 years (Kessler et al 2005). However, early intervention in childhood and adolescence can help prevent chronic mental health disorders in adulthood (RANZCP 2023).

The World Health Organization emphasises that mental health is a major factor in an individual's overall health, and that mental health should be an important topic for both individuals and communities (World Health Organization 2018). Mental health has been shown to be related to many aspects of an adult's life, such as employment (Frijters et al 2014), drug use and alcohol use (Teesson et al 2000). Mental health issues for children are also linked to adverse effects, such as lower academic performance than their peers (Ek et al 2011).

*Kia Manawanui Aotearoa: Long-term pathway for mental wellbeing (Kia Manawanui)* highlights the importance of a population-based approach to improving mental wellbeing (Ministry of Health 2021). This approach seeks both to improve mental wellbeing outcomes for the whole population and to address inequities that lead to disparities in mental wellbeing outcomes for specific population groups. *Kia Manawanui* also underlines the importance of having robust information and data for policy planning and service development.

The New Zealand Health Survey (NZHS) included a module on mental health and problematic substance use (including tobacco, alcohol and illicit substance use) in 2016/17, 2021/22 and 2022/23. Because of smaller achieved sample sizes in 2021/22 and 2022/23, data from these years have been pooled (combined) to produce more precise estimates.

This report presents the key results from this module. It does so in two main sections: first, results for adults aged 15 years and over; and second, results for children aged 2–14 years. Further data are available on the Mental Health and Problematic Substance Use Data Explorer at: [minhealthnz.shinyapps.io/nz-health-survey-2022-23-mental-health-data-explorer/](https://minhealthnz.shinyapps.io/nz-health-survey-2022-23-mental-health-data-explorer/).

Since the mental health and problematic substance use module was first included in the NZHS in 2016/17, the global mental health landscape has changed significantly, including the impact of the COVID-19 pandemic.

The 2021/22 and 2022/23 data from the NZHS mental health and problematic substance use module shows mental health outcomes in Aotearoa New Zealand after the onset of the COVID-19 pandemic. As such, it can be compared with data from the 2016/17 module before the COVID-19 pandemic began. The findings can then be used to inform a more nuanced approach to preventing and managing poor mental health and problematic substance use.

This data can also be considered within the context of a wider group of indicators to gain a broader understanding of mental health and wellbeing in New Zealand. For example, since 2021/22, the core NZHS survey has collected data on life satisfaction and family wellbeing. This report does not present these statistics, but you can find them within the indicators released each year at: [health.govt.nz/nz-health-statistics/surveys/new-zealand-health-survey](https://health.govt.nz/nz-health-statistics/surveys/new-zealand-health-survey).

Additional sources of data on mental health and addiction services are also available. For example, see the Mental Health and Wellbeing Commission's **He Ara Āwhina dashboard** ([mhwc.govt.nz/our-work/mental-health-and-addiction-system/he-ara-awhina-dashboard](https://mhwc.govt.nz/our-work/mental-health-and-addiction-system/he-ara-awhina-dashboard)).

## What to consider when interpreting the results

For an overview of the methodology used in collecting, and preparing results from, the mental health and problematic substance use module, see the methodology page of the Mental Health and Problematic Substance Use Data Explorer at: [minhealthnz.shinyapps.io/nz-health-survey-2022-23-mental-health-data-explorer/](https://minhealthnz.shinyapps.io/nz-health-survey-2022-23-mental-health-data-explorer/).

When interpreting the findings in this report, please be aware of the following possible influences on and limitations of the results.

### Sample sizes

The NZHS is designed to yield a sample size of about 14,000 adults and 5,000 children each year. It is a nationally representative survey.

Data for the 2021/22 NZHS were collected between July 2021 and July 2022 but were suspended for some periods. The data collection was much slower than a normal year due to COVID-19 disruptions. For the same reason, the sample size was smaller than usual, with a total of 4,434 adults and 1,323 children.

Data for the 2022/23 NZHS were collected between July 2022 and July 2023. Ongoing disruptions from the COVID-19 pandemic and Cyclone Gabrielle had a significant impact on data collection. The sample size was again smaller than usual with a total of 6,799 adults and 2,029 children.

In contrast, the sample size for the 2016/17 survey was 13,598 adults and 4,668 children.

Table 1 presents the number of survey respondents in the 2016/17 and 2021–23 mental health and problematic substance use module data set, by ethnic group. With the exception of Asian adults, the sample size achieved for each ethnic group, for both adults and children, was lower in 2021–23 than in 2016/17.

Smaller sample sizes increase the uncertainty associated with the estimates for population groups. This can impact whether any difference between groups or changes over time represent true differences.

For many indicators, the smaller sample sizes for the mental health and problematic substance use module in 2021/22 and 2022/23 were not sufficient to produce robust single-year estimates for smaller population groups. However, more reliable statistics can be produced by pooling (combining) the data from the mental health and problematic substance use module from these two years to improve the range and statistical quality of analyses that can be undertaken.

For this reason, data collected for 2021/22 and 2022/23 have been pooled. The combined data is referred to as 2021–23 data throughout this report. Data presented for 2016/17 refer to the single survey year. The pooled sample for 2021–23 is still smaller than, but closer to, the size of the 2016/17 sample.

**Table 1: Mental health and problematic substance use module sample sizes for children and adults, by ethnic group, 2016/17 and 2021–23**

Ethnic group (total response)	2016/17		2021–23	
	Adult sample size	Child sample size	Adult sample size	Child sample size
European/Other	9,877	2,471	7,960	1,806
Māori	2,639	1,348	1,924	863
Pacific	740	542	562	343
Asian	1,149	497	1,161	468
<b>Total</b>	<b>12,929</b>	<b>3,733</b>	<b>10,256</b>	<b>2,628</b>

**Note:** Child sample sizes are calculated for those aged 2–14 years. The sample does not include children under 2 years.

As mental health is a sensitive topic, respondents (adults or parents/caregivers on behalf of children) were asked to self-complete the module. Some respondents were not included in the final dataset because they did not start the module, either because they refused or because of English language and/or computer literacy difficulties.

The survey uses the total response classification of ethnicity, which means that people who reported identifying with more than one ethnic group are counted in, and contribute to, each group they reported. Therefore, when numbers in different ethnic groups in the table are summed, the total is greater than the overall adult and child sample sizes.

Some indicators from the mental health and problematic substance use module will now be collected every year as part of the core NZHS, and are published on the New Zealand Health Survey Annual Data Explorer (see [health.govt.nz/nz-health-statistics/surveys/new-zealand-health-survey](https://health.govt.nz/nz-health-statistics/surveys/new-zealand-health-survey)). They include selected mental health services use and support indicators, and emotional and behavioural problems. However, as the estimates in the Annual Data Explorer are published using a single year of data, as opposed to two years of pooled data, they will differ from those published in this report.



## Limitations of screening tools

The mental health and problematic substance use module used screening tools to collect data about anxiety and depression symptoms and the risk of problematic substance use in adults, as well as emotional and behavioural symptoms in children. The screening tools in this module are commonly used in New Zealand (Best Practice Advocacy Centre New Zealand 2009, 2010; Matua Raki 2016).

It is important to note that these screening tools are not designed to estimate the prevalence of disorders, nor to make diagnoses, but are an indication of mental health and substance use concerns only. The only national prevalence study of mental health and substance use disorders, *Te Rau Hinengaro: The New Zealand Mental Health Survey*, was carried out in 2003/04 (Oakley Browne et al 2006).

Screening tools may overestimate prevalence, as they are intended to identify individuals with an undiagnosed condition and therefore take a broader view than the diagnostic criteria (Thombs et al 2018). A result of taking this broader view may be to include individuals who have symptoms but do not reach the criteria for diagnosis.

Additionally, recent efforts to raise awareness of mental health conditions may contribute to an increase in individuals reporting milder symptoms as mental health problems. This may also then lead to a genuine increase in symptoms, due to the individual's self-image changing when they believe that they have a mental health problem (Foulkes and Andrews 2023).

In screening for emotional and behavioural problems in children, each child's parent or caregiver completed the Strengths and Difficulties Questionnaire (SDQ). There may be discrepancies between how the parent or caregiver reports their child's emotional and behavioural problems and how the child would report their own experience (Kawabe et al 2021). Several factors may contribute to these discrepancies, such as the age and gender of the child, the gender of the parent or caregiver answering the questionnaire, and difficulties the parent or caregiver has with their own emotional regulation (Shenaar-Golen and Hen 2022).

It is also important to note that many screening tools have been developed and tested using a Western worldview. Therefore, while some of the screening tools in this report have been validated for use in the New Zealand context (Arroll et al 2010; Kersten et al 2014; Newcombe et al 2016), they do not entirely account for the more holistic view of health and wellbeing that many Indigenous peoples have (Meldrum et al 2023).

## Data on unmet need for mental health and addiction services

Within the mental health and problematic substance use module, all respondents are asked whether, in the last 12 months, they felt that they had needed professional help for their emotions, stress, mental health or substance use, but they hadn't received that help. They may not have received that help for personal reasons or for reasons they could not control. For children aged 2–14 years, their parent or caregiver answered the question on behalf of the child.

If the respondent answered 'yes' to the above question, they were classified as having an unmet need for mental health and addiction services.

It is important to note that individuals must have felt that they needed professional help to be considered as having an unmet need for mental health and addiction services. It is possible that, in addition to those who met the classification for having an unmet need, some other respondents would benefit from professional help but did not feel that they needed it. These individuals are not included in the statistics for unmet need for mental health and addiction services.

## Data on illicit substance use

The screening tool used to collect data about risk of problematic substance use (the World Health Organization's Alcohol, Smoking and Substance Involvement Screening Test (ASSIST)) asks about use of tobacco, alcohol and illicit substances. Use of illicit substances includes non-medical use of prescription drugs.

Additionally, the NZHS asks individuals to report on their own use of substances. Individuals may not be comfortable with disclosing information about use of illicit substances, meaning that their responses may have been subject to social desirability bias<sup>1</sup> (Ministry of Health 2010). To help mitigate this, the NZHS uses computer-assisted self-interviewing (CASI) for some sensitive questions, which allows adult respondents to input their responses directly into a tablet computer. CASI was used in each iteration of the mental health and problematic substance use module.

The target population for the NZHS is the New Zealand 'usually resident' population of all ages, including those living in non-private accommodation. Approximately 99% of the New Zealand 'usually resident' population of all ages is eligible to participate in the NZHS. For practical reasons, a small proportion of the target population is excluded from the survey population – for example, homeless individuals and those in most types of non-private dwellings, such as prisons, hospitals, hospices, dementia care units and hospital-level care in aged care facilities.

Note that populations not included in the target population may have different substance use patterns from the target population.

## Comparability of 12-month substance use and risk of problematic substance use indicators

Every year, the core NZHS collects and reports data on the number of adults who have used an illicit substance in the past 12 months. This indicator is not directly comparable with the risk of problematic substance use indicator reported from the mental health and problematic substance use module.

The core NZHS asks respondents about any substance use in the past 12 months. By contrast, the ASSIST question set used in the NZHS mental health and problematic substance use module asks about substance use with time specifiers across the lifetime

<sup>1</sup> Respondents may under-report risk behaviours based on what they consider to be socially desirable.

and within the past three months. See Appendix One for more information about the ASSIST screening tool.

The NZHS mental health and problematic substance use module explores substance use in more depth. Where individuals report 'ever having used' a substance, it asks further questions to screen for use that may be hazardous or likely to cause harm, either now or in the future.

It is important to note that not all individuals who use substances experience harms or are at risk. In 2016/17, for example, 11.8% of adults reported having used cannabis in the 12 months before the survey, whereas 7.6% of adults reported 'ever having used' cannabis and were at moderate or high risk of problematic use of the substance.

## Ethnicity groupings

This report presents ethnicity data at an aggregate level for the groups Māori, Pacific, Asian and European/Other. There is considerable diversity within each of these groups, and presenting data for these broad groups does not reflect the experience of the sub-groups within them.

The NZHS uses the total response classification of ethnicity, which means that people who reported identifying with more than one ethnic group are counted in, and contribute to, each group they reported.

# Summary of findings – Adults aged 15+

## Anxiety and depression symptoms

The severity of anxiety symptoms was assessed using the seven-item Generalized Anxiety Disorder scale (GAD-7). Possible scores range between 0 and 21.

The severity of depression symptoms was assessed using the nine-item Patient Health Questionnaire depression scale (PHQ-9). Possible scores range between 0 and 27.

A composite measure of anxiety and/or depression symptoms was assessed based on the individual's severity scores on the PHQ-9 and GAD-7. The anxiety and/or depression severity level is defined by the individual's highest severity level across both the PHQ-9 and GAD-7.

See Appendix One for more detail on these screening tools and the proposed actions associated with each severity level.

In 2021–23, in the two weeks before participating in the survey, 26.6% of adults experienced mild or greater symptoms of anxiety and 29.0% of adults experienced mild or greater symptoms of depression. Each of these prevalences have increased since 2016/17 (Table 2).

Anxiety and depression often co-occur (Kalin 2020). In 2021–23, 34.8% of adults experienced mild or greater symptoms of anxiety and/or depression in the two weeks before participating in the survey. This is an increase from 25.0% in 2016/17 (Table 2). The majority of adults (65.2%) experienced minimal or no symptoms of anxiety and/or depression in the two weeks before participating in the survey (Table 2).

**Table 2: Anxiety and depression symptoms in the last two weeks, adults aged 15+, 2016/17 and 2021–23**

Severity of symptoms in the last two weeks	2016/17 % (95% CI)	2021–23 % (95% CI)
<b>Anxiety symptoms (GAD-7 score range)</b>		
No/minimal anxiety symptoms (0–4)	81.5 (80.4–82.5)	73.4* (72.3–74.4)
Mild anxiety symptoms (5–9)	12.4 (11.6–13.3)	16.9* (15.8–18.0)
Moderate anxiety symptoms (10–14)	3.7 (3.3–4.2)	6.5* (5.8–7.3)
Severe anxiety symptoms (15–21)	2.4 (2.1–2.8)	3.3* (2.8–3.7)
<b>Mild or greater anxiety symptoms (5+)</b>	<b>18.5 (17.5–19.6)</b>	<b>26.6* (25.6–27.7)</b>
<b>Depression symptoms (PHQ-9 score range)</b>		
No/minimal depression symptoms (0–4)	80.1 (79.1–81.1)	71.0* (69.8–72.3)
Mild depression symptoms (5–9)	12.9 (12.1–13.7)	17.4* (16.3–18.5)
Moderate depression symptoms (10–14)	4.0 (3.6–4.5)	6.4* (5.8–7.0)
Moderately severe depression symptoms (15–19)	1.7 (1.4–2.0)	3.4* (2.8–4.0)
Severe depression symptoms (20–27)	1.3 (1.1–1.6)	1.8* (1.5–2.2)
<b>Mild or greater depression symptoms (5+)</b>	<b>19.9 (18.9–20.9)</b>	<b>29.0* (27.7–30.2)</b>
<b>Anxiety and/or depression symptoms</b>		
No/minimal anxiety and/or depression symptoms	75.0 (73.9–76.1)	65.2* (64.1–66.4)
Mild anxiety and/or depression symptoms	16.1 (15.3–17.0)	20.6* (19.6–21.7)
Moderate anxiety and/or depression symptoms	5.0 (4.5–5.5)	8.0* (7.3–8.8)
Severe (including moderately severe) anxiety and/or depression symptoms	3.8 (3.4–4.3)	6.1* (5.5–6.8)
<b>Mild or greater anxiety and/or depression symptoms</b>	<b>25.0 (23.9–26.1)</b>	<b>34.8* (33.6–35.9)</b>

Notes:

CI = confidence interval

\* indicates the change between 2016/17 and 2021–23 is statistically significant.

## Increase in moderate to severe anxiety and depression symptoms

The prevalence of each severity level of anxiety, depression, and anxiety and/or depression symptoms increased between 2016/17 and 2021–23. Mild symptoms of anxiety and/or depression remained the most prevalent severity level in 2021–23. However, moderate or greater symptoms of anxiety and/or depression increased at a greater rate over the period (by 5.3 percentage points, compared with a 4.5 percentage point increase in mild symptoms of anxiety and/or depression).

Each severity level of anxiety and/or depression symptoms requires different interventions and so these levels are therefore often of interest to different groups of people working in mental health. *Kia Manawanui* emphasises the importance of early intervention<sup>2</sup> for potential mental health and addiction problems, as well as the need to provide support to those with higher needs through accessible, equitable and high-quality specialist services (Ministry of Health 2021).

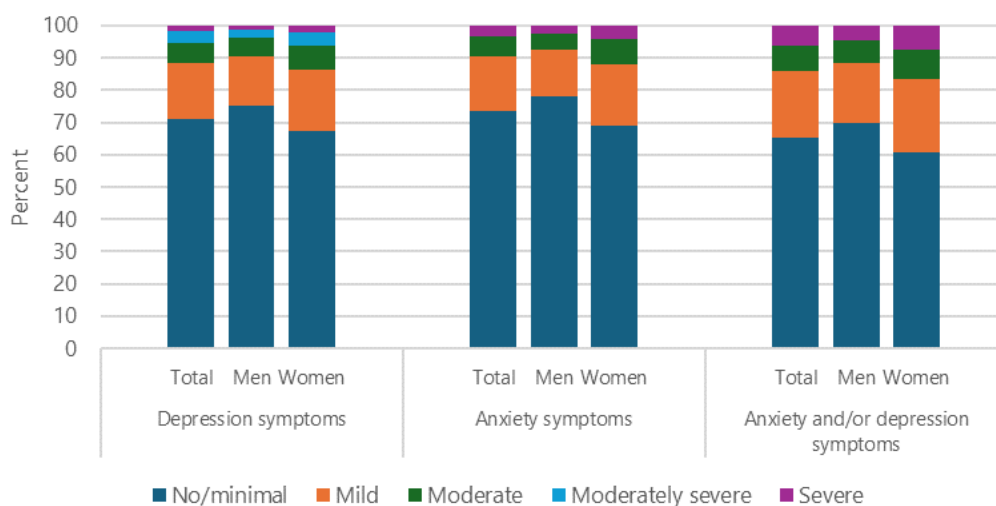
Experiencing mild symptoms of anxiety and/or depression does not in itself indicate that treatment is required. For example, experiencing some symptoms or feelings of anxiety is a normal response to stress or perceived danger, and does not equate to having an anxiety disorder. However, early intervention can prevent the symptoms from escalating. Active treatment is recommended for those people experiencing moderate or greater symptoms of anxiety and/or depression. See Appendix One for more detail on the screening tools used in the mental health and problematic substance use module and the proposed actions associated with each severity level.

## Higher prevalence of anxiety and depression symptoms among women

In general, women experience symptoms more frequently associated with internalising disorders, such as those associated with depression, anxiety and social withdrawal. In contrast, men are more likely to experience disorders characterised by impulsive or disruptive symptoms, including substance use (Christiansen et al 2022).

In 2021–23, women were more likely than men to experience mild or greater symptoms of anxiety and/or depression, with prevalences of 39.2% for women and 30.0% for men. This disparity occurred for each severity level of symptoms (Figure 1).

**Figure 1: Anxiety and depression symptoms in the last two weeks, adults aged 15+, by gender and severity of symptoms, 2021–23**



Note: The 'moderately severe' category relates to depression symptoms only. The 'severe' category for anxiety and/or depression symptoms includes the moderately severe category.

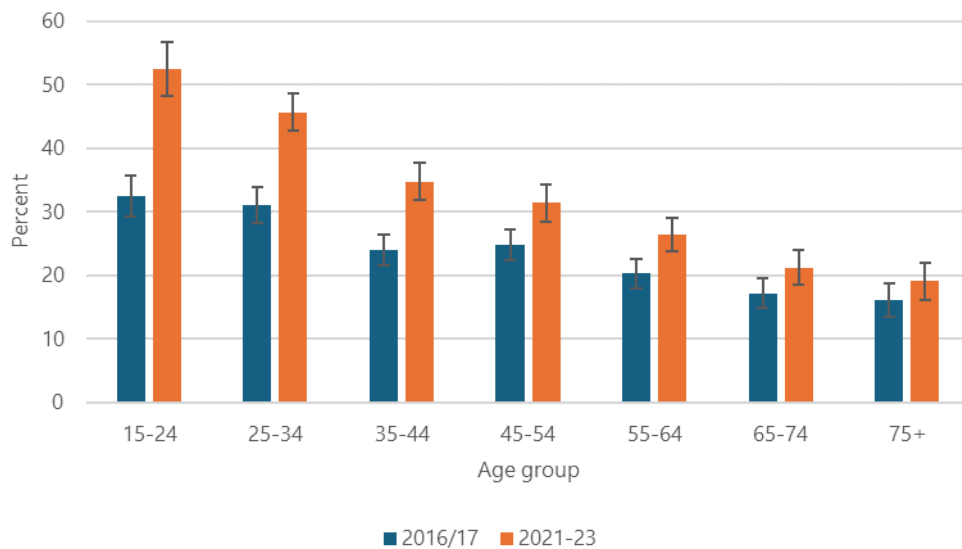
<sup>2</sup> 'Early' intervention can mean both early in the life course and early in the course of mental distress.

## Increases in anxiety and depression symptoms in young adults

Anxiety and/or depression symptoms were more common in younger age groups, with the prevalence trending downwards as age increased (Figure 2). Each age group, with the exception of the 75+ age group, experienced an increase in prevalence of mild or greater anxiety and/or depression symptoms between 2016/17 and 2021–23. In 2021–23, 52.5% of those aged 15–24 years experienced mild or greater symptoms of anxiety and/or depression. This has increased from 32.5% in the same age group in 2016/17.

The prevalence of anxiety and/or depression symptoms in young adults has also increased in some other countries, such as in Canada (Stephenson 2023).

**Figure 2: Mild or greater anxiety and/or depression symptoms in the last two weeks, adults aged 15+, by age group, 2016/17 and 2021–23**



## Risk of problematic substance use

This section reports exclusively on individuals' risk of problematic substance use. This measure is not directly comparable with the prevalence of any past-year illicit substance use, which is published in the **New Zealand Health Survey Annual Data Explorer**. For more detail, see the discussion on the **comparability of substance use indicators** in the section 'What to consider when interpreting the results'.

Risk of problematic substance use was assessed using the World Health Organization's Alcohol, Smoking and Substance Involvement Screening Test (ASSIST).

See Appendix One for more detail on the ASSIST screening tool and the proposed actions for responding to each severity level.

In 2021–23, 27.0% of adults had a moderate or high risk of problematic substance use, which includes tobacco, alcohol and illicit substances. It has decreased from 32.6% of adults in 2016/17, and reflects decreases in the prevalence of moderate or high risk of both alcohol and tobacco use. Conversely, the prevalence of moderate or high risk of illicit substance use increased over the same period (Table 3).

Among the general adult population, men were more likely to have a moderate or high risk of problematic substance use than women. Similarly, in 2003/04 *Te Rau Hinengaro: The New Zealand Mental Health Survey* found men were more likely to have substance use disorders than women (Oakley Browne et al 2006). This same pattern, where men have a higher prevalence of substance use disorders than women, is evident in other countries, such as Australia as established in its National Study of Mental Health and Wellbeing (Australian Bureau of Statistics 2020–2022).

**Table 3: Moderate or high risk of problematic substance use, adults aged 15+, by substance type, 2016/17 and 2021–23**

Moderate or high risk of problematic substance use (ASSIST score range)	2016/17 % (95% CI)	2021–23 % (95% CI)
Cannabis <sup>1</sup> (4+)	7.6 (6.9–8.3)	8.4 (7.7–9.2)
Sedatives or sleeping pills <sup>2</sup> (4+)	2.5 (2.2–3.0)	2.5 (2.1–2.9)
Amphetamine-type stimulant (4+)	1.2 (1.0–1.4)	1.8* (1.3–2.3)
Hallucinogen (4+)	0.6 (0.5–0.8)	1.0* (0.7–1.4)
Opioid (4+)	1.2 (0.9–1.5)	0.8 (0.6–1.2)
Cocaine (4+)	0.5 (0.3–0.6)	0.6 (0.4–0.8)
<b>Any illicit substance</b>	<b>10.1 (9.4–10.9)</b>	<b>11.2* (10.4–12.2)</b>
Alcohol (11+)	15.8 (14.8–16.9)	13.0* (12.2–13.9)
Tobacco (4+)	20.7 (19.8–21.6)	14.6* (13.7–15.6)
<b>Any substance</b>	<b>32.6 (31.5–33.9)</b>	<b>27.0* (25.8–28.1)</b>

Notes:

CI = confidence interval

\* indicates a statistically significant change between 2016/17 and 2021–23.

1. In 2021–23, synthetic cannabinoids were removed from the cannabis category and were categorised as ‘Other’ substances.
2. In 2021–23, GHB and GBL were removed from the sedatives or sleeping pills category and were categorised as ‘Other’ substances.



## Decrease in prevalence of moderate or high risk of problematic tobacco and alcohol use

Although the prevalence of moderate or high risk of problematic tobacco and alcohol use decreased between 2016/17 and 2021–23, tobacco and alcohol remained the substances with the highest prevalence of moderate or high risk of problematic use in 2021–23. As noted above, the decrease in the prevalence of moderate or high risk of these two substances has driven the decrease in the overall prevalence of moderate or high risk of problematic substance use.

The decrease in the prevalence of moderate or high risk of problematic tobacco use occurred across many population groups. Between 2016/17 and 2021–23, decreases were evident across all age groups (except for the 75+ age group) and all ethnic groups, and for both men and women.

The decrease in the prevalence of moderate or high risk of problematic alcohol use was driven by a decrease in the prevalence for men, from 19.2% in 2016/17 to 15.0% in 2021–23. The prevalence for women has remained relatively stable over the same period (12.5% in 2016/17 compared with 11.1% in 2021–23, not a statistically significant change).

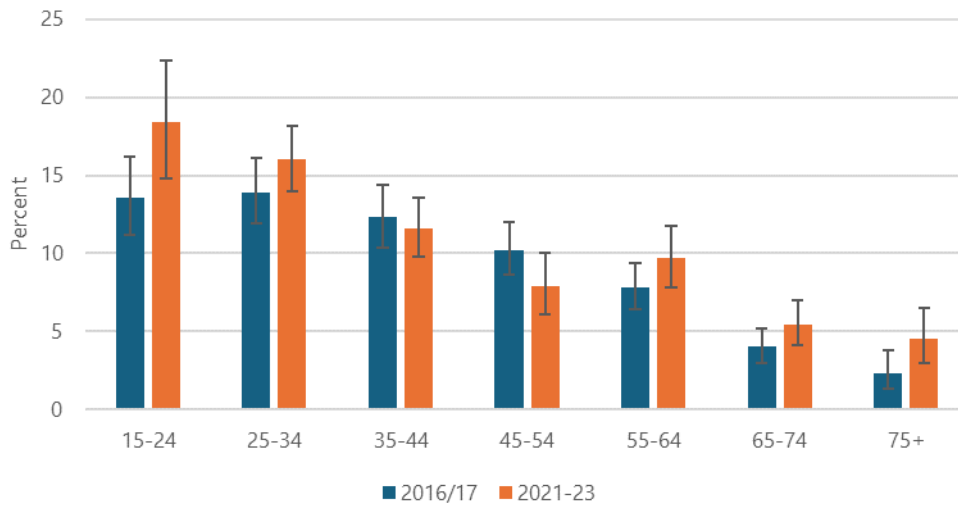
## Increase in prevalence of moderate or high risk of problematic use of illicit substances

When focusing on illicit substances separately from tobacco and alcohol, the prevalence of moderate or high risk of problematic illicit substance use increased, from 10.1% in 2016/17 to 11.2% in 2021–23.

This increase was driven by an increase in the prevalence of moderate or high risk of illicit substance use in women. While men were more likely than women to have moderate or high risk of problematic illicit substance use overall, the prevalence for men remained relatively stable between 2016/17 and 2021–23 (12.2% to 12.4%, not a statistically significant change), whereas the prevalence for women increased from 8.1% to 9.9% over this period.

Among the illicit substances the survey asked about, the prevalence of moderate or high risk of problematic use increased for both amphetamine-type stimulants and hallucinogens between 2016/17 and 2021–23 (Table 3). The prevalence of moderate or high risk of problematic use for both substances increased in those aged 15–24 years. Among both those aged 15–24 years and those aged 75+ years, the prevalence of moderate or high risk of problematic illicit substance use overall increased between 2016/17 and 2021–23 (Figure 3).

**Figure 3: Moderate or high risk of problematic illicit substance use, by age group, 2016/17 and 2021–23**



## Inequities in mental health outcomes and substance use

Results from the 2021–23 mental health and problematic substance use module show that some population groups are more likely than others to experience anxiety and/or depression symptoms and risk of problematic substance use.

As previously discussed, in general women have higher prevalences of internalised mental health conditions, such as depression and anxiety, whereas men have higher prevalences of externalised mental health conditions, such as substance use disorders (Christiansen et al 2022). In addition, inequities exist for other population groups, such as some ethnic groups, the disabled population, and people living in higher deprivation areas (Table 4).

**Table 4: Anxiety and/or depression symptoms and risk of problematic substance use, adults aged 15+, by population group, 2021–23**

<b>Mental health indicator</b>	<b>Total population % (95% CI)</b>	<b>Māori % (95% CI)</b>	<b>Pacific % (95% CI)</b>	<b>Asian % (95% CI)</b>	<b>European/Other<sup>1</sup> % (95% CI)</b>	<b>Disabled<sup>2</sup> % (95% CI)</b>	<b>Most deprived<sup>3</sup> % (95% CI)</b>
<b>Anxiety and/or depression symptoms</b>							
Mild or greater anxiety symptoms	<b>26.6</b> (25.6–27.7)	35.5 (32.5–38.5)	31.5 (26.9–36.4)	23.4 (20.4–26.5)	26.8 (25.6–28.1)	46.3 (42.1–50.6)	30.6 (27.8–33.6)
Mild or greater depression symptoms	<b>29.0</b> (27.7–30.2)	39.3 (36.2–42.4)	36.7 (31.7–42.1)	26.0 (23.6–28.6)	28.7 (27.2–30.3)	58.1 (53.9–62.2)	32.8 (29.7–36.1)
Mild or greater anxiety and/or depression symptoms	<b>34.8</b> (33.6–35.9)	45.2 (42.2–48.2)	40.7 (35.4–46.1)	31.4 (28.7–34.3)	34.8 (33.4–36.3)	61.5 (57.6–65.4)	38.3 (35.2–41.4)
<b>Moderate or high risk of problematic substance use</b>							
Illicit substances	<b>11.2</b> <b>(10.4–12.2)</b>	22.6 (20.0–25.4)	15.0 (11.0–19.9)	4.0 (2.8–5.5)	11.6 (10.6–12.7)	20.2 (16.5–24.4)	15.1 (12.9–17.5)
Alcohol	<b>13.0</b> <b>(12.2–13.9)</b>	18.8 (16.2–21.5)	13.9 (10.6–17.7)	5.4 (3.9–7.4)	14.1 (13.1–15.2)	13.3 (10.7–16.3)	14.1 (12.0–16.4)
Tobacco	<b>14.6</b> <b>(13.7–15.6)</b>	30.2 (27.0–33.5)	22.8 (18.1–28.0)	6.3 (4.6–8.3)	14.1 (13.0–15.2)	24.5 (20.4–28.8)	22.8 (20.6–25.1)
Any substances	<b>27.0</b> <b>(25.8–28.1)</b>	44.7 (41.4–48.0)	34.5 (28.8–40.6)	12.5 (10.2–15.0)	27.5 (26.3–28.8)	37.3 (33.0–41.8)	34.1 (31.4–36.9)

Notes:

CI = confidence interval

1. The group 'European/Other' includes European; Middle Eastern, Latin American and African (MELAA); and Other ethnicities. These groups have been combined to avoid problems with small sample sizes.
2. 'Disabled' adults are those who have at least a lot of difficulty with seeing or hearing (even with glasses or hearing aids), walking or climbing stairs, remembering or concentrating, self-care or communicating, as measured by the Washington Group Short Set.
3. 'Most deprived' refers to those living in neighbourhoods with the highest levels of socioeconomic deprivation, as measured by the New Zealand Index of Deprivation 2018 (NZDep2018).

Different population groups have different demographic profiles; for example, individual ethnic groups may vary in their age and gender distribution. However, data from the 2021–23 mental health and problematic substance use module shows that differences in anxiety and/or depression symptoms and risk of problematic substance use still exist between groups after adjusting for these differences in age, gender and, in the case of those living in the most deprived neighbourhoods, ethnicity. Table 5 presents these differences.

In 2021–23, Māori were 2.1 times as likely as non-Māori to have a moderate or high risk of problematic illicit substance use, 1.8 times as likely to have a moderate or high risk of problematic use of any substance, and 1.2 times as likely to experience mild or greater anxiety and/or depression symptoms.

Disabled adults were 2.4 times as likely as non-disabled adults to have a moderate or high risk of problematic illicit substance use, 1.6 times as likely to have a moderate or high risk of problematic use of any substance, and 2.1 times as likely to experience mild or greater anxiety and/or depression symptoms.

**Table 5: Subgroup comparison of anxiety and/or depression symptoms and risk of problematic substance use, adults aged 15+, by population group, 2021–23**

<b>Mental health indicator</b>	<b>Māori Ratio (95% CI)</b>	<b>Pacific Ratio (95% CI)</b>	<b>Asian Ratio (95% CI)</b>	<b>Disabled<sup>1</sup> Ratio (95% CI)</b>	<b>Most deprived<sup>2</sup> Ratio (95% CI)</b>
<b>Anxiety and/or depression symptoms</b>					
Mild or greater anxiety symptoms	1.23* (1.12–1.35)	0.94 (0.79–1.13)	0.71* (0.61–0.83)	2.14* (1.95–2.35)	1.15 (1.00–1.33)
Mild or greater depression symptoms	1.26* (1.15–1.38)	1.02 (0.86–1.22)	0.74* (0.65–0.83)	2.48* (2.30–2.67)	1.22* (1.06–1.40)
Mild or greater anxiety and/or depression symptoms	1.22* (1.13–1.31)	0.96 (0.82–1.12)	0.75* (0.67–0.84)	2.11* (1.97–2.25)	1.12 (1.00–1.26)
<b>Moderate or high risk of problematic substance use</b>					
Illicit substances	2.14* (1.86–2.46)	1.07 (0.80–1.45)	0.24* (0.17–0.35)	2.36* (1.97–2.82)	2.01* (1.51–2.67)
Alcohol	1.57* (1.34–1.85)	1.11 (0.84–1.45)	0.33* (0.24–0.47)	1.18 (0.96–1.44)	1.20 (0.89–1.62)
Tobacco	2.36* (2.07–2.70)	1.45* (1.16–1.82)	0.32* (0.24–0.43)	2.14* (1.79–2.55)	2.45* (1.90–3.17)
Any substances	1.81* (1.66–1.98)	1.24* (1.04–1.48)	0.36* (0.29–0.44)	1.63* (1.46–1.83)	1.66* (1.36–2.02)

Notes:

This table gives comparisons by ethnic group and disability status after adjusting for age and gender. Neighbourhood deprivation is adjusted for age, gender and ethnic group.

Adjusted ratios above 1 mean the indicator is more likely in the group of interest than those not in the group; adjusted ratios below 1 mean the indicator is less likely.

CI = confidence interval

\* indicates that the difference is statistically significant.

1. 'Disabled' adults are those who have at least a lot of difficulty with seeing or hearing (even with glasses or hearing aids), walking or climbing stairs, remembering or concentrating, self-care or communicating, as measured by the Washington Group Short Set.
2. 'Most deprived' refers to those living in neighbourhoods with the highest levels of socioeconomic deprivation, as measured by the New Zealand Index of Deprivation 2018 (NZDep2018).

Differences in mental wellbeing outcomes across different population groups are not only avoidable but also unfair and unjust (Ministry of Health 2021). *Kia Manawanui* highlights the importance of taking a population-based approach to improving mental wellbeing, which seeks both to improve mental wellbeing outcomes for the whole population and to address inequities that lead to disparities in mental wellbeing outcomes for specific population groups (Ministry of Health 2021).

## Service use and support

See Appendix Two for definitions of the types of services and support mentioned in this section.

In 2021–23, 41.1% of all adults used some type of service or support for concerns about their emotions, stress, mental health or substance use in the 12 months before they completed the survey. This is an increase from 35.3% in 2016/17 (Table 6).

The most common service or support used in 2021–23 was complementary and/or alternative therapy (which includes, but is not limited to, massage, exercise or movement therapy, herbal medicine, rongoā Māori, mirimiri or other traditional Māori healing, and traditional Pacific healing). Help from the primary sector (which includes general practitioners (GPs), nurses and medication) was the second most common type of service and support.

Within complementary and/or alternative therapy, the most common subcategories were massage and exercise or movement therapy. In 2021–23, 16.3% of adults used exercise or movement therapy and 10.4% used massage. In total, 20.6% of adults used either massage and/or exercise or movement therapy.

**Table 6: Use of services or support in the past 12 months for concerns about emotions, stress, mental health or substance use, adults aged 15+, by type of service or support, 2016/17 and 2021–23**

Type of service or support	2016/17 % (95% CI)	2021–23 % (95% CI)
Primary sector (GP, nurse, medication)	13.3 (12.6–14.1)	16.6* (15.6–17.6)
Secondary and tertiary sectors (could also be called crisis care)	1.2 (1.0–1.5)	1.1 (0.8–1.4)
Primary–secondary care crossover (could also be called community care, collaborative services or possibly post-crisis care)	3.6 (3.2–4.0)	4.3* (3.7–4.8)
<b>Any formal health care (primary, secondary and tertiary, and primary–secondary crossover)</b>	<b>14.4 (13.6–15.1)</b>	<b>17.9* (16.9–19.0)</b>
Māori health services and support	1.0 (0.8–1.2)	1.6* (1.3–2.0)
Teachers	0.5 (0.3–0.7)	0.4 (0.2–0.7)
Self-help groups	2.7 (2.4–3.0)	3.7* (3.1–4.4)
Counselling, psychologists and/or telephone hotlines	8.9 (8.2–9.7)	11.4* (10.5–12.3)
Complementary and/or alternative therapy	21.3 (20.0–22.5)	27.4* (26.2–28.7)
Family, whānau and/or friends	8.8 (8.0–9.6)	13.4* (12.4–14.3)
Online resources about symptoms	11.8 (11.0–12.6)	10.8 (9.9–11.7)
Online resources for help (other than to find out about symptoms) <sup>1</sup>	4.6 (4.1–5.1)	7.5* (6.8–8.3)
<b>Any type of service or support (any of the types listed)<sup>2</sup></b>	<b>35.3 (33.8–36.8)</b>	<b>41.1* (39.6–42.6)</b>

Notes:

CI = confidence interval

\* indicates a statistically significant change between 2016/17 and 2021–23.

1. In 2021–23, use of mental health and wellbeing apps was added to this indicator. The 2016/17 survey did not ask about these explicitly, but respondents could have included them in their answers to the 'Other' online resources option.
2. In 2021–23, peer support worker was added to this indicator.

## Unmet need for services increased over the same period

As reported above, overall in 2021–23 more adults had used some type of service or support for concerns about their emotions, stress, mental health or substance use in the 12 months before they completed the survey. Despite this, more people also reported feeling that they need help for these concerns but had not received it. In 2021–23, 8.4% of adults reported that, in the 12 months before completing the survey, they needed professional help for their emotions, stress, mental health or substance use, but did not receive that help. This is an increase from 4.9% in 2016/17 (Table 7).

Those who had an unmet need for services were asked why they did not receive help. In 2021–23, one of the most common barriers people noted was cost: 3.4% of all adults had an unmet need for services and identified cost as a barrier to receiving help.



**Table 7: Felt the need for professional help for emotions, stress, mental health or substance use but did not receive it in the past 12 months, adults aged 15+, 2016/17 and 2021–23**

<b>Unmet need for mental health and addiction services in past 12 months</b>	<b>2016/17 % (95% CI)</b>	<b>2021–23 % (95% CI)</b>
Unmet need for mental health and addiction services	4.9 (4.4–5.5)	8.4* (7.6–9.2)
<b>Reason given for not accessing mental health and addiction services in the past 12 months<sup>1</sup></b>		
Wanted to handle it alone and/or with the support of family, whānau and friends	2.1 (1.8–2.5)	2.4 (2.0–2.9)
Couldn't spare the time	0.7 (0.5–0.9)	1.3* (1.0–1.7)
Costs too much	1.9 (1.6–2.2)	3.4* (2.8–4.0)
Problems with transport or childcare	0.5 (0.3–0.7)	0.4 (0.3–0.6)
Unsure of where to go or who to see	1.4 (1.2–1.7)	2.2* (1.8–2.8)
Couldn't get an appointment	0.6 (0.5–0.9)	1.6* (1.2–2.0)
Time taken to get an appointment too long	–	2.2 (1.8–2.7)
Health professionals being unhelpful or unwilling to help	–	1.4 (1.1–1.8)
Not satisfied with available services	0.8 (0.6–1.0)	1.3* (1.0–1.7)
Didn't think treatment would work	1.0 (0.8–1.3)	0.9 (0.6–1.2)
Concerned what others might think	0.9 (0.6–1.1)	0.9 (0.7–1.2)

Notes:

CI = confidence interval

\* indicates a statistically significant change between 2016/17 and 2021–23.

A dash (–) indicates that the data were not collected that year.

1. The prevalence of each reason given for not accessing mental health and addiction services in the past 12 months is presented for all adults aged 15+. For example, 2.4% of adults aged 15+ years felt the need for professional help for their emotions, stress, mental health or substance use but did not receive it in the past 12 months because they wanted to handle it alone and/or with the support of family, whānau and friends.

# Summary of findings – Children aged 2–14 years

## Emotional and behavioural problems

Emotional and behavioural problems in children aged 2–14 years were screened for using the **parent or caregiver’s responses** to the Strengths and Difficulties Questionnaire (SDQ). Emotional and behavioural problems include emotional symptoms, conduct problems, hyperactivity and peer problems.

Prosocial behaviour is also screened for using the SDQ but is not included in the criteria for total emotional and behavioural problems as it is calculated to show positive, rather than negative, behaviours.

See Appendix One for more detail on the SDQ and the proposed actions associated with each severity level.

In 2021–23, 10.3% of children aged 2–14 years were likely to have emotional and/or behavioural problems over the last six months or school year, compared with 9.0% of children in 2016/17 (Table 8).

Being likely to have emotional and/or behavioural problems indicates a risk that a child experiences substantial difficulties with their emotions, conduct, hyperactivity, or with their peers. Evidence indicates that early intervention can reduce the risk or severity of certain types of mental disorders later in a child’s life, as well as improving developmental, emotional, academic and social outcomes (Manning 2017; Ministry of Health 2018).

In 2021–23, 95.0% of children aged 2–14 years demonstrated average or close to average prosocial behaviour, compared with 94.3% in 2016/17. Prosocial behaviour includes being considerate of other people’s feelings; sharing readily; being helpful if someone is hurt, upset or feeling ill; being kind to younger children; and often offering or volunteering to help others.

**Table 8: Emotional and/or behavioural problems over last six months or school year, children aged 2–14 years, 2016/17 and 2021–23**

<b>Strengths and Difficulties Questionnaire subscales (Concerning SDQ score range for children aged: 5+ years / 2–4 years)</b>	<b>2016/17 % (95% CI)</b>	<b>2021–23 % (95% CI)</b>
Emotional symptoms (5–10 / 4–10)	9.2 (8.0–10.6)	13.0* (11.5–14.7)
Conduct problems (4–10 / 5–10)	11.1 (9.9–12.4)	10.3 (8.7–12.0)
Hyperactivity (7–10 / 7–10)	8.8 (7.7–10.1)	10.4 (9.0–12.0)
Peer problems (4–10 / 4–10)	14.6 (13.1–16.1)	15.9 (13.9–18.0)
<b>Emotional and/or behavioural problems (17–40 / 16–40)</b>	<b>9.0 (7.9–10.2)</b>	<b>10.3 (8.7–12.2)</b>

Notes:

CI = confidence interval

\* indicates a statistically significant change between 2016/17 and 2021–23.

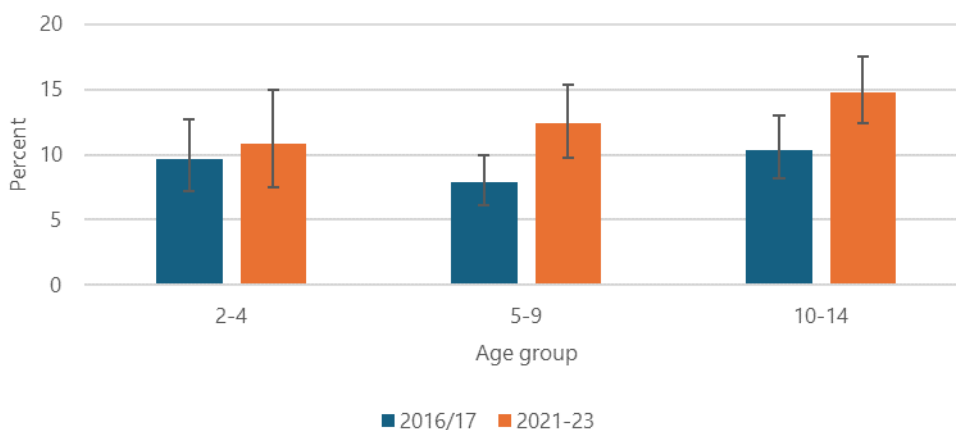
## Increase in children likely to have emotional symptoms

While the overall prevalence of emotional and/or behavioural problems over the last six months or school year remained relatively unchanged between 2016/17 and 2021–23, the prevalence of emotional symptoms increased from 9.2% to 13.0% over the same period. Emotional symptoms indicate difficulties with worries, unhappiness, nervousness or clinginess, fears, or physical symptoms of anxiety.

The prevalence of emotional symptoms for girls increased between 2016/17 and 2021–23 (from 10.1% to 15.5%), while the prevalence for boys remained relatively stable (8.4% to 10.7%, not a statistically significant change). Overall, girls were more likely than boys to have emotional symptoms, whereas boys were more likely than girls to have hyperactivity, peer problems, and overall emotional and/or behavioural problems.

The increase in prevalence of emotional symptoms occurred in the age groups of both 5–9 and 10–14 years (Figure 4).

**Figure 4: Emotional symptoms over last six months or school year, children aged 2–14 years, by age group, 2016/17 and 2021–23**



## Tamariki and rangatahi Māori more likely to have emotional and/or behavioural problems

The section '**Inequities in mental health outcomes and substance use**' presented differences in outcomes for adults for select population groups. Similar to adults, children in some population groups are more likely to exhibit emotional and/or behavioural problems than those not in the population group.

After adjusting for age and gender, tamariki and rangatahi Māori aged 2–14 years were 1.6 times as likely to have emotional and/or behavioural problems as non-Māori children in 2021–23.

This disparity between tamariki and rangatahi Māori and non-Māori children also occurred across most of the sub-scales of emotional and/or behavioural problems. Tamariki and rangatahi Māori aged 2–14 years were more likely to have conduct problems (1.7 times as likely), hyperactivity (1.7 times as likely), and peer problems (1.4 times as likely).

Pacific children were also 1.5 times as likely to have peer problems as non-Pacific children.

Differences were also apparent by deprivation level. After adjusting for age, gender and ethnic group, children living in the most deprived areas were 2.1 times as likely to have conduct problems, and 2.7 times as likely to exhibit peer problems as children living in the least deprived areas.

## Service use and support

The **parent or caregiver's responses** about the child are used to define the child's access to, and unmet need for, services and support.

See Appendix Two for definitions of the types of services and support mentioned in this section.

In 2021–23, 28.8% of children accessed at least one type of service or support for concerns about their emotions, behaviour, stress, mental health or substance use in the 12 months before the survey. This prevalence has remained relatively unchanged since 2016/17 (Table 9).

**Table 9: Use of services or support by children aged 2–14 years in the past 12 months for concerns about emotions, stress, mental health or substance use, by type of service or support, 2016/17 and 2021–23**

<b>Service or support used in past 12 months</b>	<b>2016/17 % (95% CI)</b>	<b>2021–23 % (95% CI)</b>
Primary sector (GP, nurse, medication)	9.0 (7.6–10.4)	9.2 (7.9–10.7)
Primary–secondary care crossover (could also be called community care, collaborative services or possibly post-crisis care)	5.9 (4.9–7.2)	4.1* (3.3–5.1)
<b>Any formal health care (primary, secondary and tertiary, and primary–secondary crossover)</b>	<b>11.4 (10.1–12.9)</b>	<b>11.4 (9.9–13.0)</b>
Māori health services and support	0.9 (0.6–1.3)	1.3 (0.9–1.9)
Teachers	8.6 (7.5–9.8)	9.1 (7.5–10.9)
Counselling, psychologists and/or telephone hotlines	8.3 (7.1–9.6)	6.2* (5.2–7.3)
Complementary and/or alternative therapy	9.6 (8.3–11.0)	12.2* (10.8–13.9)
Family, whānau and/or friends	8.1 (6.8–9.6)	9.4 (8.0–11.0)
Online resources about symptoms	11.7 (10.2–13.4)	9.5 (7.9–11.2)
Online resources for help (other than to find out about symptoms) <sup>1</sup>	6.6 (5.7–7.7)	7.5 (6.3–8.9)
<b>Any type of service or support (any of the types listed)</b>	<b>29.0 (26.6–31.4)</b>	<b>28.8 (26.7–31.1)</b>

Notes:

CI = confidence interval

\* indicates a statistically significant change between 2016/17 and 2021–23.

1. In 2021–23, use of mental health and wellbeing apps was added to this indicator. The 2016/17 survey did not ask about these explicitly, but respondents could have been included them in their answers to the 'Other' online resources option.

## Decrease in use of help from counselling, psychologists and/or telephone hotlines and the crossover between primary and secondary care

Between 2016/17 and 2021–23, there were decreases in the proportion of children using help both from counselling, psychologists and/or telephone hotlines and from the crossover between primary and secondary care for concerns about their emotions, behaviour, stress, mental health or substance use in the 12 months before the survey (Table 9).

Help from the crossover between primary and secondary care for children includes consulting a paediatrician, psychiatrist or other medical specialist, or receiving help from Māori health services, community mental health or addiction services and/or other community support services.

Of all the services or supports included in the survey, complementary and/or alternative help was the only one that increased for children between 2016/17 and 2021–23. Complementary and/or alternative help includes, but is not limited to massage, exercise or movement therapy, herbal medicine, rongoā Māori, mirimiri or other traditional Māori healing, and traditional Pacific healing.

## Increase in unmet need for mental health and addiction services among children

Similar to adults, between 2016/17 and 2021–23 the prevalence increased for children who needed professional help for their emotions, behaviour, stress, mental health or substance use in the 12 months before the survey but they did not receive it, as reported by their parent or caregiver (Table 10).

**Table 10: Felt the need for professional help for emotions, stress, mental health or substance use but did not receive it in the past 12 months, children aged 2–14 years, 2016/17 and 2021–23**

<b>Unmet need for mental health and addiction services in past 12 months</b>	<b>2016/17 % (95% CI)</b>	<b>2021–23 % (95% CI)</b>
Unmet need for mental health and addiction services	4.8 (4.0–5.8)	6.8* (5.6–8.3)
<b>Reason given for not accessing mental health and addiction services in the past 12 months<sup>1</sup></b>		
Unsure of where to go or who to see	1.6 (1.1–2.3)	2.2 (1.5–3.2)
Time taken to get an appointment too long	–	1.8 (1.2–2.5)
Health professionals being unhelpful or unwilling to help	–	1.0 (0.6–1.7)

Notes:

CI = confidence interval

\* indicates a statistically significant change between 2016/17 and 2021–23.

A dash (–) indicates that the data were not collected that year.

1. For each reason given for not accessing mental health and addiction services in the past 12 months, the prevalence is among all children aged 2–14 years. For example, as reported by their parents/caregivers, 2.2% of children aged 2–14 years felt the need for professional help for their emotions, stress, mental health or substance use but did not receive it in the past 12 months because they were unsure of where to go or who to see.

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# Appendix 1: Screening tools

The mental health and problematic substance use module used the following screening tools.

- The severity of anxiety symptoms in adults was assessed using the seven-item Generalized Anxiety Disorder scale (GAD-7).
- The severity of depression symptoms in adults was assessed using the nine-item Patient Health Questionnaire depression scale (PHQ-9).
- A composite measure of anxiety and depression symptoms was assessed based on the individual's severity scores on the PHQ-9 and GAD-7.
- Risk of problematic substance use was assessed using the World Health Organization's Alcohol, Smoking and Substance Involvement Screening Test (ASSIST).
- Emotional and behavioural problems in children aged 2–14 years were assessed using the parent or caregiver's responses to the Strengths and Difficulties Questionnaire (SDQ).

It is important to note that these screening tools are not designed to calculate the prevalence of mental health disorders, nor to make diagnoses, but are an indication of mental health and substance use concerns only.

## Generalised Anxiety Disorder scale (GAD-7)

The GAD-7 screener comprises seven items, each of which is scored between 0 and 3. All of these scores are summed to provide a severity score between 0 and 21. All seven items are aimed at determining the frequency of anxiety-related symptoms the respondent has experienced within the last two weeks.

Table 11 displays the severity of symptoms associated with each score. A score of 10 or higher indicates that further evaluation is recommended (Pfizer Inc, nd).

**Table 11: GAD-7 scores**

GAD-7 score	Severity of symptoms
5–9	Mild
10–14	Moderate
15–21	Severe

Source: Pfizer Inc (nd)

## Patient Health Questionnaire (PHQ-9)

The PHQ-9 screener comprises nine items, each of which is scored between 0 and 3. All of these scores are summed to provide a severity score between 0 and 27. All nine items are aimed at determining the frequency of depression-related symptoms the respondent has experienced within the last two weeks.

Table 12 displays the severity of symptoms associated with each score, along with the treatment actions that the PHQ-9 instruction manual proposes (Pfizer Inc, nd).

**Table 12: PHQ-9 scores and proposed treatment actions**

PHQ-9 score	Severity of symptoms	Proposed treatment actions
5–9	Mild	Watchful waiting; repeat PHQ-9 at follow-up
10–14	Moderate	Treatment plan, considering counselling, follow-up and/or pharmacotherapy
15–19	Moderately severe	Active treatment with pharmacotherapy and/or psychotherapy
20–27	Severe	Immediate initiation of pharmacotherapy and, if severe impairment or poor response to therapy, expedited referral to a mental health specialist for psychotherapy and/or collaborative management

Source: Pfizer Inc (nd)

## Composite measure of anxiety and/or depression symptoms

A composite measure of anxiety and/or depression symptoms was assessed based on the individual's severity scores on the PHQ-9 and GAD-7. The anxiety and/or depression severity level is defined by the highest severity level across both the PHQ-9 and GAD-7.

Please note that this analysis has not used Kroenke et al's (2016) scoring bands for the Patient Health Questionnaire Anxiety and Depression Scale (PHQ-ADS). The PHQ-ADS is the sum of the PHQ-9 and GAD-7 scores, with higher scores indicating higher levels of depression and anxiety symptoms. The reason for not using the PHQ-ADS scoring bands to create severity levels for anxiety/and or depression indicators is that the PHQ-ADS scoring bands can produce counterintuitive results when presented alongside the PHQ-9 and GAD-7 indicators. For example, a person with moderate depression and no anxiety may be categorised as having mild anxiety and/or depression on the PHQ-ADS.

## Alcohol, Smoking and Substance Involvement Screening Test (ASSIST)

The ASSIST consists of eight questions about an individual's use of substances over their lifetime, as well as their use of substances over the past three months and any related problems they have experienced.

Each substance is scored and assessed individually in order to provide an indication of the individual's risk of problematic use of the substance. Table 13 displays the severity of risk associated with each score, along with the treatment actions the ASSIST instruction manual proposes (Humeniuk et al 2010).

**Table 13: ASSIST scores and proposed treatment actions**

ASSIST score		Severity of risk	Proposed treatment actions
Alcohol	All other substances		
0–10	0–3	Lower	Provide treatment as usual and can give feedback about their score if time is available. Encourage to remain low risk.
11–26	4–26	Moderate	Brief intervention. Provide informative resources and a copy of the ASSIST feedback report card.
27+	27+	High	Brief intervention. Provide information about, or referral for, detailed clinical assessment and appropriate specialist treatment.

Source: Humeniuk et al (2010)

## Strengths and Difficulties Questionnaire (SDQ)

The SDQ asks whether 25 attributes are 'not true', 'somewhat true' or 'certainly true' for the child over the last six months or school year. The attributes fall into five subscales, each consisting of five questions: behavioural symptoms, conduct problems, hyperactivity, peer problems and prosocial behaviour. The response to each question is scored 0–2, for a total score of 10 in each scale.

The total emotional and/or behavioural problems score is the sum of the emotional symptoms, conduct problems, hyperactivity and peer problems scores. Prosocial behaviour is excluded as it is calculated to show positive, rather than negative, behaviours.

In the mental health and problematic substance use module, the child's parent or caregiver responded on behalf of the child. For children aged 2–4 years, the questions and the thresholds for concerning scores are also slightly different from those for older children.

Table 14 outlines the thresholds for each scale, for both age groups of 2–4 years and 5–14 years. Children with a 'concerning' total difficulties score are likely to benefit from a more thorough clinical assessment, and potentially a service intervention.

**Table 14: SDQ thresholds for emotional and behavioural problems and prosocial behaviour, children aged 2–14 years by age group**

SDQ subscale	2–4 years	5–14 years
	Concerning SDQ scores	
Emotional symptoms	4–10	5–10
Conduct problems	5–10	4–10
Hyperactivity	7–10	7–10
Peer problems	4–10	4–10
Total emotional and/or behavioural problems	16–40	17–40
	Normal or borderline normal SDQ score	
Prosocial behaviour	6–10	5–10

Source: SDQ (2015), SDQ (2016)

# Appendix 2: Support type definitions

Further information on the specific questions asked for each support type is available on the Mental Health and Problematic Substance Use Data at: [minhealthnz.shinyapps.io/nz-health-survey-2022-23-mental-health-data-explorer/](https://minhealthnz.shinyapps.io/nz-health-survey-2022-23-mental-health-data-explorer/).

## Māori health services and support used in past 12 months

Respondents (adults aged 15+ years and children aged 2–14 years) are categorised as using Māori health services for concerns about their emotions, stress, mental health or substance use if they answered that in the past 12 months they have:

- used Rongoā Māori, mirimiri or other traditional Māori healing
- consulted a kaumātua or tohunga, and/or
- received help from Māori health services.

## Primary sector (GP, nurse, medication) used in past 12 months

Adult respondents (aged 15+ years) are categorised as using the primary sector for concerns about their emotions, stress, mental health or substance use if in the past 12 months they have:

- consulted a GP or a nurse, and/or
- been prescribed medication or are taking prescription medication.

Children (aged 2–14 years) are categorised as using the primary sector for concerns about their emotions, behaviour, stress, mental health or substance use if in the past 12 months they have:

- been prescribed medication, or
- consulted a:
  - GP
  - nurse at a medical centre
  - Plunket, Well Child / Tamariki Ora nurse, and/or school or district nurse.

## Teachers consulted in past 12 months

Respondents (adults aged 15+ years and children aged 2–14 years) are categorised as using help from teachers for concerns about their emotions, stress, mental health or substance use if they answered that they consulted a teacher in the past 12 months.

## Secondary and tertiary sectors (could also be called crisis care) used in past 12 months

Respondents (adults aged 15+ years and children aged 2–14 years) are categorised as using secondary or tertiary sectors for concerns about their emotions, stress, mental health or substance use if they answered that in the past 12 months they have received help from:

- a hospital emergency department or an after-hours medical centre, and/or
- a crisis mental health team.

## Primary–secondary care crossover (could also be called community care, collaborative services or possibly post-crisis care) used in past 12 months

Adult respondents (aged 15+ years) are categorised as using primary–secondary care crossover for concerns about their emotions, stress, mental health or substance use if they have done one or more of the following in the past 12 months:

- consulted a social worker or a psychiatrist or other medical specialist
- have stayed, overnight or longer, in a hospital or a residential treatment centre
- have received at least one of the following forms of help:
  - hospital ward
  - Māori health service (including Māori mental health or addiction services)
  - community mental health or addiction service
  - other community support services
  - programme in a prison or a youth justice centre.

Children (aged 2–14 years) are categorised as using primary–secondary care crossover for concerns about their emotions, behaviour, stress, mental health or substance use if they have consulted a paediatrician, psychiatrist or other medical specialist, or have received help from Māori health services, community mental health or addiction services, and/or other community support services in the past 12 months.



## Any formal health care (combines primary, secondary or tertiary, or primary–secondary crossover) used in past 12 months

Adult respondents (aged 15+ years) are categorised as using primary care, secondary or tertiary care, or primary–secondary care crossover for concerns about their emotions, stress, mental health or substance use if they declared that in the past 12 months one or more of the following applies:

- have been prescribed medication or are taking prescription medication for their emotions, stress, mental health or substance use
- have consulted a GP
- have consulted a nurse
- have received help from a hospital emergency department or an after-hours medical centre
- have received help from a crisis mental health team
- have consulted a social worker or a psychiatrist or another medical specialist
- have stayed, overnight or longer, in a hospital or a residential treatment centre
- have received at least one of the following forms of help:
  - hospital ward
  - Māori health service (including Māori mental health or addiction services)
  - community mental health or addiction service
  - other community support services
  - programme in a prison or a youth justice centre.

Child respondents (aged 2–14 years) are categorised as having used any formal health care (primary care, secondary or tertiary care, or primary–secondary care crossover) for concerns about their emotions, behaviour, stress, mental health or substance use in the past 12 months, if they:

- were prescribed medication or taking prescription medication for their emotions, behaviour, stress, mental health, or substance use
- consulted a GP; a nurse at a medical centre; a Plunket or Well Child / Tamariki Ora nurse; a school or district nurse; a paediatrician, psychiatrist or other medical specialist; or a social worker
- received help from a hospital emergency department or an after-hours medical centre, crisis mental health team, Māori health service, community mental health or addiction service, other community support service or other service.

## Self-help groups used in past 12 months

Adult respondents (aged 15+ years) are categorised as using self-help groups for concerns about their emotions, stress, mental health or substance use if they answered that in the past 12 months they have gone to:

- an emotional or mental health self-help group, such as a group for eating disorders, bipolar disorder or bereavement, and/or
- an alcohol or drug use self-help group, such as Alcoholics Anonymous or Narcotics Anonymous.

## Counselling, psychologists and/or telephone hotlines used in past 12 months

Respondents (adults aged 15+ years and children aged 2–14 years) are categorised as using counselling, psychologists and/or telephone helplines for concerns about their emotions, stress, mental health or substance use if they answered that in the past 12 months they have:

- used a telephone helpline
- had counselling that lasted 30 minutes or longer
- had an online therapy, such as e-therapy or online counselling, and/or
- consulted a psychologist, counsellor or psychotherapist.

## Complementary and/or alternative therapy used in past 12 months

Respondents (adults aged 15+ years and children aged 2–14 years) are categorised as using complementary and/or alternative help for concerns about their emotions, stress, mental health or substance use if they declared that in the past 12 months they have:

- consulted a religious or spiritual advisor or a kaumātua or tohunga, and/or
- used any of the following complementary or alternative therapies:
  - massage
  - exercise, or movement therapy
  - herbal medicine
  - spiritual, psychic or energy healing
  - Rongoā Māori, mirimiri or other traditional Māori healing
  - traditional Pacific healing
  - relaxation, meditation, mindfulness training, yoga or guided imagery
  - acupuncture
  - osteopathic or chiropractic treatment
  - hypnosis
  - other types of complementary or alternative therapies.

## Family, whānau and/or friends helped in past 12 months

Respondents (adults aged 15+ years and children aged 2–14 years) are categorised as using help from family, whānau, a partner and/or friends for concerns about their

emotions, stress, mental health or substance use if they declared that they had consulted family, whānau, a partner and/or friends in the past 12 months.

## Online resources about symptoms used in past 12 months

Respondents (adults aged 15+ years and children aged 2–14 years) are categorised as using online resources to find support for concerns about their emotions, stress, mental health or substance use if they answered that they had used any online resources to learn about symptoms, diagnosis, causes, treatments or medication side effects related to their concerns in the past 12 months.

## Online resources for help (other than to find out about symptoms) used in past 12 months

Respondents (adults aged 15+ years and children aged 2–14 years) are categorised as using online resources for other purposes related to their concern about their emotions, stress, mental health or substance use if they answered that in the past 12 months they had used online resources:

- to find out where to get help
- to discuss with others through forums, support groups or online social networks, or a mental health and wellbeing app, and/or
- for a reason other than learning about symptoms, diagnosis, causes, treatments or medication side effects.