

Otago youth not in employment, education, or training (NEET):

Collaborative research between
Stats NZ and Methodist Mission Southern
using integrated data

with support from

ministry for **Women**
minitanga mō ngā
Wāhine 



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Purpose and summary

Purpose

The report, *Otago youth not in employment, education, or training (NEET): Collaborative research between Stats NZ and Methodist Mission Southern using integrated data* provides information about young people aged 15–24 years who were not in employment, education, or training (NEET) during the 2015 calendar year, with a particular focus on Otago region.

The report is accompanied by associated files that give a picture of NEET youth by territorial authority and local area level. See [Youth not in employment, education, or training \(NEET\)](#) for:

- Otago youth not in employment, education, or training (NEET) – tables (Excel, 300KB)
- Youth not in employment, education, or training (NEET) – maps (PDF, 3.99MB).

This work is the result of a collaborative research project between Stats NZ and Methodist Mission Southern (MMS), with support from Ministry for Women. It is one of several pilot partnership projects between Stats NZ and non-government organisations using data from the Integrated Data Infrastructure (IDI) to provide information on communities or groups of interest.

Using IDI data to measure NEET youth

The IDI brings together a wide range of data from government administrative sources and surveys to give a view across many **aspects of people's experiences**. **While there are limitations with the administrative data in the IDI (in terms of how well people's records are linked across different datasets and the quality and coverage of the data)**, it has some advantages over other data sources on NEET youth.

Some advantages of the IDI are that it allows us to identify young people who have had sustained periods of being NEET, to provide detailed information at regional and local area levels, and to look at many different characteristics of NEET youth. These include risk factors such as contact with mental health services or school behavioural interventions, as well as resilience factors such as **having a driver's licence or having previously worked**.

Why measuring NEET youth matters

Successfully managing transitions from education to employment can have implications for **people's outcomes across their lives**. **Using data to understand the characteristics of those who experience greater difficulty in managing that transition, and identifying where those people are more likely to be found, can help shape targeted, effective services able to support our young people in achieving economic independence and social well-being.**

We welcome your feedback

This project has been guided by the needs of the partner (MMS) for better information about NEET youth in their region and to assist in delivery of services to this group. The report presents an innovative and experimental use of IDI data that can provide groundwork for further research on NEET youth and for other non-government organisations to find out more about NEET youth in their own communities.

Stats NZ, MMS, and Ministry for Women, the project partners, encourage discussion about the story presented here and the choice of data used to tell it.

We welcome any feedback you may have, email: philip.walker@stats.govt.nz.

Summary of key points

- We used a ‘**main activity**’ measure that counts as NEET all those who spent more months in the 2015 calendar year being NEET than in either education or employment.
- We developed methods to identify and profile NEET youth in the IDI, which can be used in other research projects either for local groups such as iwi and community organisations or for nationally focused research.
- Nationwide, a total of 87,650 young people aged 15–24 years experienced being NEET as their main activity in 2015 (a rate of 13.5 percent).
- In Otago, 2,800 young people experienced being NEET as their main activity in 2015 (a rate of 8.4 percent), with 72 percent of those living in Dunedin.
- NEET rates varied considerably across **the region’s territorial authority areas, from 5.4 percent** in Queenstown-Lakes to 10.7 percent in Waitaki and Clutha, with Dunedin city in the mid-range at 8.5 percent.
- Some of the local areas with relatively high NEET numbers and rates included Caversham (a rate of 17.4 percent), Brockville (16.8 percent), Fernhill (13.7 percent), and Mornington (13.6 percent).
- Otago youth aged 20–24 were much more likely than those aged 15–19 to have NEET as their main activity during the year (10.2 percent compared with 5.6 percent), with males having slightly higher rates than females in both age groups.
- The majority of 15–19-year-old mothers in the region were NEET in 2015 – 59 percent, compared with just 4 percent of women in the same age group who were not mothers.
- The Otago 15–24-year-olds whose main activity was NEET in 2015 were more likely than those whose main activity was in education or employment to have experienced:
 - behavioural interventions at some stage while at secondary school
 - using services or treatments for substance abuse and/or other mental health conditions at some stage in their lives
 - having two or more changes of address in 2015.
- We identified a group of young people who were of concern, in that they had already experienced multiple poor outcomes – they were NEET for six months or more in 2015, **didn’t have NCEA level 2**, and had at least one behavioural intervention at school and/or had accessed mental health services or treatments. This group represents 37 percent of young people who had NEET as a main activity in 2015, and one in twenty (5 percent) of young people in New Zealand.
- Otago NEET youth were less likely than others to have the following resilience factors:
 - achieved NCEA level 2 or higher
 - having a restricted drivers licence or higher
 - previously been in paid employment.

IDI disclaimer

The results in this report are not official statistics, they have been created for research purposes from the Integrated Data Infrastructure (IDI) managed by Stats NZ.

Access to the anonymised data used in this study was provided by Stats NZ in accordance with security and confidentiality provisions of the Statistics Act 1975. Only people authorised by the Statistics Act 1975 are allowed to see data about a particular person, household, business or organisation and the results in this report have been confidentialised to protect these groups from identification.

Careful consideration has been given to the privacy, security and confidentiality issues associated with using administrative and survey data in the IDI. Further detail can be found in the [Integrated Data Infrastructure: Overarching privacy impact assessment](#) available from www.stats.govt.nz.

The results are based in part on tax data supplied by Inland Revenue to Stats NZ under the Tax Administration Act 1994. This tax data must be used only for statistical purposes, and no individual information may be published or disclosed in any other form, or provided to Inland Revenue for administrative or regulatory purposes.

Any person who has had access to the unit-record data has certified that they have been shown, have read, and have understood section 81 of the Tax Administration Act 1994, which relates to secrecy. Any discussion of data limitations or weaknesses is in the context of using the IDI for statistical purposes, and is not related to the data's ability to support Inland Revenue's core operational requirements.

Introducing the NEET youth project and previous research

This chapter provides background to the project about NEET youth in Otago, discusses some issues relating to the measurement of the NEET population, and summarises existing New Zealand research on the topic.

IDI pilot partnerships

Otago youth not in employment, education, or training (NEET) presents the results of a pilot project by Stats NZ with Methodist Mission Southern about young people in the Otago region who are not in employment, education, or training (NEET). It is one of several pilot projects initiated by the Government Statistician in 2015 through an invitation to community organisations to collaborate with Stats NZ in creating new information from data in the Integrated Data Infrastructure (IDI).

The IDI is a large research database containing microdata about people and households. The data includes administrative and survey data sourced from government agencies and non-government organisations. Records from these datasets are linked to enable research drawing on multiple data sources over different time periods, while strictly preserving the confidentiality of individuals. Linking these datasets provides a rich new source of information to inform decision making by communities, businesses, and government.

[See Integrated Data Infrastructure](#) on the Stats NZ website for more information about the IDI.

One of the many potential uses of the IDI is the ability to provide non-government organisations with better information about the communities and groups they represent or service. Many of these organisations provide assistance to some of the most vulnerable and disadvantaged people in our society, targeting relatively small populations within tight funding constraints. Better information to guide the targeting and effectiveness of services improves utilisation of available skills and resources to produce better outcomes for people and their communities.

The **Mission's** project – NEET youth in Otago

Methodist Mission Southern (MMS) is a Dunedin-based organisation that provides a wide range of social services and community programmes throughout the Otago region.

[See the Mission's website](#) for more information about MMS and its work.

MMS wanted better information about NEET youth in the Otago region, including the size and location of the NEET population and their characteristics. This would help the Mission identify where to target their resources and how best to assist young people who are NEET or at risk of being NEET.

Stats NZ selected this as a pilot partnership project because NEET youth are a group of particular interest to policy makers and social service providers. Meaningful, adequately paid employment is an important factor in social well-being. The transition from school to work is not always easy and young people without adequate skills, with additional responsibilities such as being a parent, or with health or other social problems, often require additional support to flourish. Without that support some may be at greater risk of poor social and economic outcomes throughout their lives.

In 2009 the OECD report *Doing better for children* noted that young New Zealanders have a **comparatively high risk of poor outcomes**. Chief Science Advisor Sir Peter Gluckman's 2011 report *Improving the transition* noted that at least one in five young New Zealanders will have experiences, or exhibit behaviours or emotions, that lead to long-term consequences affecting the rest of their lives. The report stressed that prevention or intervention strategies applied early in life reap better economic and social returns than strategies applied later in life.

Young people who spend significant periods not working and not in education or training may face difficult economic and social circumstances, and be at risk of poor outcomes across their later lives. The transition from education to employment can be a difficult one for young people, particularly if they lack qualifications, and if jobs are scarce. People in their late teens and early twenties generally have the highest unemployment rates in the population and tend to be the most vulnerable to job losses during economic downturns. This may have long-term scarring **effects, as success in today's labour market is increasingly dependent on the possession of valued skills and work experience**. If young people are out of work for long periods **and don't acquire marketable skills**, this may limit their future opportunities and have detrimental effects on their material and social wellbeing throughout their adult lives.

Consequently, there has been growing interest in NEET youth among policy makers, social service providers, and researchers over recent years. One of the valuable outcomes of this project is that it has developed methods to identify and profile NEET youth in the IDI, which can now be used in other research projects either for local groups such as iwi and community organisations or for nationally focused research. The information also has potentially important operational benefits for these organisations in that it can help service providers and regional funders in making decisions about resource allocation.

How we measure NEET in the HLFS

Responding to the need for better information on this group, Stats NZ started producing an official NEET measure from the Household Labour Force Survey (HLFS) in 2011. This identified people aged 15–24 years who were not in employment, education, or training during the survey reference week (Statistics NZ, 2011). The survey produces regular quarterly estimates of the NEET population at national and regional levels, and allows analysis of their demographic, educational, and labour market characteristics.

The HLFS measure is a point-in-time estimate that shows whether people were NEET at the time they were surveyed. It does not tell us about the duration of their NEET spell or whether they have had recurring NEET spells (unless these occur within the period of up to two years that they are in the HLFS sample). Because it is a sample survey, there are limits to the extent to which the NEET population can be broken down by other variables such as demographic characteristics and location.

Options for measuring NEET in the IDI

The administrative data in the IDI enables us to produce different NEET measures. These should not be seen as substitutes for the official HLFS measure but complementary measures that allow us to look at different aspects of the NEET population. Just as the HLFS data has some limitations due to the sample size and scope of the survey, the IDI data has some limitations in terms of how **well people's records are linked across different datasets** and the quality and coverage of the data ([see appendix 1](#) for more information). However, the advantage of the IDI is that it allows us to

track people's participation in education and employment over time, so we can tell how long their NEET spells have been and whether they've experienced recurring spells. By linking to other data sources, the IDI also allows us to analyse a much wider range of information about NEET youth, their backgrounds, interactions with government agencies, and outcomes across a range of domains.

The IDI provides us with a number of different possibilities for identifying NEET youth during a given year. These include identifying those who have had any period of being NEET during the year; those who have been NEET for a certain duration or a certain number of months in the year; those who have spent more time in the year being NEET than in other activities such as education or employment; and those who have been NEET for the entire year (Earle, 2016).

The main activity measure

For this project, we decided to use a main activity measure. This means that our population of interest is all those people aged 15–24 during the 2015 calendar year who spent more months in that year being NEET than they did in either education, employment, in custody, or overseas (we have used the 2015 year because this is the most recent year for which we have complete data across all relevant collections in the IDI).

In this indicator, training is included under either education or employment, depending on the type of training (ie on-the-job or at an educational or training institute).

This measure is well suited to identifying vulnerable youth as it focuses on those who have experienced prolonged or repeated NEET spells. It includes not only those who spend continuous periods of several months being NEET, but also those who may have some short-term jobs during the year interspersed with longer periods of joblessness – a fairly common situation for young people who sometimes take casual or other temporary jobs when unable to find permanent employment.

The people captured by this measure are those who are more likely to be of concern for social service providers and policy makers as their opportunities for finding stable employment may be more limited and they may be more likely to experience poor outcomes in the future. On the other hand it excludes those who have relatively brief periods of being NEET as they transition from education into the workforce, or as they move between jobs – many of whom are unlikely to suffer long-term detrimental effects from their short NEET spells.

While most of this report is based on the main activity indicator, we also developed a secondary NEET measure that shows whether people were NEET for six or more months (not necessarily consecutively) in 2015.

[See Young people of concern](#) and [Employment and income](#), which used the measure 'NEET for six or more months'.

[See NEET](#) for more information on the NEET indicators.

What we knew about being NEET before this project

Before we started this research project, our knowledge about NEET youth was based on national and regional snapshots from the HLFS and a small number of research reports using longitudinal data from the Survey of Family, Income and Employment (SoFIE) and the IDI (see sections below).

HLFS provides a useful snapshot

The HLFS shows that New Zealand's official NEET rate has averaged 12 percent since 2004, peaking at just over 15 percent in the first quarters of 2010 and 2011 (NEET rates always peak in the first quarter of the year, when many young people are in transition from study to work or waiting for the academic year to start). NEET rates are much higher for 20–24-year-olds than for 15–19-year-olds, as many of the younger age group are still in school. Between 2004 and 2016, the NEET rate averaged 15.6 percent for 20–24-year-olds and 8.4 percent for 15–19-year-olds.

The HLFS shows considerable regional variation in NEET rates. The average rate for 15–24-year-olds between 2004 and 2016 ranged from 8.4 percent in Otago to 19.4 percent in Northland. Regional variations clearly reflect differences in labour market conditions in the regions, but may also be related to the presence of educational institutions. The low rate for Otago is influenced by the fact that large numbers of young people in the region are studying at Otago University.

While the HLFS provides a useful snapshot of NEET youth, other data sources provide a longitudinal picture.

SoFIE can provide longitudinal data

A study by MBIE (2013) based on data from the Survey of Family, Income and Employment (SoFIE), followed respondents for up to six years, and found that short NEET spells were very common among young people, with three-quarters having at least one NEET spell of a week or longer while aged from 16 to 21.

Long-term NEET spells were much less common, with around 3 in 10 experiencing spells of six months or longer at some stage between the ages of 16–21. The median NEET spell for this group was 1.2 years. Those at higher risk of having long-term NEET spells included early school leavers, **teenage parents, Māori and Pacific youth**, and those from lower socio-economic backgrounds.

The study found that people who had long-term NEET spells were increasingly likely to be engaged in work or education in subsequent years, although still less likely to do so than people who had avoided long-term NEET spells.

NEET youth **don't** necessarily have poor educational outcomes

A Ministry of Education study (Earle, 2016) used the IDI to explore the education and employment **experiences of a cohort of young people born in 1991. It supported MBIE's finding that short NEET spells are relatively common for young people, and only partly related to educational participation and achievement.**

However, it did find that the likelihood of having long-term NEET spells or being predominantly NEET over the course of a year was more strongly related to educational participation and achievement. This relationship was particularly strong for those who were NEET over the course of the entire year.

However, the study also found that while people with higher educational participation and achievement are less likely to be NEET they nonetheless make up a significant minority of the NEET population, suggesting that we should avoid stereotyping NEET youth as people with poor educational outcomes.

Early school leavers have poorer outcomes

Treasury used SoFIE data in combination with administrative data in the IDI to look at economic outcomes for people who have had long-term NEET spells (Samoilenko & Carter, 2015). They found that those who experienced a long-term spell of NEET in their youth experienced poorer outcomes than others after the first two years – being less likely to be employed, more likely to be inactive, and more likely to be receiving a benefit.

These differences in outcomes reduced after four years, with no significant differences in rates of employment or post-school study. However, this depended on when the first NEET spell occurred. Those who left school between the ages of 15 and 17 had particularly poor economic outcomes after four years, while those who experienced their first NEET spell when aged 20 to 24 experienced no significant differences with their peers after four years.

Social service providers to benefit from new research

Otago youth not in employment, education, or training (NEET) adds to the growing body of research on NEET youth in New Zealand by focusing in detail on a local NEET population and examining how they fare across a range of social and economic indicators.

This report begins with some background on the Otago region and its youth population before looking in more detail at those who were mainly NEET during the course of 2015. A demographic and geographic profile of this group is followed by descriptive analysis of aspects of their education, housing, health, employment, and income.

The distinctive features of this report are its focus on a regional population (with national-level comparisons) and on data which will be of help to social service providers in targeting interventions and programs aimed to offset the risk associated with long-term or recurring NEET spells.

Otago region – data from non-IDI sources

To provide context for the analysis of IDI data, we start with a picture of the Otago region using non-IDI data sources from Stats NZ.

The data relates to the 2015 year except where otherwise stated. This is not necessarily the most recent data available but 2015 is the year we focus on throughout the report as it is the most recent year for which we have complete data across all relevant collections in the IDI.

Population

Stats NZ population estimates for June 2015 show that the Otago region was home to 215,000 **people or 4.7 percent of New Zealand's population. Most of the region's population lives in Dunedin city – 58 percent in 2015. The other districts of Waitaki, Central Otago, Queenstown Lakes, and Clutha each accounted for between 8 percent and 15 percent of the region's population.**

Young adults were **over-represented in Otago's population, and particularly in Dunedin. In 2015, 17 percent of the region's population and 21 percent of Dunedin's population** were aged 15–24 years, compared with 14 percent nationally. This is likely to reflect the large number of people who come to Dunedin for tertiary study, particularly at University of Otago. The 2013 Census showed **that 67 percent of Otago's 15–24-year-olds and 75 percent of those in Dunedin were students,** compared with 54 percent nationally.

This is also reflected in the geographical distribution of young adults in the region, with the most populous areas being those around the university, including the Otago University area unit and those of North Dunedin, Stuart Street-Frederick Street, North-East Valley, and High Street-Stuart Street.

Otago's population is growing at a slower rate than the national population. In the 10 years to 2015, the regional population grew by 8 percent, compared with growth of 10 percent across the whole country. Stats NZ population projections show that between 2013 and 2028, Otago's population is expected to grow by around 10 percent, compared with 16 percent nationally.

Most of the growth in recent years was in the Queenstown-Lakes District, which grew by 34 percent between 2006 and 2015, compared with just 3 percent in Dunedin. This is expected to continue over the coming years with Queenstown-Lakes accounting for over half of **the region's** projected population growth to 2028. This includes almost all the projected growth in the 15–24-year-old population, with most of the other districts in the region – with the exception of Central Otago – expected to experience falls in this age group.

Economy

Regional Gross Domestic Product (GDP) data showed that in the year to March 2015 the Otago **region accounted for 4.2 percent of New Zealand's GDP – lower than its 4.7 percent share of the national population. The region's per capita GDP was 10 percent lower than nationally at \$47,670.** Between 2010 and 2015, GDP per capita grew by 16 percent in the Otago region, compared with 18 percent nationally.

By comparison with the national picture, greater shares of Otago's GDP came from primary industries, accommodation and food services, and education and training. Conversely, smaller shares came from manufacturing, financial and insurance services, professional and support services, and wholesaling.

The pattern of economic activity varied across the five territorial authorities within the region. Education and health were the most important industries in Dunedin, livestock and grain farming in Clutha and Waitaki, horticulture and viticulture in Central Otago, and tourism-related industries in the Queenstown-Lakes District (MBIE 2016, pp 76–79).

Business demography statistics showed that business growth was slightly faster in Otago than nationally, with a 7 percent growth in the number of business units between February 2010 and 2015, compared with 5 percent nationally. However, this was not reflected in employment growth, where the number of employees grew at a slower rate than nationally – 6 percent compared with 8 percent across the country. This may reflect the fact that most of the growth in business units in the region was in service industries where sole proprietors or small workforces are more common, including: rental, hiring and real estate services; professional, scientific and technical services; and financial and insurance services.

Employment

In recent years, Otago's employment rate was slightly higher than the national rate. HLFS data averaged across the four quarters of 2015 showed that the proportion of adults who were employed was 67 percent in the Otago region, compared with 65 percent nationally.

Conversely, Otago's unemployment rate was lower than the national rate in recent years. In 2015 the region had an average unemployment rate of 3.8 percent, compared with a national rate of 5.4 percent. The Otago unemployment rate fell from just under 5 percent between 2009 and 2013.

The 2015 HLFS showed that distribution of employment by industry in Otago was broadly similar to the national picture, with almost three-quarters of workers in 2015 employed in service industries, the largest of which were retail trade and accommodation (19 percent), health care and **social assistance (13 percent), and education and training (10 percent)**. Ten percent of the region's workforce were employed in construction and a further 10 percent in manufacturing and utility industries.

The most employment growth between 2010 and 2015 was in health care and social assistance; retail trade and accommodation; arts, recreation and other services; and professional, scientific and technical services. Over the same period there were employment falls in a number of industries including education and training, and primary industries.

Among 15 to 24-year-olds, those living in Otago had lower labour force participation and employment rates than the national rates, but they also had lower unemployment rates. This may **partly be a reflection of the relatively large proportions of students among Otago's youth population**. In 2015 an average of 57 percent of Otago's 15–24-year-olds were in the labour force compared with 61 percent nationally. Eleven percent of the local youth labour force was unemployed, compared with just under 14 percent nationally.

Otago's youth population – results from IDI data

From this chapter onwards we use data from the IDI. This chapter provides a profile of the Otago youth population in 2015 as identified from IDI data sources. It describes the age, sex and ethnic breakdown of the region's 15–24 year-olds, and whereabouts in the region they lived.

[See The study population](#) for how we identified the youth population.

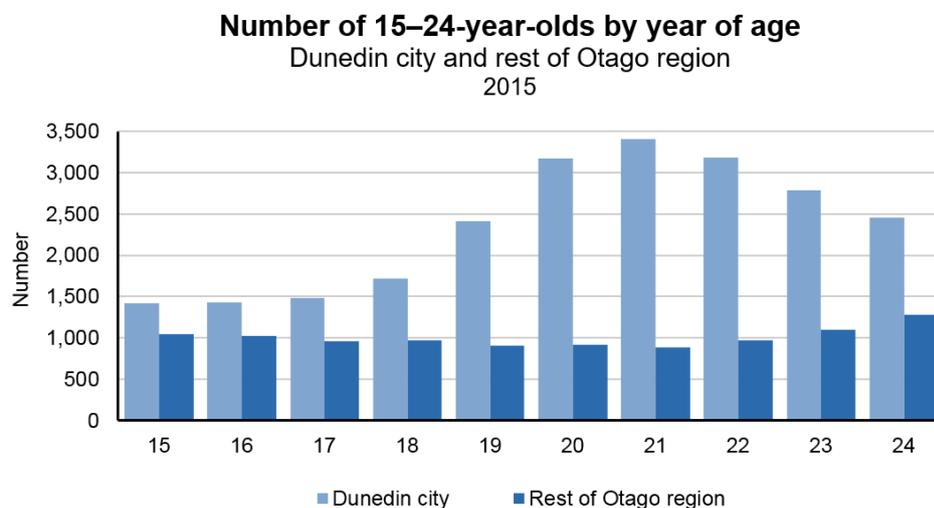
We used the address of longest duration in 2015 to determine locations. See [Location](#) for further detail.

University shapes age profile of region

In 2015, just over 33,500 New Zealand residents aged 15–24 lived in the Otago region. People in their twenties made up the majority of the youth population, with 20,140 aged 20–24 and 13,360 aged 15–19.

The preponderance of older youth reflects the importance of the University of Otago in shaping the demographic profile of the region's youth. This is shown in the contrasting age profiles of the youth population in Dunedin city and the rest of the Otago region (figure 1). In Dunedin, the population increased markedly between the ages of 18 and 21, when young people are most likely to be in tertiary education, and fell after the age of 21. By contrast, in the rest of the region the population dipped slightly between the ages of 18 and 21 and increased at older ages.

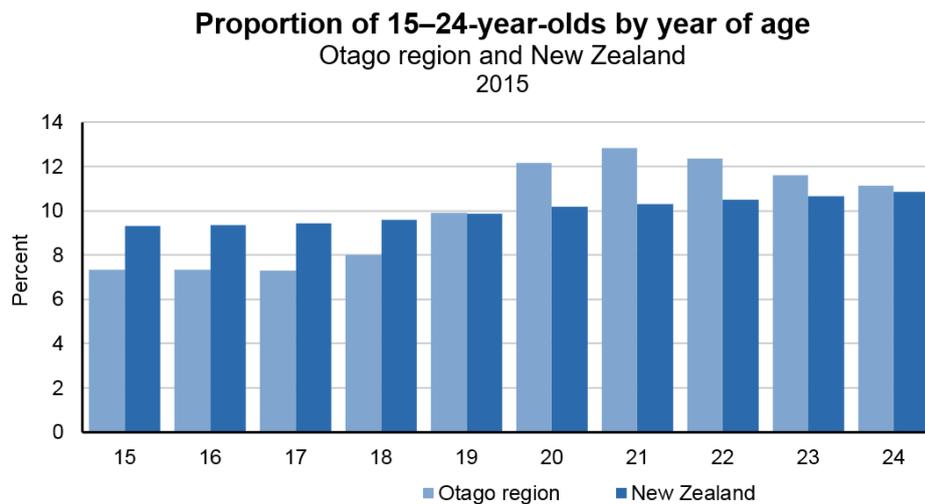
Figure 1



Source: Stats NZ with IDI data

Because the Dunedin population dominated the Otago region, the regional youth population also had quite a different profile from the national youth population. Figure 2 shows that, by comparison with New Zealand as a whole, smaller proportions of Otago's youth population were aged between 15 and 18, and larger proportions aged 20 and over. In all, 60 percent of Otago's youth population was aged 20–24, compared with 52 percent of the national youth population.

Figure 2



Source: Stats NZ with IDI data

Balance of sexes fairly even

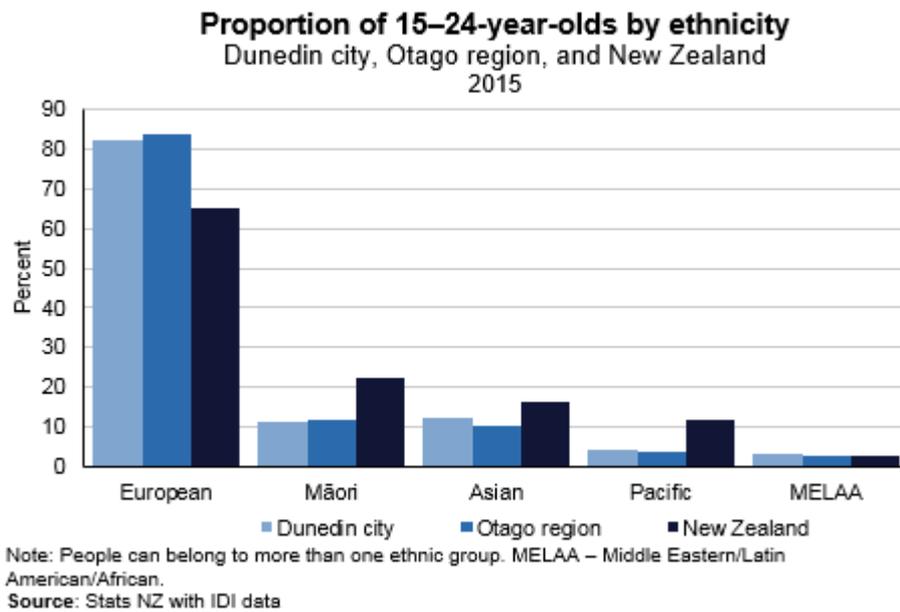
The balance between the sexes in Otago’s youth population was fairly even, with a slightly higher proportion of males than females in the region (51 percent against 49 percent). This was more pronounced at older ages, with males making up 54 percent of the region’s 24-year-olds.

Youth population less ethnically diverse than nationally

The youth populations of both Dunedin and the Otago region were less ethnically diverse than nationally. Over 80 percent of 15–24-year-olds in both Dunedin and Otago were of European ethnicity, compared with 65 percent of the New Zealand youth population. Just over 1 in 10 young adults in Dunedin and Otago were of Māori ethnicity, and similar proportions of Asian ethnicity. Only four percent of young people in both the city and region were of Pacific ethnicity – less than half the national proportion.

There were some age variations in the ethnic makeup of the local youth populations. People in their twenties were less likely than those in their teens to be of European or Māori ethnicity and more likely to be Asian or in the combined grouping of Middle-Eastern, Latin American, and African. This may reflect differences in the ethnicity of people coming to the region for tertiary study.

Figure 3



Most Otago youth live in Dunedin city

Most of the Otago region’s young people (70 percent) live in the Dunedin city territorial authority area. In both Dunedin city and Queenstown-Lakes district, 20–24-year-olds predominated over 15–19-year-olds, making up around 64 percent of the local youth populations (see table 1).

In Dunedin city this reflected the number of young people in tertiary education – particularly at the University of Otago – while at Queenstown-Lakes it is likely to reflect the number of young people working in the hospitality and tourism industries.

The more rural districts of Waitaki, Clutha, and Central Otago were home to more 15–19-year-olds than 20–24-year-olds. There were also more males than females in these districts, whereas there was a more even gender balance in Dunedin city and Queenstown Lakes.

Table 1

15–24-year-olds by age group, Otago territorial authorities, ⁽¹⁾ 2015						
Territorial authority ⁽¹⁾	Age group (years)					
	15–19		20–24		All (15–24)	
	Count	Percent	Count	Percent	Count	Percent
Dunedin city	8,475	63.4	15,000	74.5	23,478	70.1
Queenstown-Lakes district	1,407	10.5	2,508	12.5	3,915	11.7
Waitaki district	1,296	9.7	924	4.6	2,220	6.6
Clutha district	1,185	8.9	954	4.7	2,139	6.4
Central Otago district	999	7.5	753	3.7	1,755	5.2
Total Otago region	13,365	100.0	20,142	100.0	33,507	100.0

1. Location is determined by address of longest duration in 2015. [See Location](#) for further detail.
Note: Due to rounding, individual figures may not sum to stated totals.
Source: Stats NZ with IDI data

Table 2 shows the area units in Otago with the greatest numbers of young people aged 15–24. The most populous area units were those which were home to large numbers of university students – Otago University, North Dunedin, Stuart St–Frederick St, North East Valley, and High St–Stuart St. These areas also have many more 20–24-year-olds than 15–19-year-olds.

The same is true of Queenstown area units such as Queenstown Hill and Queenstown Bay. On the other hand 15–19-year-olds tend to predominate in smaller towns and rural areas.

Table 2

15–24-year-olds by age group , selected ⁽¹⁾ Otago area units, ⁽²⁾ 2015						
Area unit ⁽²⁾	Age group (years)					
	15–19		20–24		All (15–24)	
	Count	Percent	Count	Percent	Count	Percent
Otago University	645	4.8	2,925	14.5	3,570	10.7
North Dunedin	216	1.6	2,067	10.3	2,280	6.8
Stuart St-Frederick St	306	2.3	1,476	7.3	1,779	5.3
North East Valley	321	2.4	1,203	6.0	1,527	4.6
High St-Stuart St	108	0.8	627	3.1	735	2.2
Wanaka	363	2.7	363	1.8	723	2.2
Queenstown Hill	129	1.0	552	2.7	681	2.0
Caversham	270	2.0	390	1.9	660	2.0
Queenstown Bay	54	0.4	519	2.6	573	1.7
Sunshine Bay	129	1.0	417	2.1	549	1.6
Balclutha	270	2.0	246	1.2	516	1.5
Alexandra	288	2.2	216	1.1	507	1.5
Fernhill	93	0.7	411	2.0	504	1.5
St Clair	243	1.8	252	1.3	495	1.5
Vauxhall	267	2.0	225	1.1	489	1.5
Clutha	249	1.9	216	1.1	462	1.4
Mornington	207	1.5	255	1.3	462	1.4
Oamaru North	267	2.0	189	0.9	456	1.4
Brockville	264	2.0	186	0.9	447	1.3
Dunstan	261	2.0	177	0.9	438	1.3
Mosgjel East	240	1.8	192	1.0	432	1.3
Cromwell	210	1.6	213	1.1	423	1.3
Pine Hill	189	1.4	225	1.1	411	1.2
Wakari	213	1.6	195	1.0	408	1.2
Musselburgh	213	1.6	189	0.9	399	1.2

1. Area units with the largest populations of 15–24-year-olds.
2. Location is determined by address of longest duration in 2015. [See Location](#) for further detail.
Note: Due to rounding, individual figures may not sum to stated totals.
Source: Stats NZ with IDI data

The NEET population

This chapter looks at the main activity of young people in the Otago region and nationally, by locality within the Otago region, and by age and sex. It also looks at two sub-groups of particular interest: young mothers and young people ‘of concern’ who have already experienced multiple poor outcomes including being NEET for six months or more in 2015.

In this chapter we break down the 15–24-year-old population according to their main activity in 2015. This is the activity in which they spent the most months during that year – either in education or employment or being NEET (training is included under either education or employment, depending on the type of training).

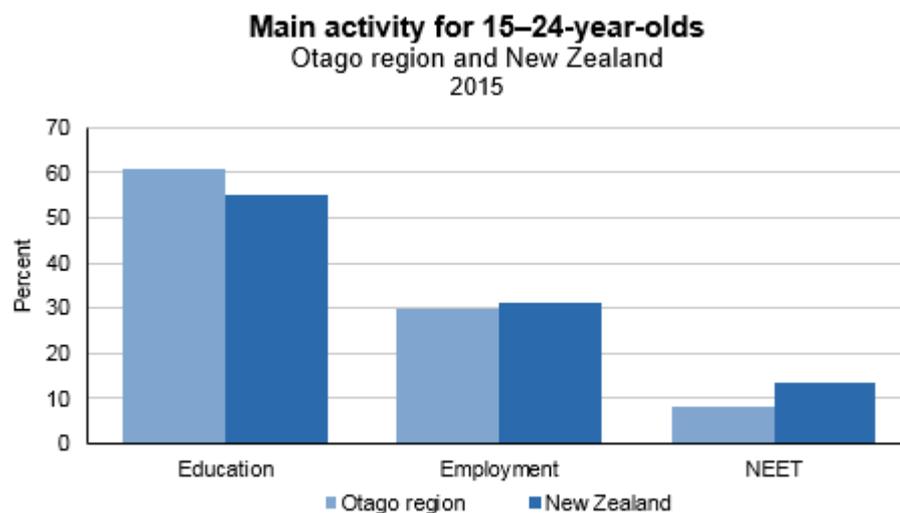
For more detail on this definition, see [NEET as main activity](#) (as used in figures 4–10).

Relatively low NEET rate in Otago

In 2015, 61 percent of Otago’s 15–24-year-olds (20,390 people) were mainly engaged in education and 30 percent in employment (10,020 people).

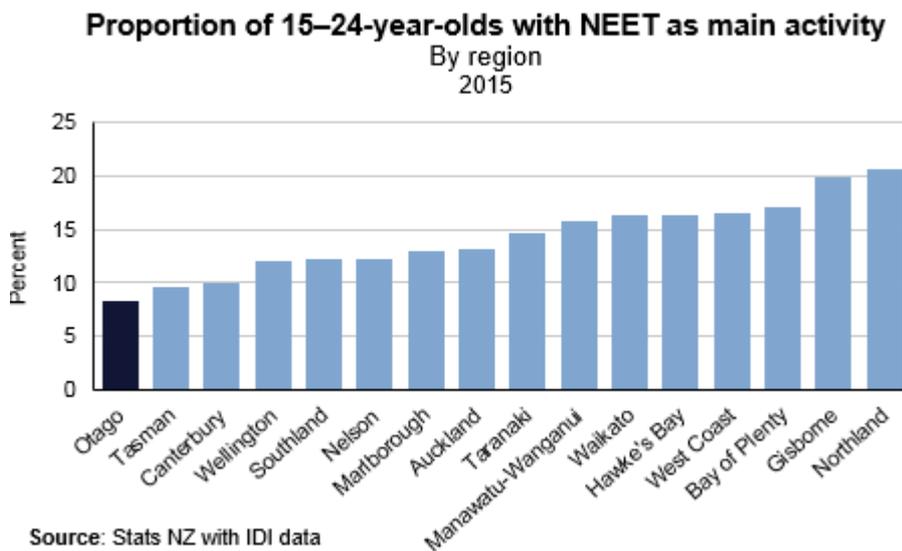
Those who were not in education or employment (2,800 people) made up 8.4 percent of the region’s youth population. This was considerably lower than the national figure of 13.5 percent, reflecting the relatively large proportions of the region’s young people involved in education.

Figure 4



Otago had the lowest proportion of NEET youth of any region. Only two other regions had NEET rates below 10 percent (Tasman and Canterbury), while the regional figures ranged up to almost 21 percent in Northland. Otago’s low NEET rate largely reflects the fact that of all regions it had the highest proportion of young people whose main activity was education.

Figure 5



The main activity measure from the IDI gave higher NEET numbers and rates than the official NEET measure in the HLFS.

In 2015, annual average figures from the HLFS counted 2,400 NEET youth and a NEET rate of 7.1 percent in the Otago region (compared with 2,800 and 8.4 percent from the main activity measure). Nationally, the HLFS counted 73,500 NEET youth, giving a NEET rate of 11.3 percent (compared with 87,650 and 13.5 percent from the main activity measure).

Where NEET young people live

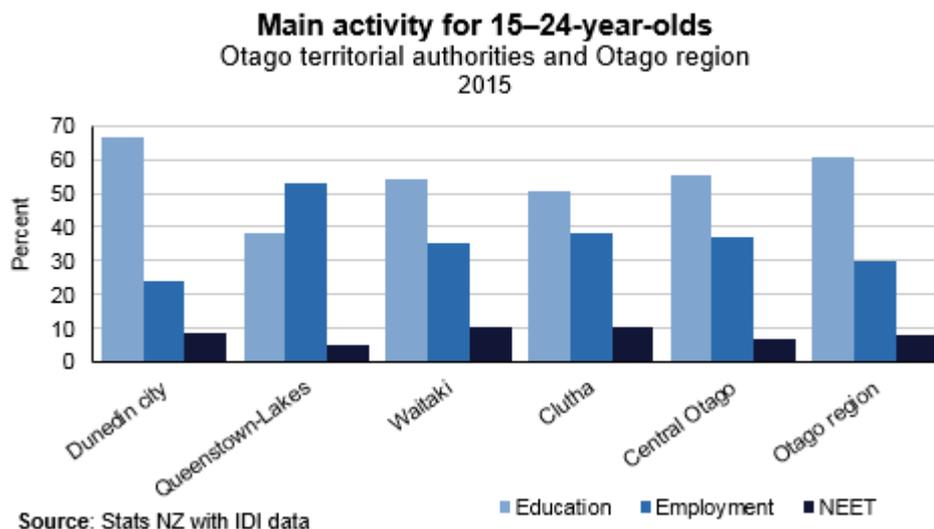
In looking at where young NEET people live it is useful to consider both numbers and rates. If a service provider such as MMS knows the areas with the largest numbers of NEET youth, it will help them target their services.

However, in some areas the presence of large numbers of NEET youth may simply reflect the fact that there is a large youth population, and the proportion of those young people who are NEET may be relatively low. In areas with smaller numbers but higher proportions of NEET youth, this may indicate there is more chance of becoming NEET due to social or economic circumstances, so young people in these areas may be of particular concern. For organisations such as MMS, therefore, the NEET rate in local areas is most important, providing the areas meet a basic threshold in terms of numbers.

There is considerable variation within the Otago region in patterns of activity among young people. In 2015, education was the most common main activity in most territorial authority areas (with the exceptions of Queenstown-Lakes), but it was more common in Dunedin city than in other areas. The proportion of young people who were predominantly NEET during the year was lowest in Queenstown-Lakes (5.4 percent) and highest in Waitaki and Clutha (10.7 percent). The Dunedin NEET rate was 8.5 percent.

These differences highlight diversity within the region which is significant for service providers and funders, as their resources tend to be allocated at localised rather than regional levels.

Figure 6



Although Dunedin did not have a high proportion of NEET youth, its population size meant that it had by far the largest number of NEET youth in the region – just over 2,000. The numbers in other districts ranged from 120 in Central Otago to around 240 in Waitaki.

The area units in the Otago region showed considerable variation in main activity patterns. In the areas with the greatest numbers of 15–24-year-olds (table 3), education was the main activity in most areas. The proportion of young people involved in education was highest in a number of areas around Otago University – the Otago University area unit, along with North Dunedin, Stuart St-Frederick St, and North-East Valley.

The highest NEET rates among the more highly populated area units in Dunedin were in Caversham (17.4 percent), Brockville (16.8), Fernhill (13.7), and Mornington (13.6).

A number of smaller area units not shown in table 3 had high proportions of NEET youth in their populations including Corstorphine West (28 percent), South Dunedin (26), St Kilda Central (24), Tapanui (22), and Kaitangata (19).

Areas with a large number of students tended to have a relatively high number of NEETs but relatively low NEET rates – including Otago University (3.1 percent), Stuart St-Frederick St (4.0 percent), and North Dunedin (4.1 percent).

Table 3

Main activity ⁽¹⁾ for 15–24-year-olds, selected ⁽²⁾ Otago area units, ⁽³⁾ 2015							
Area unit ⁽³⁾	Population aged 15-24	Main activity ⁽¹⁾					
		Education		Employment		NEET	
		Count	Percent	Count	Percent	Count	Percent
Otago University	3,570	2,931	82.1	513	14.4	111	3.1
North Dunedin	2,283	1,758	77.0	414	18.1	93	4.1
Stuart St-Frederick St	1,779	1,371	77.1	327	18.4	72	4.0
North East Valley	1,524	1,044	68.5	330	21.7	144	9.4
High St-Stuart St	735	414	56.3	261	35.5	54	7.3
Wanaka	723	348	48.1	303	41.9	42	5.8
Queenstown Hill	681	135	19.8	486	71.4	39	5.7
Caversham	657	297	45.2	243	37.0	114	17.4
Queenstown Bay	573	39	6.8	477	83.2	36	6.3
Sunshine Bay	546	183	33.5	318	58.2	27	4.9
Balclutha	516	234	45.3	219	42.4	63	12.2
Fernhill	504	228	45.2	204	40.5	69	13.7
Alexandra	504	267	53.0	198	39.3	39	7.7
St Clair	495	285	57.6	147	29.7	63	12.7
Vauxhall	489	321	65.6	123	25.2	45	9.2
Mornington	462	255	55.2	141	30.5	63	13.6
Clutha	462	243	52.6	195	42.2	27	5.8
Oamaru North	456	240	52.6	156	34.2	57	12.5
Brockville	447	273	61.1	96	21.5	75	16.8
Dunstan	438	264	60.3	141	32.2	27	6.2

1. Main activity in 2015. See [NEET](#) for further detail.
2. Area units with the largest populations of 15-24-year-olds.
3. Location is determined by address of longest duration in 2015. See [Location](#) for further detail.
Note: Due to rounding, individual figures may not sum to stated totals.
Source: Stats NZ with IDI data

Areas with the highest proportions of NEET youth are not necessarily those where the largest numbers of NEET youth are to be found. In areas where larger numbers of young people live, there tend to be relatively large numbers of NEET youth even if they are a relatively small proportion of the area's youth population.

For instance, the area with the greatest number of NEET youth was North East Valley, with 144, although its NEET rate of 9.4 percent was well below that of some other areas. North Dunedin and Otago University also had relatively large numbers of NEET youth (111 and 93 respectively) despite having among the lowest NEET rates in the region. On the other hand, several areas such as Caversham (114), South Dunedin (81), Brockville (75), and Mosgiel East (72), had relatively large numbers and proportions of NEET youth.

Age has significant influence on main activity patterns

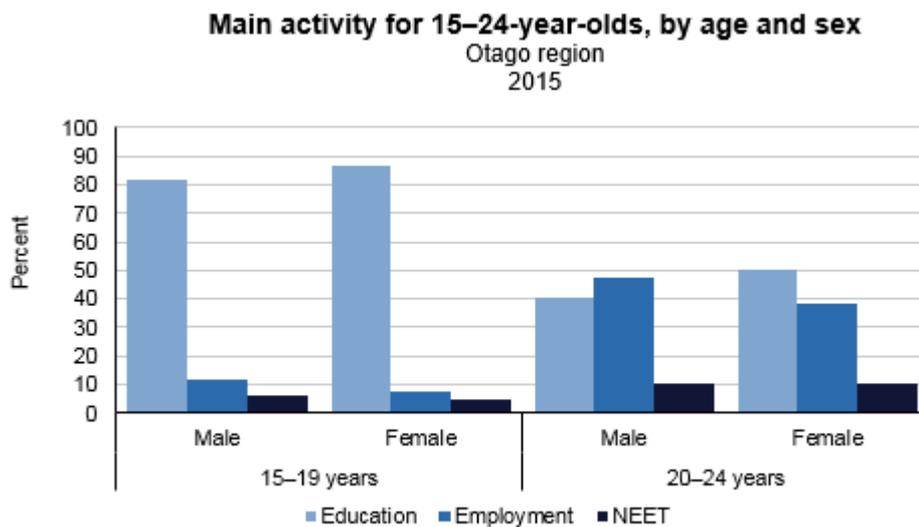
Those in their teens were more likely to be involved in education – including many who are still at school – while employment is the more common activity among those in their twenties.

In the Otago region in 2015, 84 percent of people aged 15–19 years were mainly engaged in education, while among those aged 20–24, the proportion almost halved to 45 percent. In both age groups, females were slightly more likely than males to be mainly engaged in education.

Employment was the main activity for around 10 percent of 15–19-year-olds and 43 percent of 20–24-year-olds. Employment was slightly more common among males than females.

NEET was the main activity for just under 6 percent of the region’s 15–19-year-olds. Those aged 20–24 were much more likely to have NEET as their main activity, at just over 10 percent.

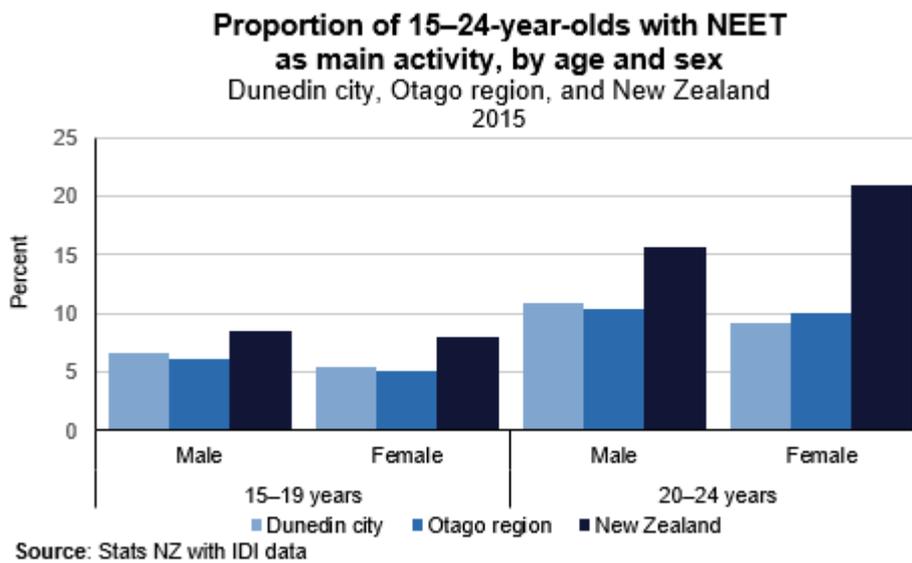
Figure 7



Source: Stats NZ with IDI data

In both Dunedin and the Otago region, having NEET as a main activity was less common than it was nationally, for both sexes and for both 15–19 and 20–24-year-olds. Generally the Otago and Dunedin rates were around a third lower than the national rates, but the gap was more pronounced among young women aged 20–24, who had a NEET rate less than half the national figure.

Figure 8



Most young mothers are NEET

One group of particular interest to service providers such as MMS is [young mothers](#). Young mothers' parental responsibilities may prevent them from participating in education or employment, particularly if there is a lack of suitable and affordable childcare services available. This is particularly the case for teenage mothers, who may be bringing up children without the help of a partner and in some cases are unable to complete their education because of childcare responsibilities (although service providers may offer programmes that provide both foundation education for mothers and care for their children at the same time).

In 2015, there was a relatively small number of teenage mothers (aged 15–19) in the Otago region – around 90.

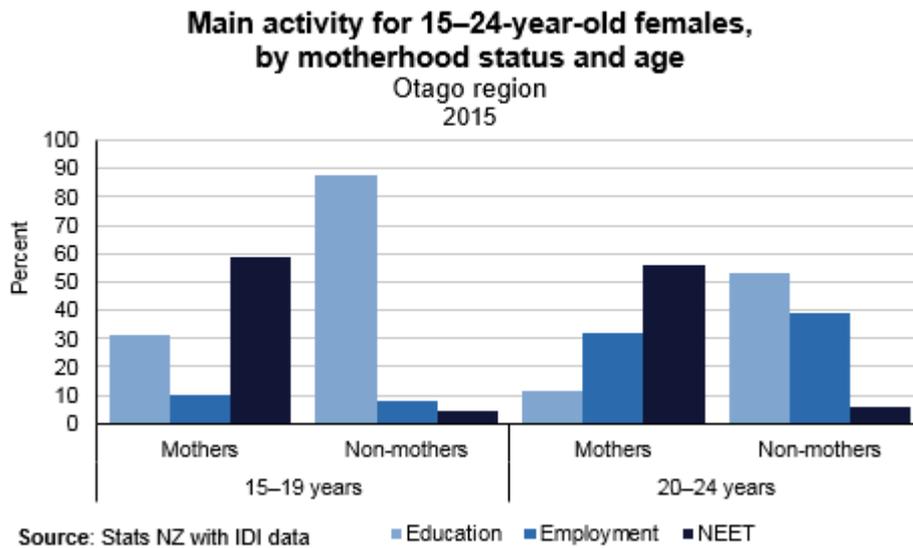
Figure 9 shows the majority of the teenage mothers in the Otago region (59 percent) were predominantly NEET during the year, with 31 percent in education and 10 percent in employment. Among non-mothers in the same age group, the vast majority (88 percent) were in education, with just 4 percent being NEET.

There were around 800 mothers aged 20–24 years in Otago. They were also most likely to be NEET – 56 percent compared with just 6 percent of non-mothers in the same age group. Around a third (32 percent) were employed and just 12 percent were in education.

Although both nationally and in Otago the NEET rates for young mothers are particularly high, it should not be assumed that this necessarily indicates hardship or vulnerability for all women in this category. Many will have the support of families or partners and be able to return to the workforce or education as their children get older. It should also be noted that, while not in paid employment, the unpaid work of raising children is a socially and economically valuable activity.

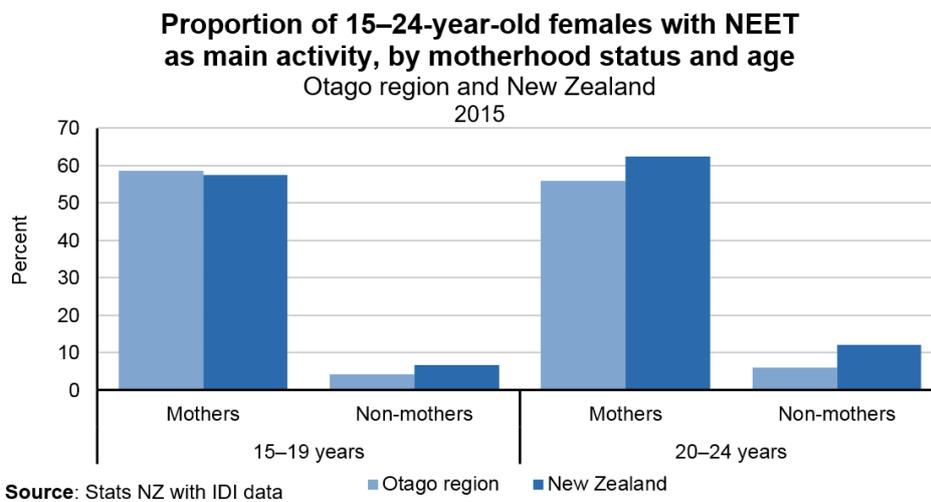
[See Young mothers](#) for definitions used in figures 9 and 10.

Figure 9



The very high proportion of NEETs among young mothers in Otago mirrored the national picture. The Otago rate was almost the same as nationally in the 15–19-year age group and slightly lower in the 20–24 age group. Among non-mothers, the Otago rate was lower than nationally in both age groups.

Figure 10



Some young people of greater concern due to multiple poor outcomes

Using information from the IDI it is possible to identify those young people who are of concern in that they have already experienced multiple poor outcomes. We identified this group as young people who:

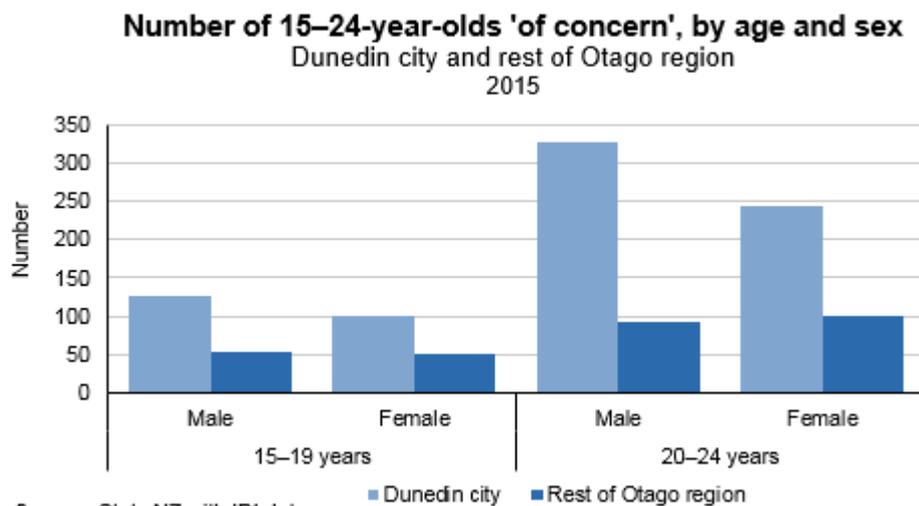
- were [NEET for six months or more](#) in 2015
- had no [NCEA level 2 qualifications](#)
- had at least one [behavioural intervention](#) at school and/or had ever used mental health services or treatments.

We report on each of these indicators in more detail during subsequent chapters.

In total, around 1,090 young people aged 15–24 were in the ‘of concern’ category in the Otago region in 2015. They predominantly lived in Dunedin City and were aged 20–24 (see figure 11). There were more males than females in this category, particularly in the 20–24-year age group in Dunedin city.

This group represented 3.3 percent of the region’s 15–24-year-olds – a lower proportion than the 5 percent nationally who were in the ‘of concern’ category.

Figure 11



Although they made up a relatively small proportion of the youth population, those in the ‘of concern’ category made up a substantial proportion of those with NEET as a main activity.

In Otago, 39 percent of young people who had NEET as a main activity in 2015 were NEET for six months or more, had no level 2 qualifications, and had at least one behavioural intervention at school and/or had accessed mental health services or treatments.

Nationally, the figure was slightly lower at 37 percent.

Education

This chapter compares NEET youth with others on three indicators related to education and skills:

- whether they had experienced behavioural interventions at secondary school
- whether they had achieved NCEA level 2 or higher
- whether they had acquired a restricted drivers licence or higher.

NEET youth more likely to experience behavioural interventions

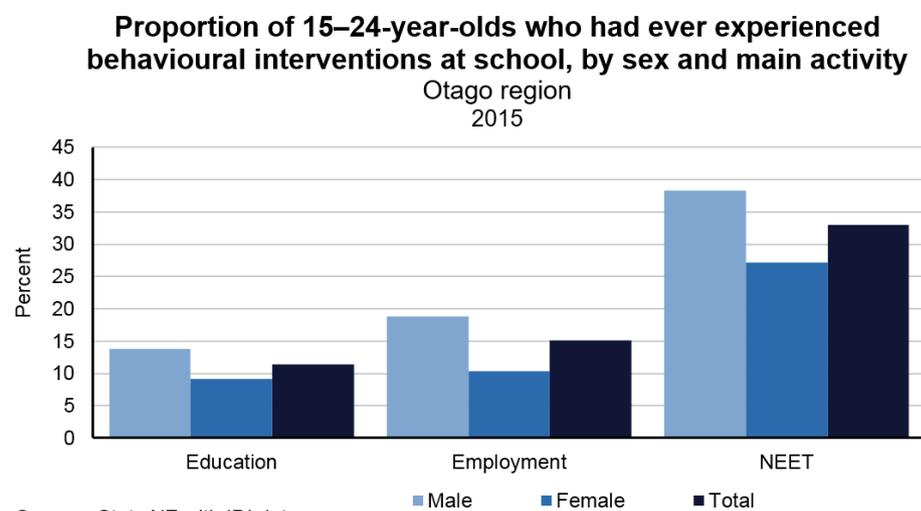
Having long-term or recurrent NEET spells is often associated with poor participation and engagement in schooling (Earle, 2016). One indicator of this is whether people have ever been subject to behavioural interventions at secondary school. These are suspensions, stand-downs, and truancy interventions.

[See Behavioural interventions](#) for more information relating to figures 12 and 13.

[See NEET as main activity](#) for definition relating to figures 12–18.

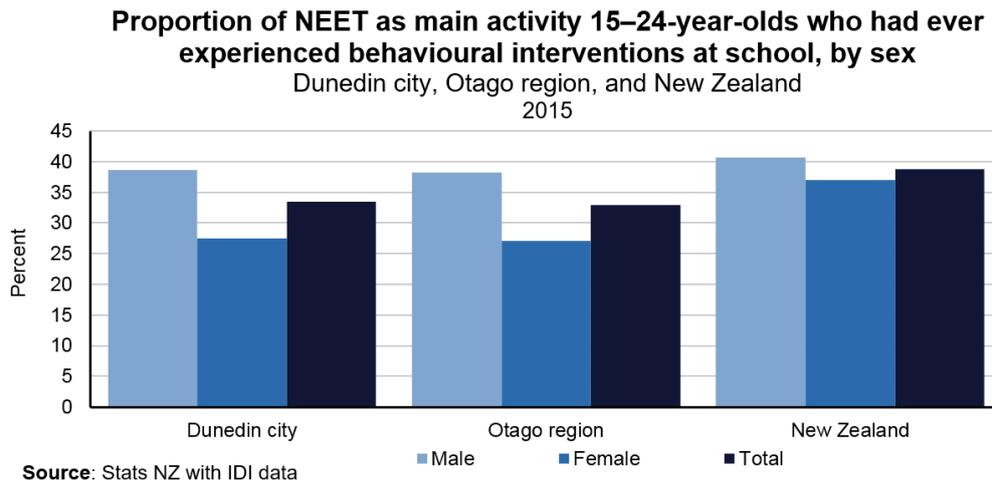
Figure 12 shows that of those youth in the Otago region who were predominantly NEET in 2015, 33 percent had experienced behavioural interventions at some stage while at secondary school. This was considerably higher than the proportion for those whose main activity was employment (15 percent) or education (11 percent). For all these groups, males were more likely than females to have experienced interventions – in the case of the NEET group, the figures were 38 percent for males and 27 percent for females.

Figure 12



The proportion of NEET youth who had experienced interventions at secondary school was lower in Dunedin city and the Otago region than it was across the country – 33 percent locally compared with 39 percent nationally. The gap was more pronounced among females than males (see figure 13).

Figure 13



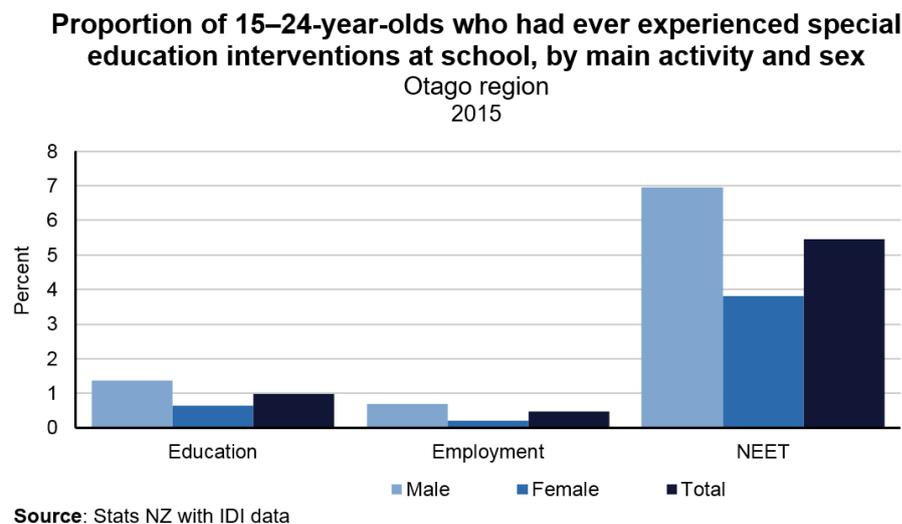
School students may also have special education interventions, which provide support and assistance for students with special education needs. These are relatively rare, but NEET youth are much more likely than others to have experienced these interventions in their secondary school years.

In the Otago region, five percent of 15–24-year-olds with NEET as a main activity in 2015 had received special education interventions in secondary school, compared with just one percent of those who were mainly in education and 0.5 percent of those who were mainly employed. This meant that the NEET group made up 37 percent of those who had received special education interventions.

As with behavioural interventions, special education interventions were more common among males than females. In the NEET group, 7 percent of males had received special education interventions, compared with 3.8 percent of females.

[See Special education interventions](#) for more information relating to figure 14.

Figure 14



NEET youth less likely to have NCEA level 2

Being NEET for long or recurring periods is also associated with low levels of attainment at school. NCEA level 2 is regarded as minimum qualification for many jobs and tertiary courses, and is widely used as an indicator of educational attainment. NEET youth are less likely than others to have achieved NCEA level 2 (or an equivalent NZQF qualification).

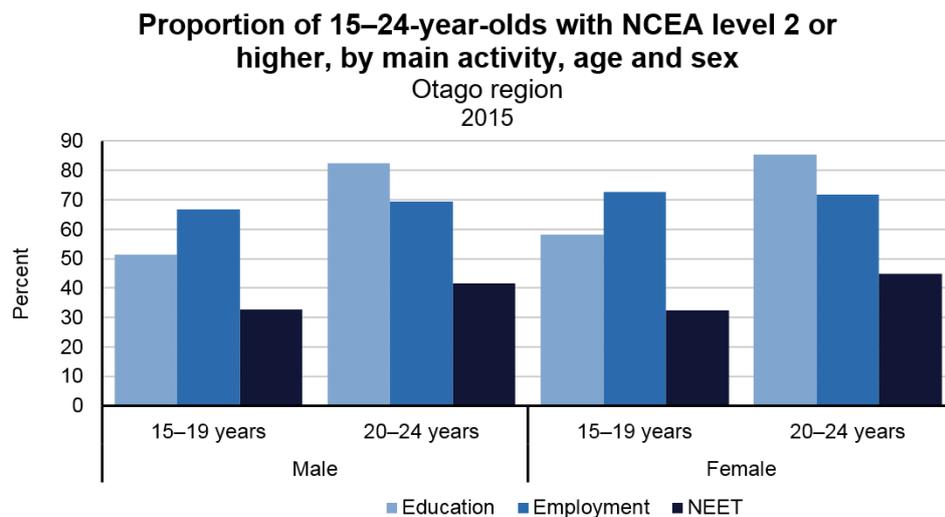
In the Otago region, of those 20–24-year-olds whose main activity was NEET in 2015, 43 percent had achieved NCEA level 2 or higher. By comparison, 84 percent of those whose main activity was education and 70 percent of those whose main activity was employment had qualified at NCEA level 2 or higher.

The figures were lower for 15–19-year-olds, some of whom would still be studying towards NCEA level 2 – 32 percent of NEET youth in this age group had NCEA level 2, compared with 69 percent of those in employment and 55 percent of those in education.

Among the NEET group, similar proportions of males and females in the 15–19-year age group had NCEA level 2, but in the 20–24 age group females were slightly more likely than males to have NCEA level 2 (45 percent compared with 42 percent).

[See Low qualifications](#) for more information relating to figures 15 and 16.

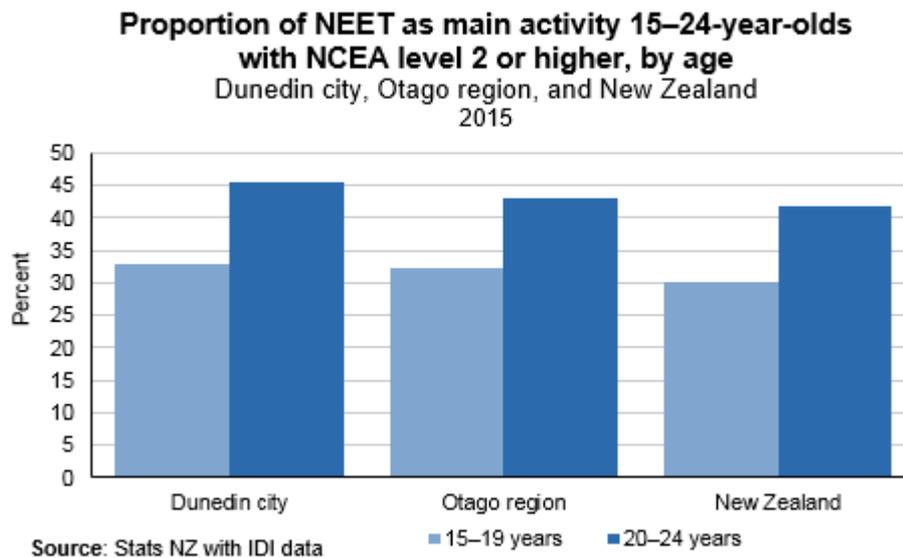
Figure 15



Source: Stats NZ with IDI data

The proportion of NEET youth with NCEA level 2 or higher was slightly higher in Dunedin city and the Otago region than it was nationally. This was the case in both the 15–19-year and 20–24-year age groups. This is a reflection of higher levels of attainment in the local youth population – of all 15–24-year-olds, 66 percent in the Otago region and 72 percent in Dunedin City had at least achieved NCEA level 2, compared with 57 percent nationally.

Figure 16



NEET youth are less likely than others to have a driver licence

Not having a driver's licence may limit people's employment opportunities by making it difficult to travel to work, or to look for work, and prevent them from taking jobs involving driving. It may also affect their social connectedness by limiting opportunities for socialising or connecting with family and friends. This in turn can have a negative effect on self-esteem or wellbeing.

Not having a licence may itself be an outcome of social circumstances if people do not have access to a vehicle to learn in, or family or friends who can help them learn to drive. On the other hand, having a licence may suggest the presence of a number of protective factors, including proximity of a supportive adult to provide driving lessons, availability of income or credit to cover the expense of getting a licence, and the mobility afforded by having access to a vehicle.

In this section we look at whether young people had a restricted licence or higher, as this allows them to drive independently and carry minors, and requires a practical driving test rather than only theory. The minimum age for getting a restricted licence is 16 and a half.

NEET youth are much less likely than others to have a driver licence. In the Otago region in 2015, 34 percent of 15–24-year-olds whose main activity was NEET during the year had a restricted licence or higher, compared with 49 percent of those who were in education and 71 percent of those who were in employment.

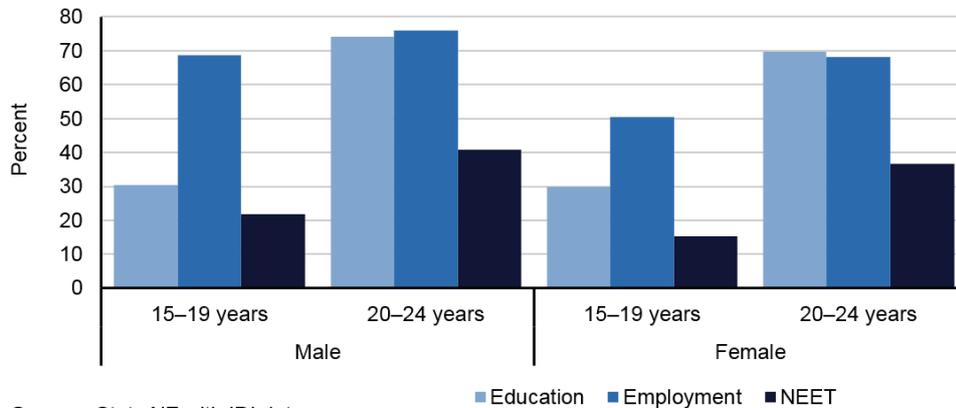
As figure 17 shows, those aged 20–24 years were much more likely to have licences than those aged 15–19. However, even in the 20–24-year age group, fewer than 4 in 10 NEET youth had restricted licences or higher, compared with around 7 in 10 of those who were in education or employment. Males were generally more likely than females to have licences regardless of main activity or age.

[See Driver licences](#) for more information relating to figures 17 and 18.

Figure 17

Proportion of 15–24-year-olds with restricted drivers licence or higher, by main activity, age and sex

Otago region
2015



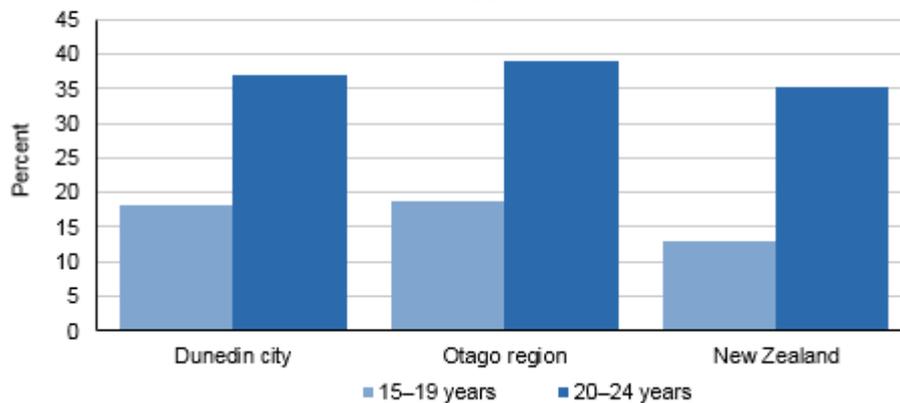
Source: Stats NZ with IDI data

Having a restricted licence or higher was more common among youth in the Otago region than it was nationally, regardless of main activity. In the case of NEET youth, 34 percent in the Otago region had a licence, compared with 29 percent nationally. The difference was greater in the 15–19-year age group than in the 20–24 age group. Licences were also slightly more common in the Otago region than in Dunedin city, which may reflect a greater reliance on private transport in smaller towns or rural areas.

Figure 18

Proportion of NEET as main activity 15–24-year-olds with restricted drivers licence or higher, by age

Dunedin city, Otago region, and New Zealand
2015



Source: Stats NZ with IDI data

Housing and health

This chapter compares NEET youth with others on two indicators:

- the number of housing moves they made in 2015
- whether they had ever used services or treatments associated with substance abuse or other mental health conditions.

NEET youth change address more often

The IDI allows us to identify how many times people have notified a change of address to a government agency over a given period. From this information we can derive a measure of housing stability based on the number of moves recorded. However, as this does not include moves that are not notified to government agencies, it may under-estimate the actual number of moves – particularly in the case of young people who use their parents' address for official correspondence.

The following analysis looked at those young people whose address of longest duration in 2015 was in the Otago region. Analysis of IDI data suggests that Otago youth who had extended or recurring periods of being NEET were more likely to be in an unstable housing situation.

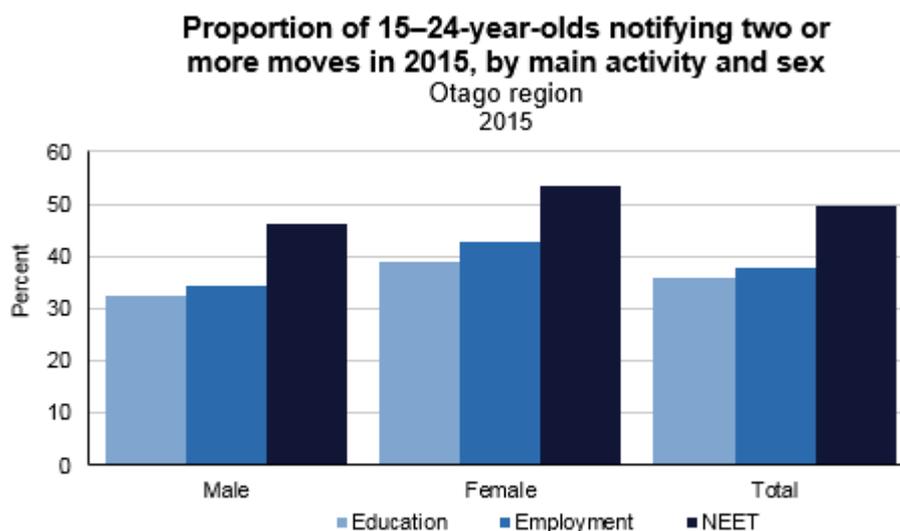
[See Housing stability](#) for limitations relating to address and location data in the IDI.

[See NEET as main activity](#) for definition relating to figures 19–23.

In the Otago region, half (50 percent) of those young people whose main activity was NEET during 2015 moved twice or more during that year. This compared with 36 percent of those who were in education and 38 percent of those who were in employment.

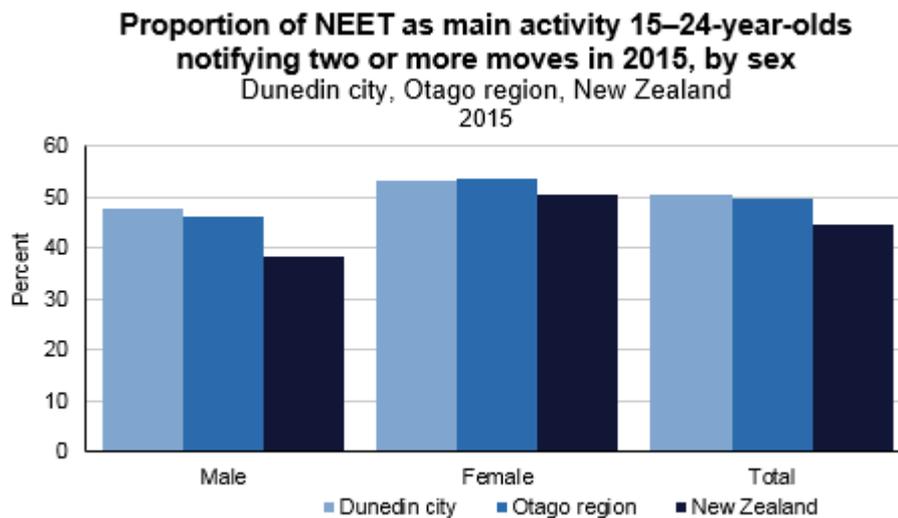
Females were more likely than males to have moved twice or more, whatever their main activity had been. Among NEET youth, 53 percent of females and 46 percent of males had moved twice or more in the year. Those aged 20–24-years were slightly more likely than those aged 15–19 to have moved twice or more (51 percent compared with 47 percent).

Figure 19



That pattern of housing instability in Dunedin city and the Otago region was similar to the national pattern in terms of the differences by main activity, age, and sex. However, the proportion of NEET youth who moved twice or more in the year was higher locally than it was nationally – overall 50 percent locally compared with 45 percent nationally.

Figure 20



Source: Stats NZ with IDI data

NEET youth were also highly over-represented among the most transient youth in the Otago region – those who had moved five or more times during the year. Four percent of NEET youth were in this category, compared with well under one percent of those whose main activity was education or employment. This meant that NEET youth made up well over half (59 percent) of young people in Otago who had moved five or more times in the year.

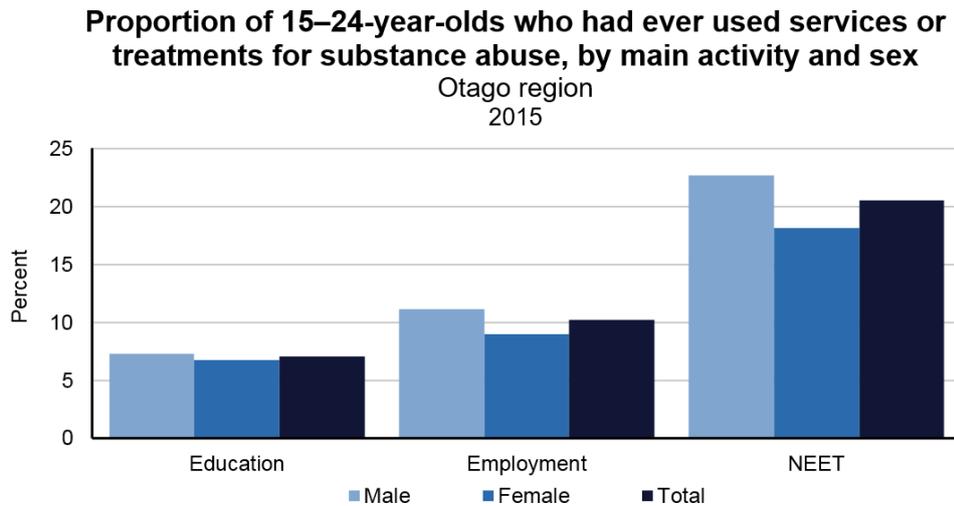
NEET youth more likely to have used mental health services

Using the IDI we can identify whether people have had prescriptions, hospital discharges, or other health service interactions associated with substance abuse or other mental health conditions at any time between 1998 and 2014. As with the housing indicator, this will likely under-estimate the number of people experiencing mental health conditions as some do not seek help or treatment.

[The mental health indicator](#) showed that young people whose main activity was NEET in 2015 were considerably more likely than other young people to have used these services and treatments.

Just over one in five NEET youth in the Otago region in 2015 were recorded as having used substance abuse services or treatments, compared with 10 percent of those in employment and 7 percent of those in education (see figure 21).

Figure 21



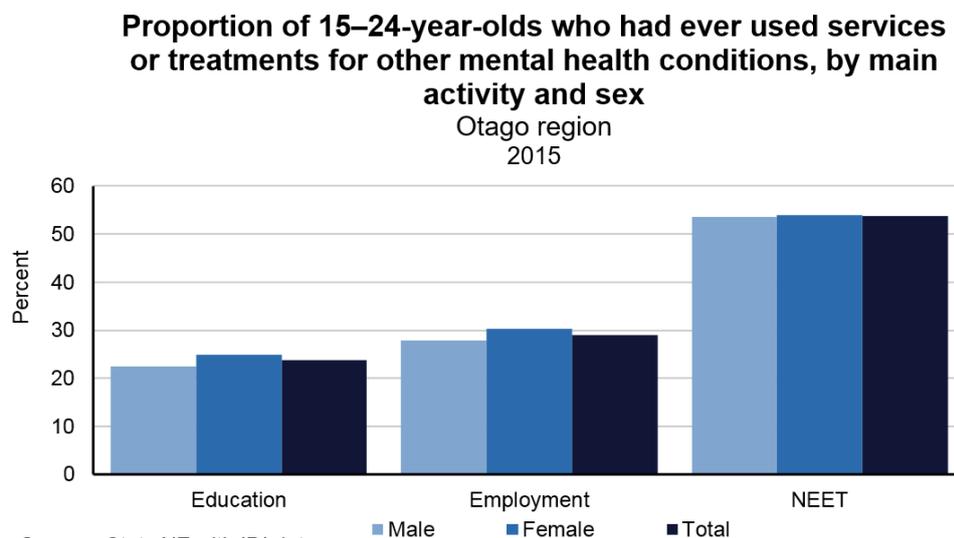
Source: Stats NZ with IDI data

Over half (54 percent) of NEET youth in the region were recorded as having used services or treatments for other mental health conditions. This compared with 29 percent of those who were in employment and 24 percent of those in education.

Substance abuse services and treatments were more common among males than females, regardless of what their main activity was.

Services and treatments for other mental health conditions were slightly more common among females than males, except in the case of the NEET population (see figure 22).

Figure 22



Source: Stats NZ with IDI data

The proportion of NEET youth who accessed services or treatment (for substance abuse or other mental health conditions) was higher in both Dunedin city and Otago than in the rest of New Zealand.

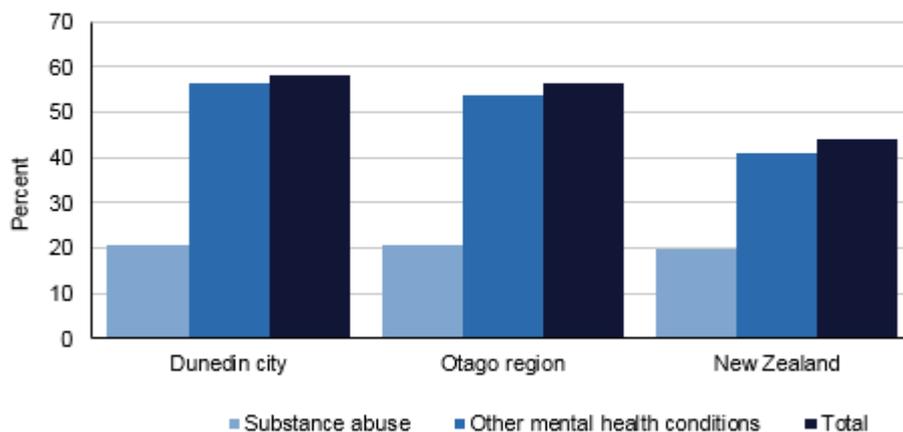
Although the proportion who accessed services and treatments for substance abuse was similar to the national level, treatment for other mental health conditions was more common among local NEETs, resulting in a higher overall rate of mental health treatment – 56 percent in Otago and 58 percent in Dunedin, compared with 44 percent nationally (see figure 23).

The incidence of mental health services and treatments was also higher locally than nationally among those in education or employment, although the difference was not as pronounced as it was for NEET youth.

Figure 23

Proportion of NEET as main activity 15–24-year-olds who had ever used services or treatments for mental health conditions

Dunedin city, Otago region, and New Zealand
2015



Source: Stats NZ with IDI data

Employment and income

This chapter looks at aspects of employment and income for NEET youth:

- whether they had ever worked in paid employment (based on whether they were recorded as having ever received employment income)
- whether they did so in 2015
- whether they received income from benefits in 2015.

[See Employment and income](#) for further detail.

The definition of NEET in this chapter differs from previous chapters in that it looks at people who have been NEET for six months or more.

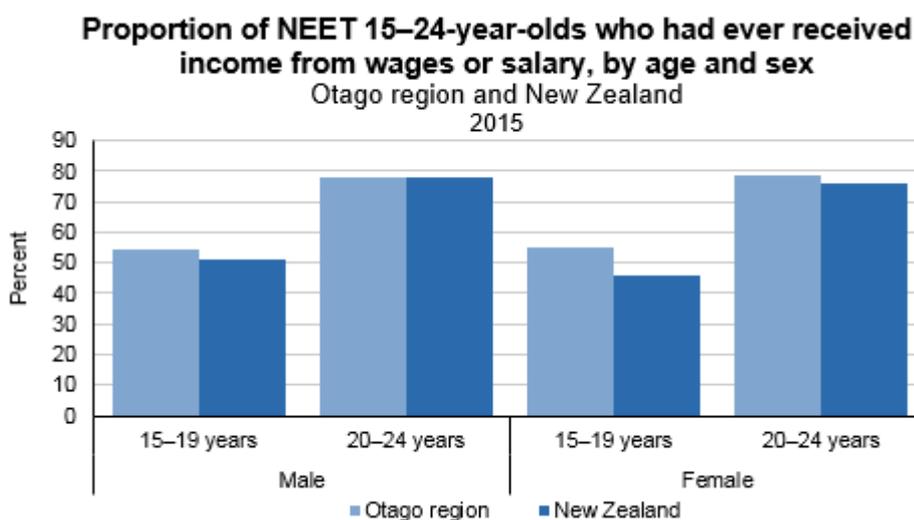
[See NEET for six months](#) or more for more detail on how this indicator is derived.

Most NEET youth have previously been in paid employment

Most young people who are NEET have previously been in paid employment at some stage of their lives. This may include short spells of temporary employment, such as holiday jobs or casual work, as well as longer-term jobs. However, many NEET youth – particularly those in the younger age group – have never had paid jobs. This may be detrimental to their current and future employment opportunities, as work experience and demonstrated ability to hold down a job are advantages for young jobseekers.

As figure 24 shows, NEET youth aged 15–19 years were much less likely than those aged 20–24 to have ever received income from wages or salary. This reflects the fact that many of those in the younger age group will have completed their education relatively recently and had less opportunity to find jobs. Of Otago young people who were NEET for six months or more in 2015, around 55 percent of those aged 15–19 and 78 percent of those aged 20–24 had previously received income from wages or salary (this includes employment outside the Otago region).

Figure 24



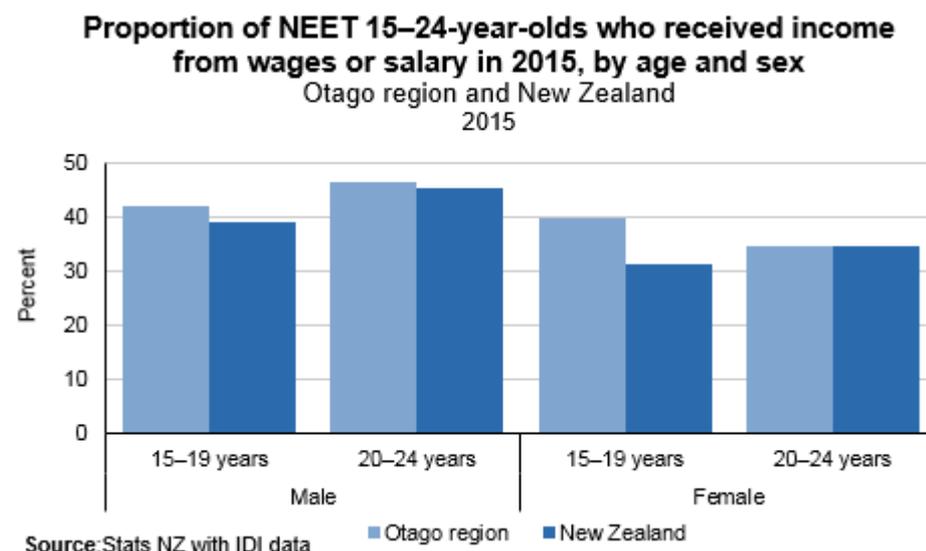
Source: Stats NZ with IDI data

The Otago figures are similar to the national picture, although having received employment income was slightly more common in the Otago region than nationally for females in both age groups and males aged 15–19.

Many of the young people who were NEET for six months or more during 2015 had received income from wages or salary at some stage during that year, even if only on a temporary or casual basis.

Among males in Otago’s NEET population, 42 percent of 15–19-year-olds and 47 percent of 20–24-year-olds had received payments of wages or salaries during the year. This was less common among females – of whom 40 percent of 15–19-year-olds and 35 percent of 20–24-year-olds had received wages or salaries. The proportion of NEETs receiving wages or salaries was generally higher in Otago than nationally.

Figure 25



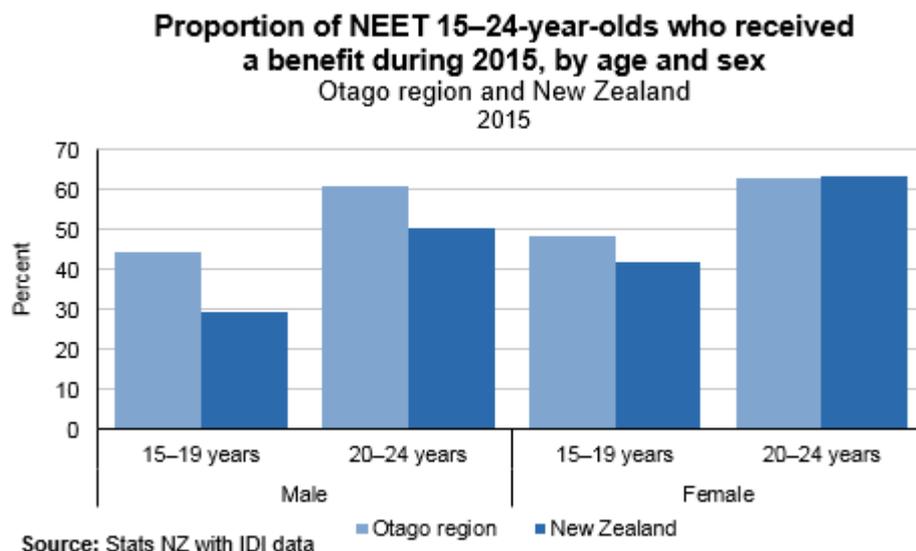
NEET youth more likely to have received income from benefits

NEET youth were more likely to have received income from benefits than from wages or salaries. In the Otago region, around 46 percent of those aged 15–19-years and 62 percent of those aged 20–24 received benefit income at some time in 2015.

Those in the younger age group may be more likely to have alternative means of support from their families or to be ineligible for benefits (Jobseeker Support is only available to those aged 18 and over).

The proportions of NEET youth receiving benefit income was slightly higher in Otago than nationally.

Figure 26



Working together to improve people's lives

The 'Otago youth not in employment, education, or training (NEET)' collaborative research project brought together a diverse range of skills and perspectives with the emerging data assets held in Stats NZ's IDI to shed new light on young New Zealanders experiencing longer spells of not being in education, employment, or training.

By combining the knowledge of people engaged in front line social service delivery, national policy perspectives, and statistical expertise, the research looked across different aspects of young people's lives to understand more about both vulnerability and resilience in the NEET population.

NEET youth are a population of concern to policy makers and social service providers. Making the transition from education to employment can be difficult for young people. Those who spend prolonged or recurring periods not working and not engaged in education or training can struggle to gain the skills needed for steady employment. Many in this group face difficult circumstances in their present lives and may remain susceptible to poor economic and social outcomes in future.

Value of indicators for policy makers and services providers

Understanding more about these young people is essential to developing policies and programmes able to provide them with the opportunities and resources needed to succeed in the labour market and improve their economic and social wellbeing.

People who face long periods of being NEET fare badly across a range of social indicators when compared to young people in education or employment. They are more likely to have experienced behavioural interventions at school, use of mental health services and treatments, and housing instability. Conversely, they are less likely to have protective factors such as NCEA level 2 qualifications, driver licences, and previous work experience.

However, this is an aggregate picture and does not hold true for all young NEET people. Many are likely to come through the experience of being NEET and obtain decent employment and economic security.

The indicators we presented here are not meant to paint a negative picture of NEET youth but to highlight some of the characteristics prevailing in the NEET population, which may help policy makers and service providers in targeting and tailoring assistance to those at risk of, or already experiencing, long or recurring NEET spells.

Potential of collaborative IDI projects to empower NGOs

The information in this report – both the indicators selected and the focus on the Otago region – has been driven by the needs of the project partner, Methodist Mission Southern, to know more about their local NEET population and certain characteristics of that group.

The project – along with other IDI pilot partnership projects – is an important step forward in Stats NZ's efforts to engage with and respond to the needs of non-government organisations as it looks to empower more of those taking direct action in communities.

However, this project should have much broader benefits beyond the information needs of MMS.

The tables and heat maps that accompany this report on the Stats NZ website provide data at national level as well as the Otago regional data; and the Ministry for Women are planning to release a national-level report on young mothers based on data from this project.

Research will benefit from new methods of identifying and profiling NEET

Most importantly, the project has developed methods to identify and profile NEET in the IDI that can now be used in other research projects. This may include research that moves beyond the type of descriptive analysis presented in this report to look at questions such as what are the key determinants of becoming NEET, and what are the long-term effects of NEET spells on future economic and social outcomes for different groups within the NEET population.

The IDI is a rich source of information that can be used to enhance our understanding of young people who are NEET and assist in efforts at both local and national levels to provide the right assistance and support for NEET youth and reduce NEET rates.

This report has built on previous research and represents another step in exploring the potential of the IDI to help in addressing an important social issue.

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Appendix 1: Methodology

This appendix outlines:

- limitations of IDI data
- the study population
- indicators of characteristics
- definitions.

Limitations of IDI data

We identified the study population and developed indicators of characteristics using data from a range of sources in the Integrated Data Infrastructure (IDI).

The IDI links information about the same person across multiple data sources. Some datasets are joined directly using common unique identifiers (eg IRD number), while others are connected probabilistically through demographic information (eg name and date of birth).

All findings in this report should be considered with an understanding of the quality issues and limitations of IDI data. Additionally, some methods used in this report are experimental so caution should be used when interpreting results.

Some of the general limitations are as follows:

- **A person's records may not have been linked correctly across datasets in the IDI due to linkage error. For example, if a person's employment and education records are not correctly linked, the person may not be recorded as having done any employment or education and may be incorrectly assumed to be NEET.**
- The data supplied to the IDI may have quality issues, such as having inaccurate, out-of-date, or missing values. Most of the data in the IDI comes from administrative sources, and has been captured for operational purposes.
- There are known issues with using geographic data in the IDI. For example, if someone has not updated their address recently with any government agencies, we might assume they are living in a location where they are no longer based. For this reason, extra caution should be used when interpreting results at the area unit level. For more information, see [Quality of geographic information in the Integrated Data Infrastructure](#).
- Coverage issues in the IDI may have resulted in some people in the target population (young people aged 15–24 years) being excluded from the study population. For example, people who do not interact with government services may not appear in the IDI (eg the spouse of a migrant who has never used a medical service and is not working may only have a record in the migration dataset). Coverage within datasets in the IDI also differs, with some datasets updated less frequently or containing less historical data than others.
- Further limitations are described in the sections below.

Study population

This study looked at the characteristics of young people aged 15–24 years (inclusive) in 2015. To do this, we identified people in the IDI who were born between 1991 and 2001 (inclusive). Members of this group were 15–24 years old on 31 December 2015. On this date, people born in 1991 were 24 years old, and people born in 2001 were 15 years old.

We chose this year because it was the most recent year in the IDI with complete data across most collections.

To be included in the study population, people needed to show activity in at least one of the following datasets between 2013 and 2015 (inclusive): Ministry of Education data, Ministry of Health data, Inland Revenue tax data, or Accident Compensation Corporation (ACC) injury claims data. This is the same method of identifying ‘signs of life’ as described by Stats NZ’s Census Transformation team in their IDI-ERP code.

People were removed from the population of study if they were overseas totalling six months or more in 2015, or deceased before or during 2015.

Data for this study was drawn from the IDI_Clean_20161020 archive of the IDI.

Indicators of characteristics

NEET

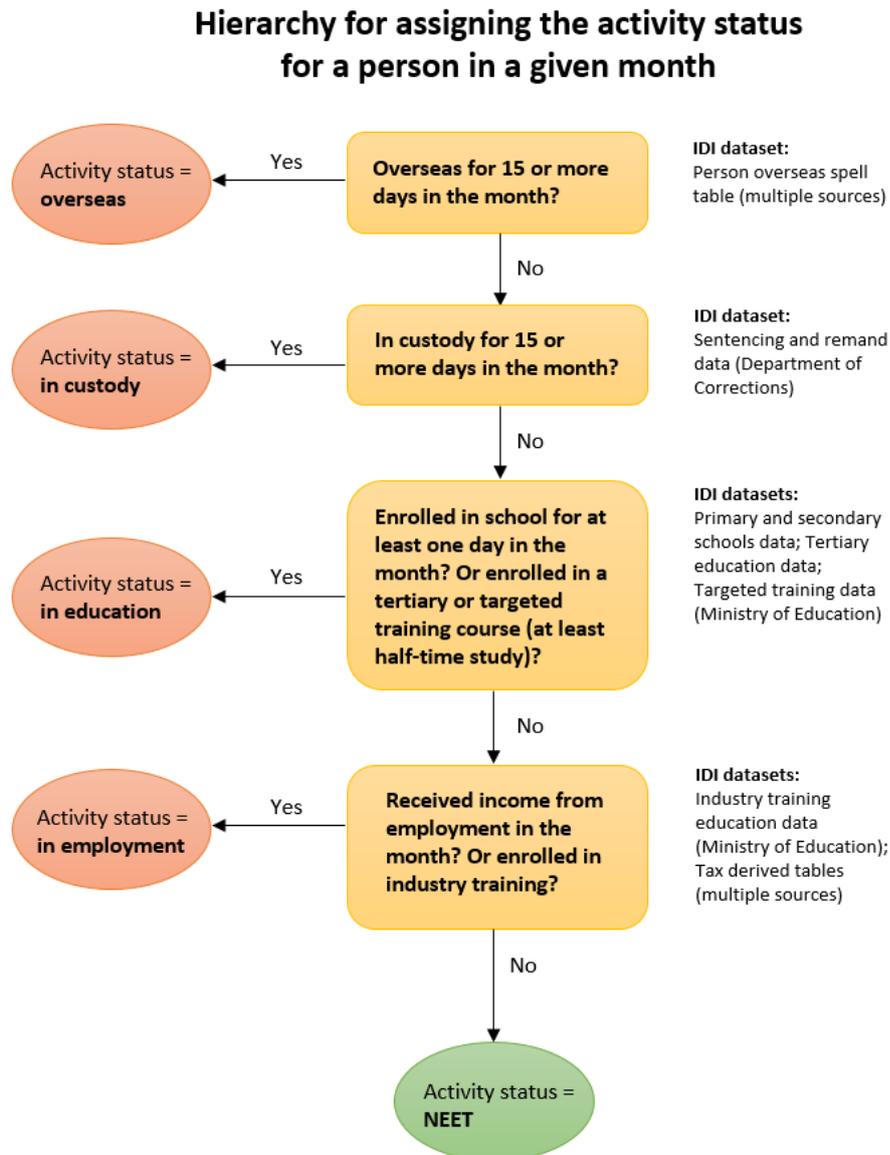
To identify people who were NEET, we looked for people in the study population who were not in education, employment or training in 2015. We used code written for the [Treasury insights tool](#) to identify NEETs, with some adjustments. The Treasury code identifies continuous NEET spells in 2015 including the last six month period before and after 2015. Our method differs in that we only sum months of being NEET during 2015. The months do not have to be consecutive.

Each month of 2015 was assigned an activity status using the hierarchy shown in figure 27 below. **This is based on the Treasury’s ‘month main activity’ approach.** NEET is a residual category – those who are not identified as being overseas, in custody, education or employment in a given month, are counted as NEET by default.

The monthly statuses were counted up for a given person to establish the number of months spent being overseas, in custody, in education, in employment, and NEET. The number of people identified as NEET is likely to be overestimated due to errors in linking and data quality issues. For example, an employed person without employment records in the IDI will be incorrectly assumed to be NEET.

It is also worth noting that interaction with tertiary education is based on course enrolment start dates. It is possible that someone has subsequently dropped out, decided not to attend, or has **been absent from class. These people will still be identified as ‘in education’.**

Figure 27



We used two measures of NEET in this study:

1. NEET as main activity

This is the primary NEET measure used in the findings of this report that allowed us to compare NEETs with people in education or employment.

A person’s main activity for 2015 was determined by their most-frequent activity status (not necessarily consecutive), and is one of the following categories: NEET, education, employment, in custody, and overseas. This is based on Ministry of Education’s approach to classifying NEETs (Earle, 2016).

For ‘NEET’ to be considered the main activity of 2015, this activity status has to be more frequent than any other activity. For example, if in 2015 someone was NEET for 5 months, in education for 4 months, and employed for 3 months, their main activity for 2015 would

be 'NEET'. In this case, they would be counted as NEET under this measure (main activity) but would be counted as non-NEET using the 'six months or more' measure.

In the event that a person had spent the same number of months on two or more main activities, the following hierarchy was used to break the tie(s), from highest to lowest priority: NEET, education, employment, custody, overseas. We decided that education should be placed before employment in this hierarchy because in the young age group education is a more preferable activity for future economic activity and stability in the labour market. Therefore those in education might also be undertaking employment.

2. NEET for six months or more

We also created a secondary NEET measure that allowed us to compare NEETs of long duration with non-NEETs. We used this in the [people of concern](#) derived variable, the [Employment and income](#) chapter, and the maps listed in [appendix 2](#).

If a person's activity status for six or more months (not necessarily consecutive) in 2015 was 'NEET', they were considered to be NEET using this measure. People who had 'NEET' as their activity status for fewer than six months were considered to be non-NEET using this measure.

In effect, this measure identifies a subset of people who are NEET according to the main activity measure, ie everyone who is NEET for six or more months will also have NEET as their main activity. This is because the sum of NEET as an activity status exceeds the sum of any other activity statuses for the year.

Sex, birth year, and ethnicity

A person's sex, birth year, and ethnicity were determined by looking at the personal details table in the IDI. This table contains Stats NZ's best estimate of demographic information derived from multiple collections in the IDI, including 2013 Census, using a set of specific rules.

Ethnicity variables are an 'ever-indicator' that show all ethnicities a person has recorded across data collections in the IDI over time.

Ethnicity has been reported in this study using the Stats NZ standard ethnicity classification: European, Māori, Asian, Pacific, Middle Eastern/Latin American/African, and Other. A person who is recorded as belonging to more than one ethnic group was counted once in each group.

If multiple ethnicities are recorded at lower levels of the same ethnic grouping they will be counted only once at the highest level, for example someone who is Samoan and Fijian is a Pacific person once.

Location

We used the IDI's address notification table to determine the location of people in the study population in 2015. This table contains geocoded address information from all sources in the IDI for each person, where that information exists. The tables and maps listed in [appendix 2](#) use area unit, territorial authority, and regional council boundaries, see [Geographic definitions](#).

If a person had more than one address in 2015, the address of longest duration was chosen. If a person's address of longest duration in 2015 was in the Otago region, they were considered as

living in Otago for the purposes of this study. In the case of a tie between the duration of two addresses, we selected the most recent address.

It is worth noting that a person could have moved in and out of the Otago region during 2015 even though their address of longest duration was in Otago. Likewise, some people might have lived in Otago during the year but their longest duration address was somewhere else – these people were not included in the Otago numbers in this study.

It is likely that some of the addresses on record for a given person are postal or contact addresses that are different from where the person was actually living. For example, a young person might supply their parents' address to Inland Revenue while they are flatting.

Address information in the IDI is captured when a person notifies a source agency that their address has changed. The date of this notification may not align with the date they started living at the property, and they may have since moved out without registering a new address.

Housing stability

To determine a person's level of housing stability, we looked at how many address changes each person in the study population had in 2015 using the IDI's address notification table.

[See Location](#) for more information about the limitations of this table.

The youth population is known to be mobile and we acknowledge that the location measure is imprecise, however location was a key requirement from consultation with Methodist Mission Southern.

Young mothers

To identify people in the study population who are mothers, we looked for women recorded as being a parent in birth data from the Department of Internal Affairs. The woman needed to have given birth to a living baby before the end of 2015. It is possible some mothers do not have the children in their care, or someone is caring for a child they did not give birth to.

This study did not consider the amount of care that a young mother gives her child. There are a range of possible caring situations. For example, the mother may be the primary carer, she may be sharing care with another person (such as a partner or her own parent), or she may have someone else caring for the child while she is working or in education. It is also feasible that someone else may be the primary carer such as a father or grandparent.

Behavioural interventions

We used the Ministry of Education secondary school dataset to identify people recorded as receiving a suspension, stand-down, or truancy intervention at secondary school. This indicator shows whether the person ever received an intervention across all years of attendance.

Suspensions are recorded when a school suspends a student so they cannot attend school for a long period, generally for behaviour reasons. Stand-downs are a warning for a minor to medium offence. Truancy relates to instances of unjustified absence or interaction with non-enrolment truancy services. This indicator does not distinguish between people who have one-off or minor interventions, from people who have received on-going or serious interventions.

We developed this indicator based on **Treasury's education indicators code**.

Special education interventions

We used the **Ministry of Education's secondary school dataset** to identify people recorded as receiving special education interventions. These are used to provide support and assistance for students with special education needs. This indicator shows whether the person ever received an intervention across all years of attendance.

Special education interventions include enrolment over the legal age and specific services relating to communication, behaviour, early intervention, high and complex needs, or serious health problems.

This indicator does not distinguish between people who have one-off or minor interventions, from people who have received on-going or serious interventions.

We developed this indicator based on **Treasury's education indicators code**.

Low qualifications

To identify people in the study population with low qualifications, we looked for evidence NCEA level 2 (or an equivalent NZQF qualification) **had been achieved in the Ministry of Education's secondary school dataset**. The youngest people in the study population could still be in the process of obtaining this qualification and therefore will not be identified as having achieved NCEA level 2. Qualifications obtained overseas are not included in this study.

[See NCEA](#) for more information on NCEA qualifications.

We developed this indicator based on **Treasury's education indicators code**.

Driver licences

We used the New Zealand Transport Agency driver licence register dataset to identify people with a restricted licence or higher for any type of vehicle. For most vehicle types, a restricted licence is the second step of the three-stage process to get a driver licence. To obtain a restricted car licence, one must sit a practical driving test. Holders of restricted licences are permitted to drive independently and to carry minors at restricted times. The minimum age for getting a restricted licence is 16 and a half.

[See Licences by vehicle type](#) for more information on driver licences.

Mental health

We used several Ministry of Health tables to create the following three mental health measures. These tables include pharmaceutical, hospital discharges, and mental health (PRIMHD) data:

- people who have used mental health services for substance abuse reasons (drug and alcohol abuse)
- people who have used mental health services for reasons other than substance abuse (such as anxiety, ADHD, eating disorders)
- people who have used mental health services for any of the reasons above.

Not all people with mental health conditions use Ministry of Health mental health services. Additionally, people who have sought mental health services exclusively through private means may not be identified as having mental health treatment.

These indicators come from Treasury's and Ministry of Health's mental health indicator code.

Young people of concern

To identify people in the study population who are young people of concern, we looked for people with the following combination of indicators associated with poor outcomes:

- NEET for six months or more in 2015
- no NCEA level 2 qualifications
- at least one behavioural intervention at secondary school and/or had ever used mental health services or treatments.

Employment and income

We used the Inland Revenue tax dataset to create the following three employment and income measures:

- Ever received income from wages or salary
If a person had any record of income from wages or salary at any time before the end of 2015, they were considered to have been in paid employment at some stage in their life. People who had not received income from this source were considered to have never worked. This only included work that was undertaken in New Zealand and was visible to government sources, for example did not include the shadow economy. Self-employment income and any other income that was not wages or salary was also not considered in this indicator.
- Received income from wages or salary in 2015
Indicates whether a person had any record of income from wages or salary during 2015. This indicator is the same as the above measure, the only difference being that it is for the 2015 year only.
- Received income from benefits in 2015
Indicates whether a person had any record of income from benefits from IR during 2015.

We developed these indicators from Treasury's income and earnings code.

Definitions

Administrative (admin) data

Information collected primarily for operational (not research) purposes. This type of data is collected by government departments and other organisations for the purposes of registration, transaction, and record keeping, usually during the delivery of a service.

De-identified data

Data that has had information removed to reduce risk of spontaneous recognition. This will typically include removing names, exact dates of birth or death, and exact addresses.

Household Labour Force Survey (HLFS)

A survey conducted regularly by Stats NZ. It collects information on respondents in New Zealand who are in paid employment, unemployed, and not in the labour force. It includes information on occupations and industries, income and net worth, types of work, and employment conditions. For more information, see [Household Labour Force Survey](#).

Integrated Data Infrastructure (IDI)

A Stats NZ database containing de-identified people-centred microdata from a range of government agencies, surveys, and non-government organisations. For more information, see [Integrated Data Infrastructure](#).

Linking

A decision that two records belong, or are likely to belong, to the same person, made by comparing identity variables like name, age, sex, and unique identifiers.

Longitudinal

A type of observational study, or dataset, in which information is gathered for the same people repeatedly over a period of time.

Methodist Mission Southern (MMS)

A Dunedin-based organisation that provides a wide range of social services and community programmes throughout the Otago region. For more information, see [Methodist Mission Southern](#).

Microdata

Data about individual people, organisations, households, or other units in a population.

NEET

An acronym for describing young people aged 15–24 years who are not employed and not engaged in education or training.

Pilot partnership projects

Collaborative projects on real-world issues undertaken by Stats NZ in partnership with iwi and non-government organisations, with the purpose of working together to make data more accessible and useful. For more information, see [Partnerships with iwi/Māori, Pasifika, and NGOs](#).

Survey data

Information collected for a statistical survey, such as Stats NZ's HLFS.

Survey of Family, Income, and Employment (SoFIE)

A survey conducted by Stats NZ. It collected information on respondents' work, family, household circumstances, income, and net worth. SoFIE was a longitudinal survey, meaning respondents were revisited over a period of eight years, or 'waves', to build a picture of how their circumstances changed during this time. For more information, see [Survey of Family, Income, and Employment \(SoFIE\)](#).

Appendix 2: Maps and tables

The following maps and tables are available to download from [Youth not in employment, education, or training \(NEET\)](http://www.stats.govt.nz/youth-not-in-employment-education-or-training-neet) (www.stats.govt.nz).

They cover NEET youth rates for New Zealand, and selected area units, regional councils, and territorial authorities.

List of maps

See *Youth not in employment, education, or training (NEET): Maps* (PDF, 3.99MB) for:

1. NEET youth rates, by regional council, New Zealand, 2015
2. NEET youth rates, by territorial authority, North Island, 2015
3. NEET youth rates, by territorial authority, South Island, 2015
4. NEET youth count, by area unit, Auckland, 2015
5. NEET youth count, by area unit, Hamilton, 2015
6. NEET youth count, by area unit, Tauranga, 2015
7. NEET youth count, by area unit, Christchurch, 2015
8. NEET youth count, by area unit, Dunedin, 2015
9. Proportion of NEET youth who are mothers, by regional council, New Zealand, 2015
10. Proportion of NEET youth who are mothers, by territorial authority, North Island, 2015
11. Proportion of NEET youth who are mothers, by territorial authority, South Island, 2015
12. **Count of Māori NEET youth, by territorial authority, New Zealand, 2015**
13. **Count of Māori NEET youth, by area unit, Auckland, 2015**
14. **Count of Māori NEET youth, by area unit, Wellington, 2015**
15. **Count of Māori NEET youth, by area unit, Christchurch, 2015**
16. Count of Pacific NEET youth, by territorial authority, New Zealand, 2015

List of tables

See *Otago youth not in employment, education, or training (NEET): Tables* (Excel, 300kB) for:

1. Age and sex of 15–24-year-olds in New Zealand, Otago, Dunedin city, and rest of Otago, 2015
2. Ethnicity of 15–24-year-olds in New Zealand, Otago, and Dunedin city, by sex and age group, 2015
3. Sex and age group of New Zealand 15–24-year-olds by region and territorial authority, 2015
4. Sex and age group of Otago 15–24-year-olds, by territorial authority and area unit, 2015
5. Main activity of 15–24-year-olds in New Zealand, Otago, and Dunedin city, by sex and age group, 2015
6. Main activity of New Zealand 15–24-year-olds, by region and territorial authority, 2015
7. Main activity of Otago 15–24-year-olds, by territorial authority and area unit, 2015
8. Main activity of New Zealand and Otago 15–24-year-olds, by sex, motherhood, and age group, 2015

9. Of concern 15–24-year-olds in New Zealand, Otago, Dunedin city, and rest of Otago, by sex and age group, 2015
10. Secondary school interventions for New Zealand 15–24-year-olds, by main activity and sex, 2015
11. Secondary school interventions for Otago 15–24-year-olds, by main activity and sex, 2015
12. Secondary school interventions for Dunedin 15–24-year-olds, by main activity and sex, 2015
13. Secondary school qualifications of New Zealand 15–24-year-olds, by main activity, age group, and sex, 2015
14. Secondary school qualifications of Otago 15–24-year-olds, by main activity, age group, and sex, 2015
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16. Driver licence status of New Zealand 15–24-year-olds, by main activity, age group, and sex, 2015
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19. Housing stability of New Zealand 15–24-year-olds, by main activity, age group and sex, 2015
20. Housing stability of Otago 15–24-year-olds, by main activity, age group, and sex, 2015
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22. Ever used services for mental health conditions and substance abuse, New Zealand 15–24-year-olds, by main activity and sex, 2015
23. Ever used services for mental health conditions and substance abuse, Otago 15–24-year-olds, by main activity and sex, 2015
24. Ever used services for mental health conditions and substance abuse, Dunedin 15–24-year-olds, by main activity and sex, 2015
25. NEET 15–24-year-olds who had ever worked, by age group, sex, New Zealand, and Otago, 2015
26. NEET 15–24-year-olds who worked in 2015, by age group, sex, New Zealand, and Otago, 2015
27. NEET 15–24-year-olds on benefit in 2015, by age group, sex, New Zealand and Otago, 2015