



YOUTH2000 SURVEY SERIES

Youth19 Rangatahi Smart Survey Initial Findings Introduction and Methods

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YOUTH19
A Youth2000 survey

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Fleming, T., Peiris-John, R., Crengle, S., & Parry, D. (2018). *Integrating survey and intervention research for youth health gains*. Health Research Council of New Zealand Project Grant (HRC ref: 18/473).

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Further Youth19 publications are available at www.youth19.ac.nz

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Overview

This report describes the Youth19 Rangatahi Smart Survey (Youth19), how we ran the survey, who took part in it and how to use the findings. It is designed to be read with the *Youth19 Rangatahi Smart Survey, Initial Findings* reports.

Youth19 is the latest in the Youth2000 series of New Zealand adolescent health and wellbeing surveys. Since 1999, the Youth2000 series has included over 36,000 young people in Aotearoa, with findings used widely to inform policy, practice and research in New Zealand and globally. Youth2000 surveys were conducted by the Adolescent Health Research Group (AHRG) in 2001, 2007 and 2012 (Clark et al., 2013; Denny et al., 2011).

Youth19 was conducted in 2019 in the Auckland, Northland and Waikato regions by researchers from The University of Auckland, Victoria University of Wellington, University of Otago and Auckland University of Technology. Youth19 combines core Youth2000 questions with an added focus on rangatahi wellbeing and, for the first time, direct access to digital help options for participants. We also included new questions about vaping, social media, future hopes and young people's views on opportunities to enhance life at home, school and in communities.

In Youth19, we surveyed 7721 year 9–13 students in 49 secondary schools including four kura kaupapa Māori. In addition we surveyed 92 Alternative Education students and 78 young people who were not in education, training or employment – these findings will be reported separately.

Youth19 is a scientifically and ethically rigorous survey, funded by the Health Research Council of New Zealand and approved by The University of Auckland Human Participants Ethics Committee. Data from Youth19 will be used for multiple research outputs to support young people, families and communities.

Youth19 reports and papers on key aspects of youth health and wellbeing will be accessible via our website www.youth19.ac.nz.

The Researchers and Survey

The researchers

The Youth19 survey was led by Associate Professor Terryann Clark (The University of Auckland), Dr Terry (Theresa) Fleming (Victoria University of Wellington), Dr Roshini Peiris-John, Dr Sonia Lewycka, Dr Lara Greaves, Dr John Fenaughty (The University of Auckland), Professor Dave Parry (Auckland University of Technology) and Associate Professor Sue Crengle (University of Otago). We worked closely with study manager Dan Archer and research assistants and research fellows who contributed to data collection, analysis of results and development of publications.

Youth19 builds on the work of the Adolescent Health Research Group (AHRG) and co-ordinates closely with the group. The AHRG was established in 1997 to gather up-to-date, representative, trustworthy data to support the health and wellbeing of New Zealand's young people. Today the AHRG includes members from The University of Auckland, Victoria University of Wellington and the University of Otago as follows: Dr Jude Ball, Dr Pat Bullen, Associate Professor Terryann Clark, Associate Professor Sue Crengle, Dr Kelsey Deane, Associate Professor Simon Denny, Lovely Dizon, Dr Bridget Farrant, Dr John Fenaughty, Dr Terry (Theresa) Fleming, Dr Lara Greaves, Kristy Kang, Dr Sonia Lewycka, Dr Mathijs Lucassen, Associate Professor Melody Oliver, Dr Roshini Peiris-John, Kylie Sutcliffe, Dr Jemaima Tiatia-Seath and Dr Jennifer Utter.

The survey

In 2017, Associate Professor Terryann Clark and colleagues were awarded an HRC grant for their project *Harnessing the Spark of Life: Maximising whānau contributors to rangatahi wellbeing*. The following year, Dr Terry (Theresa) Fleming and colleagues received an HRC grant for their project *Integrating survey*

and intervention research for youth health gains. These two projects collaborated to produce a key output, the Rangatahi Smart Survey: Youth19 (also referred to as Youth19). We also developed a school climate survey, which builds on these two projects. These three components are described here.

Harnessing the Spark of Life

Led by Associate Professor Terryann Clark with Dr Jade Le Grice, Dr Shiloh Groot, Dr Matthew Shepherd and Dr Sonia Lewycka.

Rangatahi Māori experience poorer health outcomes compared to Pākehā and other European youth in New Zealand. There is increasing evidence that whanaungatanga has a protective effect on rangatahi wellbeing, but little is known about how these mechanisms operate in contemporary Māori whānau and communities, or about how they influence health outcomes, health literacy and access to services. This three year study seeks to identify the components of whanaungatanga and to describe how whanaungatanga influences health and social outcomes for rangatahi Māori.

In 2018 (year 1), we undertook photo-elicitation and qualitative interviews with 51 rangatahi and their whānau to explore how whanaungatanga is expressed and used this data to identify components of whanaungatanga. Based on our qualitative findings, we developed quantitative questions that were added to the Youth19 survey. In 2019 (year 2) we partnered with the Smart Survey team to survey year 9–13 students. We also surveyed 91 students from Alternative Education and 82 young people described as ‘not in education, employment or training’ (NEET) to ensure that a range of rangatahi aged 12–22 years were included in these findings. In 2020 (year 3), we are analysing these datasets and creating whānau and rangatahi resources, reports and publications.

This project was funded by the Health Research Council (HRC 17/315).

Smart Survey: Integrating Survey and Intervention Research

Led by Dr Terry (Theresa) Fleming with Associate Professor Sue Crengle, Professor Dave Parry and Dr Roshini Peiris-John.

Once Youth19 participants had completed or opted to leave the survey, they were invited to sign up for an email or text message with a link to a custom website containing adolescent health and wellbeing resources relating to topics covered in the survey. This is one of three key components of the 'Integrating survey and intervention research' project. Here is an introduction to this project:

Imagine surveying thousands of people to identify health needs, yet providing no intervention. This is the norm in survey research. It would be shocking in health services and is unnecessary in the

age of digital surveys and digital health interventions. Digital interventions (such as online tools for depression, mobile tools for smoking reduction and high-quality websites) are highly scalable and increasingly important in health strategies. However, uptake of these interventions outside trials is often disappointing and may increase disparities. In this project we bring together these two dynamics and work on a new approach to smart, ethical survey research.

This project was funded by the Health Research Council (HRC 18/473). Findings will be reported from 2020 and will be available from www.youth19.ac.nz

The Youth19 School Climate Survey

Co-led by Dr John Fenaughty and Dr Roshini Peiris-John with Dr Terry (Theresa) Fleming and Associate Professor Terryann Clark.

Schools are a critical site of youth health and development. There is growing interest in health services in schools, in part driven by adolescent health statistics showing needs that are not being met. As part of the Youth19 Rangatahi Smart Survey, we invited members of the senior management and school

health service leaders from participating schools to complete School Climate Surveys. These surveys provide data about school environments, including school health services and a range of policies and practices associated with health and wellbeing. Data from the School Climate Surveys will be used in conjunction with Youth19 student data to explore how aspects of the school environment impact on student health, behaviour and wellbeing.

Methods

Ethical considerations

The Youth19 survey was based on well established procedures used to build the previous Youth2000 series surveys. Ethical approval was granted by The University of Auckland Human Subjects Ethics Committee (application #022244).

Participating schools were provided with printed and digital information sheets to send to parents and caregivers, and students. Parents and caregivers could withdraw their students prior to the survey date. Students' participation was optional and students could choose to leave the survey at any time.

All survey questions were optional and branching logic was used to ensure that students were not asked questions that did not apply to them. All responses were anonymous and students' privacy during the survey was protected by ensuring adequate spacing between students.

Each student was given a card printed on one side with a unique code that gave them access to the survey and on the other side with safety information. Safety messages were also displayed at the end of each survey section and following highly sensitive questions, for example:

Thank you for answering these questions. If questions are upsetting, remember you can talk to one of the people here. You can also choose to have info and options sent to your phone or email later in the survey or talk to the school counsellor, health staff or Youthline (ph. 0800 376633 or free txt 234).

Translation into te reo Māori

All Youth19 questions, responses and survey descriptive text were translated into te reo Māori by a certified translator and voice recorded by a fluent te reo speaker for use in the survey. Where questions and responses remained unchanged from Youth12, existing

translations were verified and corrected where required for consistency. The introduction/ explanation video that opens the survey was also translated and recorded in a similar way.

Survey design and delivery

The survey was designed such that most students could complete it within a single school period of around 50 minutes. In most schools, students who did not complete the survey within a single school period could remain to complete the survey if they wished.

The survey was hosted using the cloud-based survey platform Qualtrics Core XM (Qualtrics, Provo, UT). Each participating student completed the survey on a 7-inch mobile tablet with an Android operating system. All data transferred between the mobile tablet and the survey server was encrypted. A custom 'kiosk mode' application was created, enabling uniform delivery of the survey to each student whilst restricting access to any other apps or system settings on the tablet (for example, when each new student began the survey, the tablet volume and screen brightness were reset to ensure consistency of experience). Students also

received headphones so that they could listen to the introductory video and choose to hear questions and answer options read aloud, either on-demand by pressing an on-screen icon or automatically as each question loaded. Students could switch between delivery method. The survey text and audio descriptors were available in both English and te reo Māori.

Schools provided the survey team with a large space, such as a school hall or gymnasium, in which to administer the survey and students were invited in groups of up to 160 simultaneously. Each student received a unique 'login' alphanumeric ID, allowing them access to the survey. Students were first prompted to watch an introduction video and view survey and consent information. Consenting students then completed the survey and non-consenting students could leave and return to their ordinary school day.

The Youth19 questionnaire

The survey comprised 285 questions across 11 key areas: ethnicity and culture; home life; identity; school; health; emotions; injury and violence; sport, work and online time; sex and sexuality; addictive behaviours; and neighbourhood and spirituality.

Core Youth19 questions were based on questions from previous surveys from 2001, 2007 and 2012, allowing for trend comparison. New questions were developed and tested in codesign, photo-elicitation and piloting processes.

Survey items included previous Youth2000 series questions, validated measures (i.e. the Short Form of the Reynolds Adolescent Depression Scale and the World Health Organization's wellbeing index WHO-5), measures used in other surveys, and newly developed questions, including:

- whanaungatanga variables developed from photo-elicitation work and kaupapa Māori qualitative interviews with rangatahi and their whānau, conducted by the Harnessing the Spark of Life team.
- an opportunity to receive digital help information on a range of health and

wellbeing topics covered in the survey. This suite of help options was developed through co-design sessions conducted with students by the Smart Survey team, along with input from youth health and digital service providers. Here, you can see the resulting digital information and links, as they appeared to students: <https://support.youth19.ac.nz>

- questions about topical and emerging issues (such as gender identity, housing insecurity, period poverty and environmental issues), developed in consultation with content experts and youth advisors.
- open text questions inviting young people to comment on important areas such as home life, school, the issues they face and potential solutions. These open text questions appeared at the end of relevant sections of the survey and were clearly marked as optional. This youth voice information will be analysed and reported from 2020. Example quotes are included in some Youth19 reports to highlight examples of youth views.

The full questionnaire will be made available at www.youth19.ac.nz.

Consent and participation

In each participating school, the principal or head of the board of trustees provided consent for the students to be invited to participate. Information sheets were then provided to the school for distribution to parents and caregivers of all students enrolled in year 9–13. These sheets were available in te reo Māori and in English, and in printed and digital formats.

Parents and caregivers were given two weeks to withdraw their students by contacting the school (an opt-out process). Once ineligible students were withdrawn, students were randomly selected from the school roll. Each selected student received an information sheet containing details of the survey methods, consent information, and contact details for further information. These information sheets were available in te reo Māori and English, and in printed and digital formats.

On the day of the survey, selected students were invited to the designated survey room. Students who did not wish to participate could choose not to attend. Upon arrival, students were welcomed by the researchers and given internet tablets, which displayed an introductory video. The video contained information about the survey process, consent, geocoding and how to get help, and informed students that they could leave the survey at any time. It was not possible for students to skip past the video, ensuring that all received the same information. After viewing the video, students were invited to ask any questions and could then choose either to leave or to provide consent to participate and begin the survey.

As the survey was anonymous, it was not possible to remove individual participants' responses if they later changed their mind.

Geocoding

During the survey, each student was asked to enter the address of their usual place of residence into a custom web app that resolved and saved their 2018 census meshblock number without storing their specific address. Each student's meshblock number was stored in a database against their unique survey 'login' and later coupled with their survey responses, allowing these

responses to be considered in the context of their area information (e.g. NZ Deprivation Index decile and score, urban/rural data). No personal details were stored, and it was not possible to identify any student's home address. The geo-coding process was explained to students before they commenced the survey and students could opt out of this process.

Piloting

Two eligible schools that were not randomly selected were invited to participate in pilot testing of the survey. This testing provided valuable information about technology resilience, survey and branching errors, and

survey completion time. As there were no significant changes to the survey between piloting and the main survey, the student responses from the two pilot schools were included in the final dataset.

Statistical analysis, national estimations and comparisons to previous waves

The Youth19 survey was conducted in the Auckland, Waikato and Tai Tokerau education regions. These three regions contain 47% of the total New Zealand youth population and are the most ethnically diverse areas of the country, as seen in Table 1.

Sample weights were calculated in two ways: first as inverse probability weights to adjust for the unequal probability of each individual being invited to participate in the survey; and second using calibration to reflect the national secondary school student population, in order to make more precise estimates and adjust for differences in response rates, as well as to make nationally relevant estimates and allow comparisons with the previous national surveys. Calibrated weights were estimated using population data available from Education Counts for sex, age, ethnicity and decile. The full details of this method will be detailed in a journal article which will be announced on www.youth19.ac.nz.

Data are presented as numbers (n and N), based on the raw data on numbers of survey participants. Percentages have been adjusted using nationally calibrated weights to make estimates that reflect the national student

population, as well as adjusted to account for the of clustering of data within schools and stratification. For this reason, adjusted percentages are slightly different from the numbers presented (n and N) in the tables. Estimates from the Youth2001 Youth2007 and Youth2012 surveys also differ slightly from previous reports, as sample weights rather than calibrated weights were used in previous survey waves. This report presents updated estimates for these previous surveys as well, using the same method to calculate calibrated weights to adjust for differences in response rates by demographic group.

In previous years, data from participants in kura kaupapa Māori were only reported in particular reports and not included in the main findings. In this survey, data from kura kaupapa Māori students are included in the main findings. In order to ensure that findings across survey waves are comparable, we have not included data from kura kaupapa Māori students in trends tables (comparisons between Youth19 and previous survey waves).

Please also see: 'How to Use Information in this Report: Reading prevalence tables'.

Table 1: New Zealand Year 9–13 student population for schools with more than 50 students, excluding Partnership Schools, grouped by education region for the year 2017*

	Total Students		Māori		Pacific		Asian		Other [^]		European	
	n	%	n	%	n	%	n	%	n	%	n	%
Total	281,545	100.0%	59,976	100.0%	26,897	100.0%	32,789	100.0%	17,002	100.0%	144,881	100.0%
Included education regions												
Tai Tokerau	9,324	3.3%	4,390	7.3%	242	0.9%	279	0.9%	222	1.3%	4,191	2.9%
Auckland	98,070	34.8%	13,280	22.1%	18,828	70.0%	20,327	62.0%	8,881	52.2%	36,754	25.4%
Waikato	24,136	8.6%	7,412	12.4%	907	3.4%	1,793	5.5%	974	5.7%	13,050	9.0%
Total	131,530	46.7%	25,082	41.8%	19,977	74.3%	22,399	68.3%	10,077	59.3%	53,995	37.3%
Excluded education regions												
Bay of Plenty, Wairariki	20,321	7.2%	7,903	13.2%	497	1.8%	1,053	3.2%	1,073	6.3%	9,795	6.8%
Hawke's Bay, Tairāwhi	13,283	4.7%	5,482	9.1%	549	2.0%	424	1.3%	349	2.1%	6,479	4.5%
Taranaki, Whanganui, Manawatu	18,128	6.4%	5,073	8.5%	563	2.1%	916	2.8%	823	4.8%	10,753	7.4%
Wellington	31,830	11.3%	6,514	10.9%	3,112	11.6%	3,300	10.1%	1,642	9.7%	17,262	11.9%
Canterbury and Chatham Islands	34,297	12.2%	4,176	7.0%	1,268	4.7%	3,311	10.1%	1,558	9.2%	23,984	16.6%
Nelson, Marlborough, West Coast	9,827	3.5%	1,592	2.7%	201	0.7%	376	1.1%	485	2.9%	7,173	5.0%
Otago, Southland	17,347	6.2%	2,612	4.4%	555	2.1%	837	2.6%	838	4.9%	12,505	8.6%
Correspondence School	4,982	1.8%	1,542	2.6%	175	0.7%	173	0.5%	157	0.9%	2,935	2.0%
Total	150,015	53.3%	34,894	58.2%	6,920	25.7%	10,390	31.7%	6,925	40.7%	90,886	62.7%

* Data was retrieved from the Education Counts website and was current at the time of sampling – see the 'School participation' section.

[^] Includes Middle Eastern/Latin American/African (MELAA), Other Ethnicity, and ethnicity unknown

School and Student Participation

School participation

The Youth19 survey sampled schools from the Auckland, Waikato, and Tai Tokerau education regions. This differs from previous Youth2000 surveys, which sampled schools from throughout New Zealand. In 2019 schools from Auckland, Waikato, and Tai Tokerau accounted for 46% of all year 9–13 students in New Zealand, with sufficient representation of ethnic groups, urban and rural communities, and areas of differing socioeconomic deprivation to provide enough statistical power to extrapolate results to a national level.

At the time of sampling, there were 242 schools in the education regions of Auckland, Waikato and Tai Tokerau with students in year 9 or above (Education Counts, 2018). Single sex, co-education, public, private and fully integrated schools were included. Schools with 50 or fewer students were excluded, as were special schools where all students had disabilities that meant they were unable to participate. One school was excluded as it was closing. A further five small schools (<100 students) from Tai Tokerau were excluded through human error. Kura kaupapa Māori (state schools that operate within a whānau-based Māori philosophy and deliver the curriculum in te reo Māori) were excluded from randomisation and sampled separately.

Of the 161 eligible mainstream schools (excluding kura), we randomly selected 50% of the schools in each region (a total of 78 schools). Of these, 43 agreed to participate. A further two schools were invited to participate as pilot sites. Both agreed. No significant changes to methods were made between piloting and data collection from randomly selected schools, hence pilot schools were included in the final sample, giving a total of 45 mainstream schools. Of the 35 invited mainstream schools that did not participate, 31 declined, two initially agreed to participate and later declined, and two schools did not respond. In addition, from a total of eight kura kaupapa Māori across the three regions, two kura kaupapa Māori from each region (a total of six) were invited and four participated.

In total, 169 schools were eligible (161 mainstream and eight kura kaupapa Māori) and 86 were invited (78 randomised mainstream schools, two pilot mainstream schools and six kura kaupapa Māori). The final sample comprised 49 schools (45 mainstream and four kura kaupapa Māori), as shown in Table 2. This gives school response rates of 56% for mainstream schools, 67% for kura kaupapa Māori, and 57% for all schools combined.

Table 2: Characteristics of participating schools

	Eligible schools		Invited schools		Participating schools	
	n	%	n	%	n	%
Total*	169		86		49	
Education region						
Tai Tokerau	25	14.8%	10	11.6%	10	20.4%
Auckland	102	60.4%	53	61.6%	27	55.1%
Waikato	42	24.9%	23	26.7%	12	24.5%
Authority						
Private: Fully Reg.	20	11.8%	7	8.1%	2	4.1%
State: Integrated	28	16.6%	11	12.8%	6	12.2%
State: Not integrated	121	71.6%	68	79.1%	41	83.7%
School type						
Mainstream Secondary	161	95.3%	80	93.0%	45	91.8%
Kura Kaupapa Māori	8	4.7%	6	7.0%	4	8.2%
Size[^]						
Small	55	32.5%	25	29.1%	16	32.7%
Large	114	67.5%	61	70.9%	33	67.3%
School decile band						
Low (decile 1-3)	57	33.7%	28	32.6%	17	34.7%
Medium (decile 4-7)	63	37.3%	35	40.7%	21	42.9%
High (decile 8-10)	44	26.0%	20	23.3%	10	20.4%
School decile						
1	22	13.0%	9	10.5%	7	14.3%
2	22	13.0%	12	14.0%	5	10.2%
3	13	7.7%	7	8.1%	5	10.2%
4	21	12.4%	10	11.6%	7	14.3%
5	14	8.3%	7	8.1%	3	6.1%
6	11	6.5%	7	8.1%	3	6.1%
7	17	10.1%	11	12.8%	8	16.3%
8	9	5.3%	3	3.5%	1	2.0%
9	17	10.1%	7	8.1%	5	10.2%
10	18	10.7%	10	11.6%	4	8.2%
No decile information	5	3.0%	3	3.5%	1	2.0%

* Mainstream secondary schools and kura kaupapa Māori combined

[^] A small school is defined as one with fewer than 350 students. A large school has 350 or more students.

Student participation

For participating mainstream schools with 150 or more students in years 9–13, 30% of students were randomly selected from the roll. For the two schools with fewer than 150 students, at least 30 students were randomly selected to reduce the risk that individual students would be identifiable in reports of school results. In two small schools, all students were invited as requested by school management as a condition of school participation.

All year 9–13 students in participating kura kaupapa Māori were invited to participate (486 students), and 347 (71%) participated. A total of 12,359 students were randomly selected from mainstream schools and invited to participate, of which 7,374 (60%) participated. This number represents approximately 6% of all year 9–13 students in eligible schools.

Table 3: Characteristics of participating students

	Students attending eligible schools		Students attending invited schools		Students attending participating schools		Surveyed students	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Total	130,692		71,105		42,298		7,721	
Sex#								
Male	65,885	50.4%	34,715	48.8%	19,527	46.2%	3,472	45.0%
Female	64,807	49.6%	36,390	51.2%	22,771	53.8%	4,179	54.1%
Age								
13 years or younger	22,320	17.1%	12,155	17.1%	7,203	17.0%	1,403	18.2%
14 years	26,763	20.5%	14,553	20.5%	8,634	20.4%	1,745	22.6%
15 years	26,596	20.4%	14,585	20.5%	8,727	20.6%	1,698	22.0%
16 years	26,189	20.0%	14,400	20.3%	8,518	20.1%	1,474	19.1%
17 years or older	28,824	22.1%	15,412	21.7%	9,216	21.8%	1,401	18.1%
Education Region								
Auckland	97,415	74.5%	52,013	73.1%	31,028	73.4%	5,545	71.8%
Waikato	24,074	18.4%	14,693	20.7%	6,871	16.2%	1,248	16.2%
Tai Tokerau	9,203	7.0%	4,399	6.2%	4,399	10.4%	928	12.0%
Kura Kaupapa Māori								
Secondary Schools [^]	129,765	99.3%	70,408	99.0%	41,828	98.9%	7,374	95.5%
Kura Kaupapa Māori ^{^^}	927	0.7%	697	1.0%	470	1.1%	347	4.5%
School Year								
Year 9	26,998	20.7%	14,678	20.6%	8,638	20.4%	1,774	23.0%
Year 10	27,224	20.8%	14,898	21.0%	8,875	21.0%	1,688	21.9%
Year 11	27,313	20.9%	14,974	21.1%	8,904	21.1%	1,676	21.7%
Year 12	26,416	20.2%	14,517	20.4%	8,628	20.4%	1,406	18.2%
Year 13	21,878	16.7%	11,970	16.8%	7,223	17.1%	1,057	13.7%
Year 14	534	0.4%	62	0.1%	28	0.1%		
Year 15	329	0.3%	6	0.0%	2	0.0%		
School Decile								
1	11,760	9.0%	3,647	5.1%	2,995	7.1%	469	6.1%
2	8,832	6.8%	5,680	8.0%	2,506	5.9%	569	7.4%
3	9,175	7.0%	4,144	5.8%	3,100	7.3%	512	6.6%
4	14,384	11.0%	6,282	8.8%	4,787	11.3%	756	9.8%
5	10,294	7.9%	6,258	8.8%	3,287	7.8%	545	7.1%
6	10,145	7.8%	5,572	7.8%	2,121	5.0%	352	4.6%
7	17,084	13.1%	12,233	17.2%	9,080	21.5%	1,589	20.6%
8	8,534	6.5%	2,912	4.1%	707	1.7%	167	2.2%
9	22,554	17.3%	12,471	17.5%	9,162	21.7%	1,900	24.6%
10	16,491	12.6%	11,090	15.6%	4,410	10.4%	820	10.6%
No decile information	1,439	1.1%	816	1.1%	143	0.3%	42	0.5%
Ethnicity[*]								
Māori	24,898	19.1%	13,411	18.9%	8,399	19.9%	1,528	19.8%
Pacific	19,854	15.2%	9,095	12.8%	5,978	14.1%	945	12.2%
Asian	22,297	17.1%	12,411	17.5%	7,582	17.9%	1,776	23.0%
Other ^{**}	9,928	7.6%	5,478	7.7%	3,157	7.5%	389	5.0%
Pākehā and other European	53,715	41.1%	30,710	43.2%	17,182	40.6%	3,070	39.8%

* Ethnicity is categorised using the NZ census ethnicity prioritisation method

** Includes MELAA, Other Ethnicity, and ethnicity unknown

[^] Refers to secondary schools including private, co-ed, State integrated, not integrated, but excludes kura kaupapa Māori

^{^^} Sampling frame for kura kaupapa Māori was 100% of students available of the day of the survey (compared to 30% of students on the school roll in other schools).

Gender minority participants are not included and will be represented in a future report

Reasons for students not participating

Students could choose not to participate without having to say why. A total of 49 students arrived at the room but declined to participate in the survey once given an explanation of the survey. Twelve students consented to participate but completed only three or fewer questions; their responses were removed from the results.

There were 16 schools where student participation was less than 50%. In these schools, factors were linked to 2019 teacher

industrial action, the 2019/20 New Zealand measles outbreak, or the Ihumātao protest and occupation. Other non-participation is likely to be due to factors such as students having assessments, illness, field trips that they didn't want to miss and absenteeism or refusal to participate.

Time taken to complete the survey

To allow the survey to be completed in a single school period the questionnaire was reduced in length compared to the previous Youth2000 surveys. The average time taken to complete the survey and geocoding process was 46 minutes.

How to Use the Information in this Report

This report presents information reported by students who participated in the Youth19 survey. The Youth2000 series of surveys are the largest surveys of the health and wellbeing of young people in New Zealand and are of considerable importance for the purposes of planning and programme development for communities, schools and policy makers. However, as a voluntary survey, it is likely that a healthy respondent bias influences the results to be more positive. It is also important to remember that only students who were at school on the day of the survey were included resulting in more responses by students with good health, and fewer from regularly truant students. Hence, findings are likely to represent a positive view of the health of students in schools. Also, as the survey was carried out at a single time point, relationships between variables do not necessarily indicate cause and effect.

These youth health surveys have been designed to describe health and wellbeing issues for students attending secondary schools in New Zealand. We have randomly selected schools and then randomly selected students attending these schools to participate in the surveys. From the information obtained from these students, and adjusting for uneven probabilities of selection, response rates and the demographics of total population of secondary school students (see 'statistical analyses'), we estimate the prevalence of

various behaviours, risk factors and other issues in the population of New Zealand secondary school students.

The level of uncertainty of these estimates is indicated by the 95% confidence intervals. A confidence interval provides an indication of the precision of the estimated prevalence as an interval in which it is relatively certain that the true New Zealand student population prevalence sits. The wider the confidence interval, the more uncertain the estimate. Note that we have adjusted all confidence intervals in this report for the clustering of students within schools, reflecting evidence that students from the same school are more alike than those from different schools.

Information broken down by sex, age, ethnicity, deprivation grouping and urban/rural location of the student's home is presented in this report for the purposes of describing the health and wellbeing issues for these groups of students in New Zealand. This is to inform schools, communities and families of particular issues and where resources might need to be targeted. However, it is important not to place too much emphasis on apparent differences between groups especially when the numbers of students reporting on specific issues are small. As a general rule, if the confidence intervals around two estimates do not overlap then the differences are more likely to be important.

Reading the prevalence tables

For each item presented in the Youth19 prevalence tables we present several values.

Example table:

Smokes cigarettes weekly or more often		
	n (N)	% [95% CI]
Total	191 (7,154)	2.6 [2.2-3.0]

In each table 'n' refers to the number of students who responded in a particular way of interest. In this case the number who smoke cigarettes weekly or more (191 students). The large 'N' refers to the total number of students who responded to the question. In this example, 7154 students. The N value varies between questions as students could choose not to answer questions and students

were not asked detailed questions that did not apply to them. For example, students who did not drink alcohol were not asked questions about how often they drank alcohol.

The adjusted percentage (%) refers to the percentage of students who reported the particular response or behaviour once adjustments are made for weighting, clustering, and stratification in the sampling design as outlined under 'Statistical Analysis'. These can be regarded as an estimate of the true proportion of the population of all New Zealand secondary school students. The confidence interval (95% CI) indicates the precision of this estimate by providing an interval in which we are 95% sure the true value lies. This is similar to a 'margin of error' reported in some surveys.

Comparisons between 2001, 2007, 2012 and 2019 surveys

Results for key health indicators in 2001, 2007, 2012 and 2019 are included in tables at the end of each section in the *Youth19, Initial Findings* reports. When interpreting differences in results between survey waves, it is important to consider the issues raised on the previous pages, as well as differences between the questionnaires themselves, the response rates and the populations of participating students in each year.

To enable results from the 2001, 2007, 2012 and 2019 surveys to be compared, the Youth19 survey followed a similar methodology to the earlier surveys in the sampling of schools and students, the use of technology to enhance accuracy of reporting, and identical or similar questions and response options. However, due to the differences in sampling between 2001, 2007, and 2012, which were national level surveys, and 2019, a regional level survey, we have improved our analysis by adjusting data for all waves of the survey to account for differences in response rates across demographic groups, to better reflect the national student

population at the time of survey. Refer to the 'Statistical analysis' section for more information. This means that prevalence figures reported for previous years in the Youth19 report may differ slightly from the same data reported in previous years.

Kura kaupapa Māori students are not counted in trends tables as they were not included in prior Youth2000 series total population findings.

School and student response rates have declined over the 19 year period. Schools reported that they were overwhelmed with research requests and other demands during the 2019 school year including rolling teacher industrial action, a measles outbreak and increased pressure to perform. High decile schools (wealthier schools) are under-represented in this survey and there are fewer males. There has been a significant increase in the proportion of Asian students in the 2019 sample, largely due to the ethnic composition of the Auckland school populations who were sampled.

Table 4: Youth2000 series school and student participation by survey year

	Youth2001		Youth2007		Youth2012		Youth2019	
	n	%	n	%	n	%	n	%
Schools								
Total Schools	114		96		91		49	
Decile								
High	40	35.1%	29	30.2%	29	31.9%	10	20.8%
Low	23	20.2%	15	15.6%	26	28.6%	17	35.4%
Medium	51	44.7%	52	54.2%	36	39.6%	21	43.8%
Students								
Total Students	9,567		9,107		8,500		7,721	
Sex								
Female	5,152	53.9%	4,187	46.0%	4,623	54.4%	4,179	54.6%
Male	4,414	46.1%	4,911	54.0%	3,874	45.6%	3,472	45.4%
Age								
13 and under	2,050	21.5%	1,860	20.4%	1,838	21.7%	1,403	18.2%
14	2,285	23.9%	2,101	23.1%	1,896	22.3%	1,745	22.6%
15	2,178	22.8%	1,973	21.7%	1,755	20.7%	1,698	22.0%
16	1,725	18.1%	1,743	19.2%	1,578	18.6%	1,474	19.1%
17 and over	1,308	13.7%	1,423	15.6%	1,422	16.8%	1,401	18.1%
Ethnicity*								
Māori	2,340	24.8%	1,702	18.7%	1,701	20.0%	1,528	19.8%
Pacific	768	8.2%	924	10.2%	1,201	14.1%	945	12.3%
Asian	679	7.2%	1,126	12.4%	1,051	12.4%	1,776	23.0%
Other**	230	2.4%	531	5.8%	511	6.0%	389	5.05%
Pākehā and other European	5,406	57.4%	4,797	52.8%	4,024	47.4%	3,070	39.8%

* Ethnicity is categorised using the NZ census ethnicity prioritisation method

** Includes MELAA, Other Ethnicity, and ethnicity unknown

Demographics

Ethnicity

Students reported their ethnicity to Statistics New Zealand level 4 classification and were able to choose as many ethnicities as applied to them.

Ethnic prioritisation is utilised in this report to ensure that an equity approach is taken in all analyses. In ethnic prioritisation, each respondent is allocated to a single ethnic group based on a pre-determined hierarchy. Prioritisation does not assume this is the ethnic group that a respondent identifies most strongly with, but ensures that Māori as tangata whenua and smaller ethnic groups are not invisible (Ministry of Health, 2017; Cormack & Robson, 2010). Total response reporting may be used when describing a specific ethnicity to ensure that all participants of that ethnicity are included. In total response reporting, each person

who reports more than one ethnic group is included in all of the groups they report. These people will appear in the data more than once, thus the percentages of the total sample attributed to each ethnic group may add to more than 100%.

The total number of ethnic groups reported by students is also substantially lower than previous years. This may be due to a change in the way the question was asked. Students had to write the answer rather than checking tick boxes as in previous years.

Due to small response sizes from Middle Eastern/Latin American/African (MELAA), Other Ethnicities, and 'Residual' Ethnicities, these have been combined and will be reported as "Other" in this report.

Table 5: Ethnicity priority order for level 1 ethnicity responses

Priority order	Ethnic group code (Level 1)	Ethnic group code description
1	2	Māori
2	3	Pacific Peoples
3	4	Asian
4	5	Middle Eastern/Latin American/African (MELAA)
5	6	Other Ethnicity
6	1	Pākehā and other European
9	9	Residual Categories

Table 6: Youth19 participants by ethnicity, sex and age*

	Māori		Pacific		Asian		Other^		Pākehā and Other European		Total	
	n	%	n	%	n	%	n	%	n	%	n	%
Total	1528		945		1776		389		3070		7721	
Sex												
Female	812	53.8%	553	59.7%	945	53.5%	194	50.5%	1671	54.7%	4179	54.6%
Male	696	46.2%	371	40.3%	823	46.5%	189	49.5%	1385	45.3%	3472	45.4%
Age												
13 and under	320	20.9%	168	17.8%	244	13.7%	86	22.1%	580	18.9%	1403	18.2%
14	382	25.0%	209	22.1%	359	20.2%	97	24.9%	694	22.6%	1745	22.6%
15	351	23.0%	209	22.1%	395	22.2%	81	20.8%	659	21.5%	1698	22.0%
16	247	16.2%	185	19.6%	368	20.7%	67	17.2%	607	19.8%	1474	19.1%
17 and over	228	14.9%	174	18.4%	410	23.1%	58	14.9%	530	17.3%	1401	18.1%

* Ethnicity is categorised using the NZ census ethnicity prioritisation method

^Includes MELAA, Other Ethnicity, and ethnicity unknown

Table 7: Youth19 participants by ethnicity, sex and age using total ethnicity reporting

	Māori		Pacific		Asian		Other*		Pākehā and other European	
	n	%	n	%	n	%	n	%	n	%
Total	1528	19.8%	1204	15.6%	1927	25.0%	434	5.6%	4235	54.9%
Sex										
Male	812	53.1%	714	59.3%	1029	53.4%	221	50.9%	2345	55.7%
Female	696	45.5%	467	38.8%	889	46.1%	207	47.7%	1868	44.3%
Age										
13 and under	320	20.9%	218	18.1%	268	13.9%	94	21.7%	805	19.0%
14	382	25.0%	273	22.7%	391	20.3%	110	25.3%	978	23.1%
15	351	23.0%	274	22.8%	433	22.5%	94	21.7%	905	21.4%
16	247	16.2%	219	18.2%	395	20.5%	73	16.8%	826	19.5%
17 and over	228	14.9%	220	18.3%	440	22.8%	63	14.5%	721	17.0%

The total adds up to more than 100% because students could choose more than one response option. Consequently, students who identify with more than one ethnic grouping are included in 2 or more of the ethnic groups. It is inappropriate to compare these ethnic specific proportions as mutually exclusive categories.

* Includes MELAA, Other Ethnicity, and ethnicity unknown

Table 8: Youth19 participants by number of ethnic groupings

Number of ethnic groups	n	%
1	4462	57.8
2	2804	36.3
3 or more	455	5.9
Total	7721	100.0

Sex and gender

In previous Youth 2000 surveys, participants could only identify as male or female. In Youth19, however, participants could select a third option (“another way”) to describe themselves. Those who selected this option and/or reported that they were transgender or questioning their gender identity were also asked what sex they were assigned at birth and how they described their current gender identity.

Reporting for gender diverse students is a priority for the Youth19 group and results will be available later in 2020. These results are not included in this *Initial Findings* report to ensure that they are not provided without important contextual information.

To enable trend analysis with earlier Youth 2000 survey waves, we have included the total population and only those who identified as male or female in this report.

New Zealand Deprivation Index

The NZDep is a measure of neighbourhood deprivation, based on the characteristics of households in small area units (meshblocks). The latest NZDep measure, NZDep2018, is based on nine variables from the 2018 census, as shown in Table 9. NZDep2018 provides a deprivation score for each Statistical Area 1 and its constituent meshblocks.

In New Zealand, meshblocks are the smallest geographical units defined by Statistics New Zealand (Atkinson et al., 2019).

During the survey, meshblock data was collected from consenting students. This allowed us to determine the NZDep2018 score for the meshblock that contained each student’s usual place of residence.

Table 9: Variables included in the construction of NZDep2018 Deprivation Index

Dimension of deprivation	Description of variable (in order of decreasing weight in the index)
Communication	People with no access to the internet at home
Income	People aged 18-64 receiving a means tested benefit
Income	People living in equivalised* households with income below an income threshold
Employment	People aged 18-64 unemployed
Qualifications	People aged 18-64 without any qualifications
Owned home	People not living in own home
Support	People aged <65 living in a single parent family
Living space	People living in equivalised* households below a bedroom occupancy threshold
Living condition	People living in dwellings that are always damp and/or always have mould greater than A4 size

* Equivalisation: methods used to control for household composition.

From NZDep2018 Index of Deprivation, User's Manual (2019)

Table 10: Distribution of Youth19 participants by NZ Deprivation Index

NZ deprivation index decile	Number	Percent	Deprivation grouping	Number	Percent
1	683	9%	Low deprivation	2,110	27%
2	741	10%			
3	686	9%			
4	714	9%	Medium deprivation	2,809	27%
5	750	10%			
6	715	9%			
7	630	8%			
8	568	7%	High deprivation	1,969	26%
9	587	8%			
10	814	11%			
Unknown	833	11%	Missing	833	11%
Total	7721	100%		7721	100%

School decile

School decile is calculated by the Ministry of Education for purposes of funding allocation. It reflects the proportion of students at a school who are from low socio-economic neighbourhoods, based on small-area (meshblock) census data on five indicators: household income, household crowding, parental educational qualifications, proportion of parents on income support benefits, and occupational skill level of employed parents. Further details about how school decile is calculated are available from the Ministry of Education. We grouped school

decile into low (deciles 1-3), medium (4-7), and high (8-10), where lower decile means more socioeconomically disadvantaged (i.e. generally financially worse off households). Note that this measure is reported differently from neighbourhood deprivation (NZDep). Low deprivation (low dep) households have the *least* deprivation.

In summary, low decile schools are generally in lower income or poorer communities. Low deprivation areas ('low dep') are those that are generally better off.

Urban/rural classification

Urban areas are statistically defined areas with no administrative or legal basis. They are characterised by high population density with many built environment features where people and buildings are located close together for residential, cultural, productive, trade and social purposes (Statistics New Zealand, 2019).

- Major urban areas contain 100,000 or more residents.
- Large urban areas contain 30,000 to 99,999 residents.
- Medium urban areas contain 10,000 to 29,999 residents.
- Small urban areas contain 1,000 to 9,999 residents.

Rural settlements are statistically defined areas with no administrative or legal basis. A rural settlement is a cluster of residential dwellings about a place that usually contains at least one community or public building.

- Rural settlements contain an estimated population of 200 to 1,000 residents or at least 40 residential dwellings.
- These settlements have a visible population centre or a reasonably compact area with a population density of at least 200 residents per square kilometre.

Table 11: Distribution of Youth19 participants by urban/rural classification

Urban/rural descriptor	Number	Percent	Urban/rural grouping	Number	Percent
Major urban area	4,686	61%	Urban (more than 10,000 people)	5,220	68%
Large urban area	230	3%			
Medium urban area	304	4%			
Small urban area	556	7%	Towns (1,000–9,999 people)	556	7%
Rural settlement	202	3%	Rural (fewer than 1,000 people)	1,113	14%
Rural other	911	12%			
Unknown	832	11%	Missing	832	11%
Total	7721	100%		7721	100%

Table 12: Distribution of Youth19 participants by sex, grouped by age, deprivation index and urban/rural classification

	Male		Female		Total	
	n	%	n	%	n	%
Total	3,475	100.0%	4,179	100.0%	7,721	100.0%
Age						
13 and under	637	18.3%	752	18.0%	1,403	18.2%
14	771	22.2%	955	22.9%	1,745	22.6%
15	776	22.3%	912	21.8%	1,698	22.0%
16	697	20.1%	760	18.2%	1,474	19.1%
17 and over	594	17.1%	800	19.1%	1,401	18.1%
Total	3475	100.0%	4179	100.0%	7721	100.0%
Deprivation						
Low deprivation	946	27.2%	1,159	27.7%	2,110	27.3%
Medium deprivation	1,244	35.8%	1,554	37.2%	2,809	36.4%
High deprivation	881	25.4%	1,072	25.7%	1,969	25.5%
Unknown	404	11.6%	394	9.4%	833	10.8%
Total	3475	100.0%	4179	100.0%	7721	100.0%
Urban/rural						
Urban	2,301	66.2%	2,894	69.3%	5,220	67.6%
Towns	248	7.1%	306	7.3%	556	7.2%
Rural	523	15.1%	585	14.0%	1,113	14.4%
Unknown	403	11.6%	394	9.4%	832	10.8%
Total	3475	100.0%	4179	100.0%	7721	100.0%

Table 13: Distribution of Youth19 participants by deprivation index, sex, age and urban/rural classification

	Low Deprivation		Medium Deprivation		High Deprivation	
	n	%	n	%	n	%
Total	2,110	100.0%	2,809	100.0%	1,969	100.0%
Sex						
Female	1,158	55.0%	1,554	55.9%	1,073	54.9%
Male	945	44.9%	1,244	44.1%	880	45.1%
Total	2,103	100.0%	2,778	100.0%	1,953	100.0%
Age						
13 and under	399	18.9%	537	19.1%	355	18.0%
14	503	23.8%	654	23.3%	444	22.5%
15	445	21.1%	613	21.8%	478	24.3%
16	400	19.0%	513	18.3%	363	18.4%
17 and over	363	17.2%	492	17.5%	329	16.7%
Total	2,110	100.0%	2,809	100.0%	1,969	100.0%
Urban/rural						
Urban	1,649	78.2%	2024	72.1%	1,546	78.5%
Towns	83	3.9%	251	8.9%	222	11.3%
Rural	378	17.9%	534	19.0%	201	10.2%
Total	2,110	100.0%	2,809	100.0%	1,969	100.0%

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