

ADDRESSING ALCOHOL HARM IN ADOLESCENTS

Technical Report 4: Pasifika analysis.
Methods and data tables

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Addressing Alcohol Harm in Adolescents

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Introduction

About the project

‘Addressing alcohol harm in adolescents’ is a research and advocacy project, undertaken as partnership between Alcohol Healthwatch and the Adolescent Health Research Group (the team behind the Youth2000 survey series). The project began in January 2022, funded by a nib foundation Health Smart Grant. Additional funding from the Health Promotion Agency/Te Hiringa Hauora (which has since become part of Te Whatu Ora – Health New Zealand) was received in June 2022, enabling us to expand the scope of the project. The project’s goals are:

1. Add to the evidence base about adolescent drinking and alcohol-related harm in Aotearoa New Zealand
2. Inform evidence-based policy and community-level action to reduce hazardous drinking and eliminate disparities in alcohol harm among young people
3. Build community health literacy around alcohol harm and how to reduce it effectively.

Phase 1. The first phase of the project investigated patterns of alcohol use and self-reported alcohol harm in secondary students overall. The findings were released in September 2022.

Phase 2. The second phase of the project focuses on three priority populations at greater risk of alcohol harm during adolescence: Māori, Pasifika, and Rainbow youth. This report and the associated factsheet are the final outputs from phase two.

Webinars and factsheets. The project outputs include a series of seven factsheets and four webinars (Sept 2022 – Feb 2023) to disseminate the key findings and promote evidence-based policy and community action to address adolescent alcohol harm.

All of the project outputs, including webinar recordings, are published on the Youth19 website (www.youth19.ac.nz) and the Alcohol Healthwatch website (www.ahw.org.nz).

About this report

This report presents findings about adolescent alcohol use and experience of alcohol harm among Pasifika secondary school students, and the methods used to reach those findings. There is an associated factsheet and webinar, which present key findings for a general audience. This report builds on and updates previous findings about alcohol use in Pasifika youth.¹⁻⁴

Why does adolescent drinking matter?

Alcohol is a significant contributor to health loss and health inequity in Aotearoa New Zealand, and hazardous drinking often begins in adolescence. Although many young people do not drink alcohol at all, those who do drink are particularly vulnerable to alcohol harms. For a number of reasons, young people experience more harm per drink than older age groups.⁵ Drinking alcohol at a young age can be a significant contributor to serious short and long term harms, such as injuries, mental and emotional distress, depression, suicidality, unwanted sex, and having performance at school affected.^{6,7} Some alcohol-related harms, such as negative impacts on brain development, are irreversible.⁸ There is evidence that alcohol intoxication at a young age puts people at greater risk of substance use disorders and mental health problems in adulthood.⁹ Therefore preventing alcohol harm among adolescents is important.

The context for alcohol use among Pasifika students

To prevent alcohol harm among Pasifika adolescents, it is essential to understand the historical and current factors that influence alcohol use. Pasifika ethnicities in Aotearoa have differing histories and cultural expectations relating to alcohol.¹⁻¹⁰ The majority of Pasifika families are affiliated with at least one church and the use of alcohol is generally discouraged by church teachings.³ For Pasifika who drink, heavy alcohol use is sometimes a symptom of broader social issues, such as socioeconomic disadvantage, racism and/or psychological distress.¹¹

The neighbourhood environment is a strong determinant of adolescent alcohol use and harm.¹² Socioeconomically deprived neighbourhoods in Aotearoa have more alcohol outlets than less deprived neighbourhoods.¹³ The high proportion of Pasifika families experiencing deprivation, coupled with ineffective laws to limit the number of alcohol outlets, results in Pasifika often living in areas with high alcohol outlet density.¹¹ The proximity (median metres) to the nearest alcohol outlet is lower for Pacific peoples living in Aotearoa than other ethnic groups.¹⁴ Living in close proximity to alcohol outlets is associated with hazardous drinking, particularly for certain demographic groups including Pasifika young men (15-24 years).^{14,15} Research using wearable cameras found Pasifika children were exposed to alcohol marketing three times more often than NZ European children, e.g. via shop-front signage, sports sponsorship, and merchandise.¹⁶ The wide accessibility and marketing of alcohol serves to normalise alcohol use and plays a major role in alcohol harm inequities.

School and peer contexts also influence alcohol use and alcohol harm, for example alcohol is often normalised as part of teen social life and in the culture surrounding certain sports.¹⁷⁻¹⁹

Pasifika leaders and communities have been at the forefront of advocacy to prevent alcohol harm. Research shows that Pasifika adults have high levels of support for alcohol control policies (e.g. stronger restrictions on advertising and sponsorship), higher than other ethnic groups.²⁰

Methods

The findings in this report are based on data from the 2007, 2012 and 2019 waves of the Youth 2000 survey series (also known as Youth07, Youth12 and Youth19). More detailed information about the methods for these surveys is available elsewhere²¹⁻²⁴ and is summarised briefly below.

Ethics

Each survey wave was approved by the University of Auckland Human Participants Ethics Committee, Reference Numbers 2005/414 (2007), 2011/206 (2012) and 2018/023450 (2019).

Sampling methods

The sampling frame was secondary school students. All waves used a two-stage clustered sampling design with randomly selected schools and, within these, randomly selected students. In 2001, 2007 and 2012, one-third of NZ's secondary schools were selected and in each participating school of >150 students, 20% of the roll was invited to participate. In schools with fewer students, 30 students were randomly selected. The last wave (2019) sampled schools from three regions (Auckland, Tai Tokerau and Waikato), an demographically diverse area that includes 47% of NZ's secondary school population. In each region 50% of schools were randomly sampled and 30% of students on their roll were invited to participate. In 2019, all kura kaupapa Māori (Māori immersion schools) from the three regions were also invited, with all kura students invited to participate. In all waves, parents and caregivers were given information about the survey and could opt for their child to be excluded. Non-excluded students were randomly selected from school rolls and gave their own written consent at the start of the survey. Participation was anonymous.

Response rates

School response rates were 84% (2007), 73% (2012) and 57% (2019). Student response rates were 74%, 68% and 60% respectively. The number of participating schools and students in each wave is provided in Table 1, along with participant characteristics.

Survey design and administration

The self-report questionnaires were delivered via digital devices using M-CASI technology (text on screen and read aloud with headphones for privacy in English or Māori) during school time. The branching questionnaire design minimised exposure to irrelevant questions. The questionnaires covered demographics, identity, and key health and wellbeing indicators. (The full Youth19 questionnaire is available here: <https://bit.ly/3MGdD39>). The survey items used in the current research project are detailed in Appendix A. Unless otherwise stated, the wording of survey questions and response options has been consistent over the three survey waves (2007, 2012, 2019) enabling comparison over time.

Geocoding

While the survey was being administered, a research assistant asked each student to enter the address of the place they usually live into a custom web app that resolved and saved their census meshblock number without storing their specific address. Each student's meshblock was stored in a database against their unique survey 'login' and later coupled with their survey responses. Meshblock data was used to determine NZ Deprivation Index (NZDep2018) decile, and urban/small town/rural designation.

Table 1: Survey respondent numbers and characteristics, unweighted

	2007		2012		2019	
	N	%	N	%	N	%
Total schools	96	-	91	-	49	-
Total students	9,098	100.0	8,487	100.0	7,721	100.0
Gender[#]						
Female	4,187	46.0	4,618	54.4	4,179	54.6
Male	4,911	54.0	3,869	45.6	3,472	45.4
Age						
13 years or under	1,859	20.4	1,838	21.7	1,402	18.2
14	2,100	23.1	1,895	22.3	1,745	22.6
15	1,973	21.7	1,755	20.7	1,698	22.0
16	1,743	19.2	1,578	18.6	1,474	19.1
17 years or over	1,423	15.6	1,421	16.7	1,401	18.2
Prioritised ethnicity*						
Māori	1,702	18.7	1,697	20.0	1,528	19.8
Pasifika	924	10.2	1,200	14.1	945	12.3
Asian	1,126	12.4	1,049	12.4	1,776	23.0
Other**	549	6.0	523	6.2	389	5.1
Pākehā & other European	4,797	52.7	4,018	47.3	3,070	39.8
Total response ethnicity***						
Pasifika	1,178	12.9	1,444	17.0	1130	14.6

2019 was the first survey in which students were able to report a gender other than male or female. A total of 63 students did not report a male or female gender in 2019.

* Ethnicity is categorised here using the Ministry of Health ethnicity prioritisation method.²⁵

** 'Other' ethnicity includes Middle Eastern, Latin American, African, and other ethnicities and unknown ethnicity.

*** Total response classifies all participants who included at least one Pasifika ethnicity as Pasifika

Ethnic classification

Survey participants were asked: 'Which ethnic group do you belong to?' and could give as many responses as were relevant. For this study on alcohol use and harm, we used 'total response' to define Pasifika students. This means that all students who included at least one Pasifika ethnicity

among their ethnicities was counted as Pasifika. For example, someone who identified as both Māori and Tongan would be included in the Pasifika group, as would someone who identified as NZ European, Dutch, Chinese and Samoan. This method of classifying ethnicity differs from the 'prioritisation' method (used in the table above) where each person is assigned to a single ethnic group, and those with dual Māori and Pacific ethnicity are counted as Māori.

In our analyses, we used non-Māori/non-Pasifika as the comparator. (Note that findings for Māori are presented in a separate report.²⁶) If readers wish to compare Pasifika findings with findings for secondary students overall, please refer to Technical Report 1 for overall findings.²⁷

Measures

Indicators of alcohol use were i) lifetime use of alcohol (i.e. ever/never had more than a few sips), ii) current use of alcohol (i.e. students who continued to drink at the time of the survey), iii) frequency of alcohol use, iv) prevalence and frequency of binge drinking (5+ drinks/session) in the past month, v) quantity consumed on a typical drinking occasion, vi) sources of alcohol, and vii) experiences of alcohol harm. The survey questions and details about derivation of measures are provided in Appendix A.

The study explored potential risk and protective factors in the home, school and neighbourhood environments, and tested their association with high-risk drinking. Protective factors included measures of cultural connectedness which were only asked of Samoan, Cook Island Māori, Tongan and Niuean students (i.e. the four largest Pacific ethnicities in Aotearoa). Details about the risk and protective factors and how they were measured are provided in Appendix A.

Weighting and national estimates

Analysis was conducted using the 'survey' package in R (R Statistical Foundation). Data were initially weighted using inverse probability of selection (IPS) weights [calculated for each student as: (total number of schools ÷ schools that participated) × (total number of eligible students in the student's school ÷ students from that school that participated)]. Generalised raking was used to correct for non-response and to calibrate the results of each survey wave to the national secondary school population in terms of school decile, student age, gender, and ethnicity. Further details about weighting and calibration are available elsewhere.²² All of the findings presented in this report are national estimates.

Analysis

For trend analyses (comparing outcomes for 2007, 2012 and 2019), to ensure comparability with previous years, the 2019 data excluded kura kaupapa Māori, and findings were calibrated to the national secondary school population for each survey year (see detail on weighting above). We calculated percentages and 95% confidence intervals for the estimated national prevalence of each outcome in each survey year, for Pasifika and non-Māori/non-Pasifika (see Tables 3 and 4). We also investigated the quantity of alcohol typically consumed by Pasifika students who drank, and how this had changed over time (Table 5).

To explore drinking patterns among Pasifika students in 2019, we used the full data set including kura kaupapa Māori (Tables 6-8). This analysis included stratification by the four largest Pasifika ethnicities in Aotearoa: Samoan, Tongan, Cook Island Māori and Niuean (Table 8).

Data on alcohol harm was not collected in the 2019 survey. To investigate self-reported alcohol harm, we used the 2012 survey's nine items about alcohol harm (e.g. got injured, had unprotected

sex, had unwanted sex, performance at school affected etc) – see Appendix A for details. We calculated the proportion of current drinkers who reported experiencing each type of harm, by ethnicity (Pasifika vs non-Māori/non-Pasifika) – see Table 9.

We then derived a total harm score (range 0-27) for current drinkers. For each of the nine harm indicators, a score of 1 was given if the harm was experienced more than a year ago, 2 if the harm had been experienced once or twice in the past year, and 3 if it had been experienced 3 or more times in the past year. This aggregate measure enabled us to investigate differences in average alcohol harm score between Pasifika and non-Māori/non-Pasifika (Table 10). We used multiple regression to explore mediators of the ethnic difference in alcohol harm. We modelled the ethnic difference in alcohol harm, then added age and sex to the model to estimate baseline differences adjusting for these potential confounders. We then included neighbourhood deprivation (NZ Dep), and alcohol use variables (frequency of alcohol use, amount of alcohol typically consumed, frequency of past month binge drinking), separately, then together to test the extent to which these variables mediated the ethnic differences in self-reported alcohol harm (Table 11).

In the absence of self-reported alcohol harm data for 2019, we categorised participants into four ‘risk of alcohol harm’ categories, based on self-reported patterns of alcohol use in 2019 (Table 12). The categories were: non-drinker, small risk, high risk, very high risk. The term ‘small risk’ was used to differentiate from official ‘lower risk drinking guidelines’ and reflects the fact that no level of alcohol use is completely free from risk. Appendix B provides a flow chart of the categorisation process. Non-drinkers were defined as those who had never drunk alcohol (more than a few sips) or who reported that they did not drink any more. The criteria for the remaining groups are detailed in Table 2 and Appendix B.

Criteria were based on expert input from advisory group members and 2012 findings about the relationship between drinking patterns and harm in secondary school students (see Technical Report 1).²⁷ For example, we found no difference in average harm score between those who reported no alcohol use in the last month and those who reported alcohol use on one occasion. Therefore, once a month or less was considered a low-risk frequency. For typical quantity consumed and frequency of binge drinking, criteria differed for those aged under 16 and those aged 16 and over, reflecting the fact that younger people experienced greater harm at the same level of consumption in 2012.²⁷

Table 2: Criteria for categorisation into risk of alcohol harm groups.

	Small risk of harm		High risk of harm		Very high risk of harm	
	<16 yrs	16+ yrs	<16 yrs	16+ yrs	<16 yrs	16+ yrs
Frequency	Once in last 4 weeks or less	Once in last 4 weeks or less	2-3 times a month	2-3 times a month to once a week	Once a week or more often	Several times a week/most days
Typical quantity	1 drink	1-2 drinks	2-4 drinks	3-9 drinks	5+ drinks	10+ drinks
Binge drinking in past 4 weeks	None	None	Once	1-3 times	More than once	Weekly or more often

As detailed in the flow chart in Appendix B, current drinkers were categorised as ‘very high risk’ if they met at least one criterion for that category. The remaining drinkers were then assessed for the

‘high risk’ category. Those who did not meet any of the ‘high risk’ criteria were classified as ‘small risk’.

Potential risk and protective factors were selected in consultation with Pacific advisors to the project. We used descriptive statistics to investigate exposure to each potential risk or protective factor among Pasifika and non-Māori/non-Pasifika (Tables 13 and 14).

We used logistic regression to investigate the relationship between high-risk/very-high-risk drinking (grouped) and potential risk and protective factors in 2019 (Tables 15 and 16). Non-drinkers/small risk (grouped) were the reference group. All models were adjusted for age, gender and NZ Deprivation Index band (low, med, high), and results were expressed as Odds Ratios and 95% Confidence Intervals.

Limitations

Limitations must be borne in mind when interpreting these findings. Among students, those absent from school or choosing not to participate may have higher levels of alcohol use than those who took part in the survey, leading to underestimates of alcohol use. Furthermore, findings about alcohol use and alcohol harm in secondary school students are not generalisable to adolescents who have left or been excluded from school. Adolescents enrolled in secondary school are at a lower risk of alcohol harm than adolescents outside the school system, e.g. attending alternative schools, or NEET (not in employment, education, or training).²⁸ Therefore our school-based findings almost certainly underestimate alcohol use and related harm in 13-18 year old Pasifika overall. Further research is needed to better understand drinking patterns and alcohol harm in adolescents outside the school setting.

School and student response rates have decreased over time, increasing the possibility of selection bias.

The 2019 survey was regional, rather than national. National estimates were calculated for all survey waves to allow comparison over time, but comparisons between 2019 and earlier waves could be biased by regional differences over and above demographic differences (e.g. geographical differences in youth drinking culture).

This report includes some analyses by Pasifika ethnicity for the four largest groups in Aotearoa New Zealand: Samoan, Cook Island, Tongan, and Niuean. Small sample sizes impacted on the precision of estimates in these analysis (i.e. confidence intervals are wide), and made meaningful analysis for other smaller Pasifika ethnic groups impossible.

It is important to note that associations between risk and protective factors and alcohol outcomes may or may not be causal – causality cannot be determined in cross-sectional surveys of this nature.

The 2019 findings are the most recent available from the Youth2000 series on alcohol use, yet because of major social changes since 2019 (including changes associated with the Covid19 pandemic), drinking patterns may have changed since 2019. Indeed, recently published findings from the ‘What about me’ survey²⁹ indicate that hazardous drinking among adolescents may have risen sharply since 2019.

Data on experience of alcohol harm was not collected in the 2019 survey, so the 2012 alcohol harm findings presented here are the most recent available, but somewhat dated. A further limitation of the alcohol harm findings is that they are based on self-report and focus on immediate and tangible

consequences of drinking. There are other important harms associated with alcohol use that may be imperceptible to young people and not picked up in the study, e.g. there is evidence that adolescent alcohol use can contribute to depression and suicidality and put people at greater risk of developing alcohol dependence in adulthood.⁹³⁰ Such 'invisible' impacts of alcohol use are not identified in this study.

Data Tables

Trends in alcohol use, 2007 - 2019

As shown in Tables 3 and 4, prevalence of alcohol use declined substantially between 2007 and 2019, with most of the decline concentrated in the 2007-2012 period. For most indicators, declines have been similar (in absolute terms) between Pasifika and non-Māori/non-Pasifika. However the proportion of Pasifika reporting consuming 10 or more drinks on a typical occasion did not decrease over time among current drinkers. Ethnic differences were greatest for this indicator, with Pasifika substantially more likely to report very heavy drinking than non-Māori/non-Pasifika.

Table 3: Pasifika secondary students, prevalence of alcohol use indicators, 2007 - 2019

	2007		2012		2019	
	n(N)	Weighted % (95% CI)	n(N)	Weighted % (95% CI)	n(N)	Weighted % (95% CI)
Ever drinking	637 (976)	67.3% (63.9%, 70.8%)	659 (1334)	54.0% (50.9%, 57.2%)	434 (985)	46.7% (43.1%, 50.3%)
Current drinking	466 (969)	49.7% (45.7%, 53.7%)	436 (1330)	36.4% (33.2%, 39.5%)	299 (982)	32.7% (29.5%, 35.9%)
Past month drinking	346 (969)	37.5% (33.8%, 41.2%)	272 (1330)	24.0% (21.4%, 26.6%)	196 (982)	20.8% (18.1%, 23.5%)
Drinking weekly or more often	138 (969)	14.5% (12.6%, 16.3%)	79 (1330)	6.9% (4.9%, 8.9%)	52 (982)	6.1% (4.3%, 7.9%)
Past month binge drinking in population	301 (960)	33.2% (28.7%, 37.8%)	244 (1324)	21.4% (18.9%, 23.9%)	156 (972)	16.2% (13.7%, 18.8%)
Past month binge drinking in current drinkers	301 (457)	67.5% (62.2%, 72.9%)	244 (430)	59.5% (54.9%, 64.1%)	156 (289)	51.2% (46.7%, 55.7%)
Drinking 10+ drinks on a typical occasion over population	135 (965)	14.6% (10.1%, 19.1%)	113 (1326)	9.7% (8.1%, 11.3%)	85 (976)	10.7% (7.9%, 13.5%)
Drinking 10+ drinks on a typical occasion in current drinkers	135 (462)	29.6% (22.5%, 36.7%)	113 (432)	26.9% (22.6%, 30.9%)	85 (293)	33.0% (26.05, 40.0%)

Table 4: Non-Māori/non-Pasifika secondary students, prevalence of alcohol indicators, 2007 - 2019

	2007		2012		2019	
	n(N)	Weighted % (95% CI)	n(N)	Weighted % (95% CI)	n(N)	Weighted % (95% CI)
Ever drinking	4186 (6014)	72.1% (70.2%, 74.0%)	3022 (5470)	59.5% (57.6%, 61.4%)	2280 (4981)	53.2% (51.0%, 55.5%)
Current drinking	3575 (6003)	62.8% (60.9%, 64.7%)	2473 (5461)	49.4% (47.6%, 51.2%)	1946 (4972)	47.0% (44.8%, 49.1%)
Past month drinking	2697 (6003)	47.7% (46.0%, 49.5%)	1751 (5461)	35.9% (34.0%, 37.9%)	1409 (4972)	34.5% (32.4%, 36.7%)
Drinking weekly or more often	986 (6003)	17.6% (16.5%, 18.8%)	439 (5461)	9.1% (8.1%, 10.1%)	326 (4972)	9.3% (7.4%, 11.2%)
Drinking 10+ drinks on a typical occasion in population	1861 (5975)	33.4% (31.7%, 35.1%)	1151 (5451)	23.7% (22.0%, 25.4%)	820 (4950)	21.0% (19.0%, 23.0%)
Drinking 10+ drinks on a typical occasion in current drinkers	1861 (3547)	53.3% (51.5%, 55.2%)	1151 (2463)	48.0% (45.7%, 50.3%)	820 (1924)	45.1% (42.2%, 47.9%)
Past month binge drinking in population	452 (5974)	7.9% (7.1%-8.7%)	226 (5442)	4.9% (4.0%-5.8%)	141 (4941)	3.7% (3.0%-4.4%)
Past month binge drinking in current drinkers	452 (3546)	12.6% (11.5%-13.8%)	226 (2454)	9.9% (8.4%-11.5%)	141 (1915)	7.9% (6.6%-9.2%)

Table 5: Quantity of alcohol usually consumed, Pasifika current drinkers, 2019

	2007		2012		2019	
	n (N)	Weighted % (95% CI)	n(N)	Weighted % (95% CI)	n(N)	Weighted % (95% CI)
1-2 drinks	100 (462)	18.8 (15.0, 22.5)	92 (423)	19.7 (16.4, 23.0)	69 (293)	23.1 (17.8, 28.5)
3-4 drinks	94 (462)	20.7 (16.4, 25.0)	89 (432)	19.0 (15.3, 22.8)	55 (293)	16.9 (13.8, 19.9)
5-9 drinks	133 (462)	30.9 (27.0, 34.9)	138 (432)	34.3 (30.8, 37.8)	84 (293)	27.0 (23.6, 30.4)
10+ drinks	135 (462)	29.6 (22.5, 36.7)	113 (432)	26.9 (22.9, 30.9)	85 (293)	33.0 (26.0, 40.0)

Drinking patterns among Pasifika, 2019

For some Pasifika students, alcohol use starts young, with 25% of those aged 13 or younger reporting ever drinking alcohol in 2019 (Table 6). Parents and friends were the most common sources of alcohol (Table 7).

Table 6: Ever drunk alcohol by age, secondary school students, 2019

	Pasifika		Non-Māori/non-Pasifika	
	n(N)	Weighted % (95% CI)	n(N)	Weighted % (95% CI)
13 or under	48 (189)	25.4 (18.7, 32.0)	152 (842)	18.9 (14.8, 23.0)
14	67 (232)	31.1 (23.8, 38.4)	316 (1110)	32.2 (30.0, 34.4)
15	108 (218)	49.7 (43.5, 56.0)	526 (1083)	55.5 52.5, 58.5
16+	245 (394)	59.6 (55.4, 63.8)	1295 (1957)	74.1 (71.1, 77.1)

Table 7: Usual sources of alcohol, Pasifika current drinkers aged under 18 years, 2019

	Pasifika		Non-Māori/non-Pasifika	
	n(N)	Weighted %* (95% CI)	N(N)	Weighted %* (95% CI)
I buy it myself	37 (292)	11.9 (8.4, 15.3)	124 (1,805)	7.4 (5.8, 8.9)
Friends give it to me	127 (292)	42.4 (35.9, 49.0)	739 (1,805)	38.7 (35.1, 42.0)
My brother or sister gives it to me	54 (292)	15.0 (10.5, 19.5)	231 (1,805)	11.9 (10.4, 13.4)
My parents give it to me	108 (292)	39.4 (33.3, 45.4)	1147 (1,805)	67.0 (63.7, 70.3)
I get it from home without my parents' permission	30 (292)	7.8 (4.8, 10.8)	243 (1,805)	12.9 (12.0, 13.9)
Another adult I know gives it to me	51 (292)	16.5 (13.2, 19.7)	202 (1,805)	11.4 (9.7, 13.2)
I get someone else to buy it for me	73 (292)	22.5 (18.4, 26.5)	388 (1,805)	20.6 (18.6, 22.5)
I take or steal it from somewhere else (not home)	6 (292)	2.6 (0.3, 5.0)	33 (1,805)	1.4 (0.9, 1.9)
None of these	26 (292)	9.3 (5.3, 13.2)	87 (1,805)	4.0 (2.9, 5.1)

*Note students could choose as many categories as relevant, so percentages do not add up to 100%.

Drinking patterns among Samoan, Cook Island, Tongan and Niuean students, 2019

As shown in Table 8, prevalence of all alcohol indicators was lower among Samoan students than Cook Island, Tongan or Niuean students (although differences did not always reach statistical significance).

Table 8: Drinking patterns by Pasifika ethnicity, secondary school students, 2019

	Samoan N=573	Cook Island N=252	Tongan N=351	Niuean N=98
	Weighted % (95% CI)	Weighted % (95% CI)	Weighted % (95% CI)	Weighted % (95% CI)
Ever drinking	41.8 (36.6, 47.1)	54.1 (46.5, 61.7)	50.0 (43.6, 56.4)	48.2 (35.8, 60.6)
Current drinking	28.8 (23.9, 33.8)	41.0 (32.9, 49.2)	33.1 (29.4, 36.8)	38.2 (26.3, 50.1)
Past month drinking	17.4 (13.5, 21.3)	23.9 (17.1, 30.7)	22.4 (19.6, 25.1)	20.8 (11.4, 30.2)
Drinking weekly or more often	3.3 (1.5, 5.0)	7.0 (3.4, 10.6)	8.8 (5.6, 12.0)	5.2 (0.0, 10.4)
Past month binge drinking in population	13.2 (9.8, 16.6)	21.5 (14.0, 29.0)	17.3 (13.6, 21.0)	20.2 (10.5, 29.9)
Past month binge drinking in current drinkers	46.7 (39.2, 54.2)	53.0 (42.4, 63.6)	55.6 (46.4, 64.8)	53.5 (36.5, 70.5)
Drinking 10+ drinks on a typical occasion in population	8.3 (5.5, 11.1)	13.6 (6.3, 20.9)	13.2 (9.0, 17.3)	15.6 (6.5, 24.6)
Drinking 10+ drinks on a typical occasion in current drinkers	29.2 (21.6, 36.8)	33.6 (19.2, 48.0)	39.9 (29.4, 50.3)	40.8 (23.5, 58.1)

Self-reported alcohol harm

In 2012 a substantial proportion of current drinkers reported experiencing alcohol harm in the past 12 months (Table 9). Doing things that could have got the person in serious trouble, having sex without a condom, and injuries were the most prevalent harm indicators for Pasifika (Table 9). Being told by friends or family to cut down was also prevalent among Pasifika, suggesting that drinking was impacting on relationships. For all indicators except injuries, prevalence of harm was higher in Pasifika than non-Māori/non-Pasifika. Mean alcohol harm score was significantly higher among Pasifika than non-Māori/non-Pasifika (Table 10). Table 11 shows that ethnic differences in mean alcohol harm scores were partially mediated by socio-economic deprivation, but remained statistically significant after adjustment for deprivation (NZ Dep 2018). Differences in drinking

patterns mediated differences in alcohol harm to a greater extent. When both drinking patterns and socioeconomic deprivation were adjusted for, ethnic differences were no longer statistically significant (Table 11).

Table 9: Prevalence of alcohol harm indicators in past 12 months, current drinkers, 2012

	Pasifika		Non-Māori/non-Pasifika	
	n(N)	Weighted % (95% CI)	n(N)	Weighted % (95% CI)
Had friends or family tell you to cut down your alcohol drinking	63 (418)	14.6 (11.4, 17.8)	226 (2441)	9.7 (8.1, 11.3)
Had your performance at school or work affected	42 (418)	9.6 (6.3, 13.0)	110 (2441)	4.8 (3.6, 5.9)
Had unsafe sex (no condom) when you had been drinking alcohol?	66 (418)	16.3 (12.9, 19.7)	224 (2441)	9.2 (8.1, 10.4)
Had unwanted sex when you had been drinking alcohol?	30 (418)	7.5 (5.4, 9.5)	92 (2441)	3.8 (3.0, 4.6)
Done things that could have got you into serious trouble (e.g. stealing, etc.) when you had been drinking alcohol?	71 (418)	16.5 (12.7, 20.2)	264 (2441)	11.0 (9.7, 12.2)
Been injured when you had been drinking alcohol?	60 (418)	15.1 (11.4, 18.9)	363 (2441)	15.6 (13.7, 17.5)
Been injured and required treatment by a doctor or nurse when you had been drinking alcohol?	16 (418)	4.0 (1.9, 6.1)	55 (2441)	2.3 (1.7, 2.9)
Injured someone else when you had been drinking alcohol?	38 (418)	8.6 (5.5, 11.7)	74 (2441)	3.1 (2.4, 3.8)
Had a car crash when you had been drinking alcohol?	15 (418)	3.1 (1.6, 4.6)	23 (2441)	0.9 (0.5, 1.3)

Table 10: Ethnic differences in mean alcohol harm score

	Mean harm score (weighted)	95% CI
Pasifika	2.88	(2.42, 3.35)
Non-Māori/non-Pasifika	1.56	(1.41, 1.71)

Table 11: Mediation analysis for ethnic differences in alcohol harm score

	Linear regression estimate	P-value for ethnic difference
Model 1: Difference in harm score between Pasifika and non-Māori/non-Pasifika, unadjusted	1.33	<0.001
Model 2: Adjusted for sex and age	1.38	<0.001
Model 3: Adjusted for sex, age, and NZDep2018	1.16	<0.001
Model 4: Adjusted for sex, age, and drinking patterns (frequency of alcohol use, typical quantity consumed, frequency of past month binge drinking)	0.59	<0.01
Model 5: Adjusted for sex, age, NZDep2018, and drinking patterns	0.41	NS

Risk of alcohol harm

In 2019, based on the risk of harm categorisation outlined in Table 2, the majority of Pasifika students were in the ‘non-drinker’ category (Table 12). However, of those that did drink, a high proportion were in the ‘very high risk’ category.

Table 12: Risk of alcohol harm categories, weighted estimates, 2019

	Non-drinker	Small risk	High risk	Very high risk
Pasifika	67.1 (63.9, 70.2)	4.0% (2.7, 5.3)	13.6 (11.4, 15.7)	15.3 (12.5, 18.1)
Non-Māori/non-Pasifika	53.0 (50.7, 55.2)	11.0% (10.2, 12.1)	26.3 (24.9, 27.8)	9.6 (8.1, 11.0)

Risk and protective factors

The majority of Pasifika students had a wide range of potential protective factors in their lives in 2019 (Table 13). For most potential protective factors, exposure was similar for Pasifika and Māori/non-Pasifika. However Pasifika students were less likely than non-Māori/non-Pasifika to report having someone in their family they could trust to share their feelings with, and less likely to feel safe in their neighbourhood. Pasifika students were slightly more likely to report having an adult outside the family they trust to share their feelings with, and much more likely to report that their religious faith or spiritual beliefs were important to them. For most potential risk factors (e.g. experiences of ethnic discrimination, housing deprivation and family violence) exposure was much higher among Pasifika than non-Māori/non-Pasifika (Table 14). Associations between potential risk and protective factors and high-risk/very-high-risk drinking are shown in Tables 15 and 16.

Table 13: Exposure to potential protective factors, Pasifika and non-Māori/non-Pasifika secondary school students, 2019

	Pasifika		Non-Māori/non-Pasifika	
	n(N)	Weighted % (95% CI)	n(N)	Weighted % (95% CI)
High parental monitoring	961 (1,029)	93.2 (91.6, 94.8)	4,571 (4,974)	91.7 (90.1, 93.4)
At least one parent cares a lot	885 (957)	93.1 (91.7, 94.5)	3,999 (4,247)	94.7 (94.1, 95.3)
There is someone in my family who I can trust to share my feelings with	739 (1,022)	73.3 (69.9, 76.7)	3,824 (4,963)	78.4 (77.2, 79.6)
Get enough quality time with family	755 (1,011)	74.0 (71.0, 77.1)	3,548 (4,932)	74.0 (72.7, 75.3)
Feel safe at home	952 (1,032)	91.9 (90.4, 93.4)	4,704 (4,984)	94.4 (93.3, 95.5)
Teachers at school care	794 (1,020)	80.1% (76.9, 83.2)	3,967 (4,940)	80.9 (79.9, 81.9)
Feel safe at school	881 (1,023)	86.7 (84.7, 88.6)	4,432 (4,968)	88.7 (86.8, 90.6)
Sense of belonging at school	901 (1,015)	88.5 (86.0, 90.9)	4,233 (4,911)	85.1 (83.9, 86.3)
Feel safe in the neighbourhood	508 (979)	51.0 (46.8, 55.3)	2,927 (4,916)	60.4 (58.7, 62.0)
There is an adult outside my family I trust to share my feelings with	504 (912)	56.2 (52.7, 59.7)	2,249 (4,744)	50.0 (47.9, 52.1)
My religious faith/spiritual beliefs are important to me	564 (933)	59.8 (56.3, 63.2)	1,016 (4,636)	19.2 (16.6, 21.8)
Know about my (Samoan/Cook Island/Tongan/Nuiean) culture*	747 (933)	80.9 (78.2, 83.6)	-	-
Samoan/Cook Island/Tongan/Nuiean values are important to me*	739 (933)	79.0 (76.1, 81.9)	-	-
It is important to me to be recognised as Samoan/Cook Island/Tongan/Nuiean*	634 (933)	68.2 (64.9, 71.6)	-	-

*These questions were only asked of Samoan, Cook Island, Tongan and Niuean students, and were specific to each Pasifika ethnicity

Table 14: Exposure to risk factors, Pasifika and non-Māori/non-Pasifika secondary school students, 2019

	Pasifika		Non-Māori/non-Pasifika	
	n(N)	Weighted % (95% CI)	n(N)	Weighted % (95% CI)
Treated unfairly because of ethnicity in past 12 months	383 (997)	39.4 (36.3, 42.5)	1121 (4,861)	20.7 (19.5, 21.9)
Sexual abuse or coercion	246 (966)	24.6 (20.8, 28.4)	747 (4,877)	16.1 (15.1, 17.2)
Experience of housing deprivation, past 12 months	483 (1,032)	46.4 (43.8, 49.0)	1098 (4,986)	21.9 (20.7, 23.2)
Witnessed adult hit or hurt another child at home	163 (970)	17.1 (15.0, 19.2)	279 (4,598)	5.4 (5.0, 5.8)
Been hit or hurt by an adult at home	174 (968)	18.7 (16.1, 21.2)	423 (4,862)	7.6 (6.8, 8.4)
Witnessed adults at home hit or hurt each other	94 (961)	10.4 (8.5, 12.3)	206 (4,861)	3.8 (3.2, 4.4)
Past or present Oranga Tamariki/CYFS involvement	107 (1,022)	9.9 (7.9, 11.9)	305 (4,633)	6.2 (5.7, 6.7)

Table 15: Association between lack of protective factors and high-risk/very-high-risk drinking, Pasifika secondary school students, 2019

		Unadjusted Odds Ratio (95% CI)	Adjusted Odds Ratio ¹ (95% CI)	Adjusted Model P-value
Parental monitoring	High	1.00	1.00	0.01
	Low	1.88 (1.21, 2.91)	1.94 (1.18, 3.18)	
At least one parent cares a lot	Yes	1.00	1.00	NS
	No	1.17 (0.80, 1.69)	1.31 (0.84, 2.02)	
There is someone in my family I trust to share my feelings with	Yes	1.00	1.00	<0.001
	No	1.67 (1.19, 2.34)	1.96 (1.45, 2.64)	
Enough quality time with family	Yes	1.00	1.00	<0.001
	No	2.60 (2.00, 3.38)	2.88 (2.22, 3.73)	
Feel safe at home	Yes	1.00	1.00	<0.001
	No	1.98 (1.32, 2.99)	2.49 (1.68, 3.68)	
Teachers at school care	Yes	1.00	1.00	NS
	No	1.56 (0.90, 1.50)	1.31 (0.93, 1.85)	
Feel safe at school	Yes	1.00	1.00	<0.001
	No	1.72 (1.09, 2.71)	2.28 (1.44, 3.60)	
Sense of belonging at school	Yes	1.00	1.00	<0.01
	No	1.67	1.99	

		(1.09, 2.57)	(1.22, 3.27)	
Feel safe in the neighbourhood	Yes	1.00	1.00	
	No	1.07 (0.87, 1.33)	1.19 (0.94, 1.50)	NS
There is an adult outside my family I trust to share my feelings with	Yes	1.00	1.00	
	No	0.78 (0.59, 1.04)	0.87 (0.65, 1.18)	NS
My religious faith/spiritual beliefs are important to me	Yes	1.00	1.00	
	No	2.15 (1.56, 2.95)	2.69 (1.82, 3.97)	<0.001
I know about my culture ²	Yes	1.00	1.00	
	No	2.24 (1.64, 3.04)	2.52 (1.87, 3.39)	<0.001
Samoaan/Cook Island/Tongan/Niuean values are important to me ²	Yes	1.00	1.00	
	No	1.20 (0.86, 1.69)	1.35 (0.90, 2.01)	NS
It is important for me to be recognised as Samoaan/Cook Island/Tongan/Niuean ²	Yes	0.98 (0.76, 1.26)	1.04 (0.76, 1.40)	NS
	No			

¹Adjusted for age, sex and neighbourhood deprivation (NZDep: high, mid, low).

²These questions were only asked of Samoaan, Cook Island, Tongan and Niuean students, and were specific to each Pasifika ethnicity

NS = no statistically significant association

Table 16: Association between risk factors and high-risk/very-high-risk drinking, Pasifika secondary students, 2019

		Unadjusted Odds Ratio (95% CI)	Adjusted Odds Ratio* (95% CI)	Adjusted Model P-value
Treated unfairly because of ethnicity in past 12 months	No	1.00	1.00	
	Yes	2.38 (1.68, 3.74)	2.73 (1.89, 3.93)	<0.001
Sexual abuse or coercion	No	1.00	1.00	
	Yes	1.95 (1.53, 2.48)	2.04 (1.59, 2.62)	<0.001
Experience of housing deprivation, past 12 months	No	1.00	1.00	
	Yes	1.35 (0.95, 1.92)	1.35 (0.93, 1.95)	NS
Witnessed adult hit or hurt another child at home	No	1.00	1.00	
	Yes	1.08 (0.78, 1.49)	1.23 (0.88, 1.72)	NS
Been hit or hurt by an adult at home	No	1.00	1.00	
	Yes	1.13	1.48	<0.05

		(0.79, 1.61)	(1.05, 2.08)	
Witnessed adults at home hit or hurt each other	No	1.00	1.00	
	Yes	1.57 (1.15, 2.14)	1.76 (1.32, 2.34)	<0.001
Past or present Oranga Tamariki/CYFS involvement	No	1.00	1.00	
	Yes	2.16 (1.46, 3.20)	2.27 (1.39, 3.73)	<0.01

*Adjusted for age, sex and neighbourhood deprivation (NZDep: high, mid, low).

NS = no statistically significant association

Appendix A: Derivation of variables, including survey question wording and response options

Outcome Variable	Survey question & response options	Variable definition
Ever/never drunk alcohol	We would like to now ask some questions about alcohol. By this we mean beer, wine, spirits, pre-mixed drinks. Have you ever drunk alcohol (not counting a few sips)? Response options: Yes/No	Ever = 'Yes' Never = 'No'
Current drinker	During the past 4 weeks, about how often did you drink alcohol? Response options: Not at all - I don't drink alcohol now Not in the last 4 weeks Once in the last 4 weeks Two or three times in the last 4 weeks About once a week Several times a week Most days	Current drinker = ever drunk alcohol (based on the question above) AND gave a response to this question other than 'Not at all – I don't drink now'
Drank in past month	As above	Based on the response 'Once in the last 4 weeks' or more often
Drinks weekly or more often	As above	Based on the response 'About once a week' or more often
Past month binge drinking	In the past 4 weeks, how many times did you have 5 or more alcoholic drinks in one session? Response options: None at all Once in the past 4 weeks Two or three times in the past 4 weeks Every week Several times a week	Based on the response 'Once in the past 4 weeks' or more often
Quantity consumed	How many alcoholic drinks do you usually have in one session? Response options: 1 drink 2 drinks 3 to 4 drinks 5 to 9 drinks 10 to 20 drinks More than 20 drinks	Grouped: 1-2 drinks 3-4 drinks 5-9 drinks 10+ drinks
Source of alcohol	When you drink alcohol how do you usually get it? (You may choose as many as you need) Response options:	Yes/no for each option. Note that participants could choose as many options as were relevant

	<p>I buy it myself Friends give it to me My brother or sister gives it to me My parents give it to me I get it from home without my parents' permission Another adult I know gives it to me I get someone else to buy it for me I take or steal it from somewhere else (not home) None of these</p>	<p>therefore totals exceed 100%</p>
<p>Past year alcohol harm (2007, 2012)</p>	<p>How many times in the last 12 months have you...</p> <ul style="list-style-type: none"> • had friends or family tell you to cut down your alcoholic drinking? • had your performance at school or work affected by your alcohol use? • had unsafe sex (no condom) when you had been drinking alcohol? • had unwanted sex when you had been drinking alcohol? • done things that could have got you into serious trouble (e.g. stealing, etc.) when you had been drinking alcohol? • been injured when you had been drinking alcohol? • been injured and required treatment by a doctor or nurse when you had been drinking alcohol? • injured someone else when you had been drinking alcohol? • had a car crash when you had been drinking alcohol? <p>Response options: Never Not in the last 12 months Once or twice in the last 12 months Three or more times in the last 12 months</p>	<p>For each specific type of harm, past year harm was based on the response 'Once or twice in the last 12 months' OR 'Three or more times in the last 12 months.'</p> <p>Note that 'been injured' and 'been injured and required treatment by a doctor or nurse' were not mutually exclusive categories.</p>
<p>Alcohol harm score (2012)</p>	<p>Based on the 9 items above</p>	<p>Items were scored 0 for 'never', 1 for 'Not in the last 12 months', 2 for 'Once or twice in the last 12 months' and 3 for 'Three or more times in the last 12 months' Scores were added to derive an alcohol harm score (range 0-27)</p>
<p>Risk of alcohol harm (2019)</p>	<p>Alcohol harm data was not available in 2019. Instead, we used data on 1) frequency of alcohol use, 2) quantity consumed, and 3)</p>	<p>Four categories: 1) Non-drinker 2) Small risk of harm</p>

	frequency of binge drinking (see survey questions above) to derive risk of alcohol harm.	<p>3) High risk of harm 4) Very high risk of harm</p> <p>The criteria for these categories are set out in Table 2 (p10).</p>
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Demographic Variable	Survey question & response options	
Age	How old are you? Response options: Under 12, 12, 13, 14, 15, 16, 17, 18, 19, Over 19 years	Age was grouped in two ways: 13 and under, 14, 15, 16, 17, 18 and over, or binarised (under 16, 16 and over). Note that in 2019 only 25 students were aged under 13 years, and 24 were aged over 18. Over 99% of the sample were aged 13-18 years. About 96% were aged under 18 years.
Gender	(2019) How do you describe yourself? Answer options: I am a boy or a man I am a girl or a woman I identify in another way (2007, 2012) What sex are you? Response options: Male Female	'I identify another way' was treated as 'missing'. (Note that this project includes a separate analysis investigating alcohol use and harm in Rainbow youth, including those who do not identify as male or female).
School decile	N/A	School decile is a school-level measure of the socio-economic position of the student community, relative to other schools in New Zealand. decile 1 schools are the 10% of schools with the highest proportion of students from low socio-economic communities. Deciles are based on Census data on household income, occupational skill level of employed parents, household crowding, percentage of parents with no qualifications, percentage of parents receiving income support benefits. For details of how school deciles are calculated see: https://www.education.govt.nz/school/funding-and-financials/resourcing/operational-funding/school-decile-ratings/
Deprivation (NZ Dep 2018)	N/A	Deprivation is based on the student's home address and corresponding NZ Deprivation Index categorisation for that mesh block. The NZ Deprivation Index is based on 9 Census measures. Further details are available elsewhere. ³¹

Ethnicity	<p>Which ethnic group do you belong to? (You may choose as many as you need)</p> <p>167 response options including: Samoan Cook Island Maāori Tongan Niuean Fijian Hawaiian Kiribati Nauruan New Caledonian Pacific peoples Rotuman Tahitian Tokelauan Tuvaluan</p>	<p>Respondents were categorised as ‘Pasifika’ if they checked any of the Pasifika ethnicities listed. That is, the ‘total’ ethnicity method was used. ‘Non-Māori/Non-Pacific’ included all participants except those who identified as Māori or Pasifika (as defined above).</p>
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Risk/protective factor	Survey question & response options	
Parental monitoring	<p>Does your family want to know who you are with and where you are?</p> <p>Response options: Always Usually Sometimes Almost never</p>	<p>High = ‘Always’ or ‘Usually’ Low= ‘Sometimes’ or ‘Almost never’</p>
At least one parent cares a lot	<p>Based on two questions: How much do you think your mum (or someone who acts as your mum) cares about you? How much do you think your dad (or someone who acts as your dad) cares about you?</p> <p>Response options: Not at all A little Some A lot</p>	<p>Yes= ‘A lot’ for one or both questions</p>
Someone in family I trust to share feelings	<p>There is someone in my family/whānau who I trust to share my feelings with.</p> <p>Response options: Strongly agree Agree Neutral Disagree Strongly disagree</p>	<p>Yes = ‘Strongly agree’ or ‘Agree’ No = ‘Neutral’ ‘Disagree’ or ‘Strongly disagree’</p>

Enough quality time with family	I feel like I get enough quality time with my family/whānau. Response options: Strongly agree Agree Neutral Disagree Strongly disagree	Yes = 'Strongly agree' or 'Agree' No = 'Neutral' 'Disagree' or 'Strongly disagree'
Feel safe at home	Do you feel safe at home, or the place you live? Response options: Yes, all the time Yes, most of the time Sometimes No, mostly not Not at all	Yes = All/most of the time No = Sometimes, No mostly not, or Not at all
Teachers at school care	Do you feel that teachers/tutors care about you? Response options: Yes No Doesn't apply	Yes = Yes No = No/Doesn't apply
Feel safe at school	Do you feel safe in your school/course? Response options: Yes, all the time Yes, most of the time Sometimes No, mostly not Not at all	Yes = All/Most of the time No = Sometimes, No mostly not, Not at all
Sense of belonging at school	Do you feel like you are part of your school, alternative education or course? Response options: Yes No	Yes/No
Feel safe in neighbourhood	Do you feel safe in your neighbourhood? Response options: All the time Sometimes Not often Never	Yes = 1 (All the time) No = 2,3,4 (Sometimes, not often, never)
There is an adult outside my family I trust to share my feelings with	Response options: Strongly agree Agree Neutral Disagree Strongly disagree	Yes = Agree/Strongly agree No = Neutral/Disagree/Strongly disagree
My religious faith/spiritual beliefs are important to me	Response options: Strongly agree Agree Neutral Disagree	Yes = Agree/Strongly agree No = Neutral/Disagree/Strongly disagree

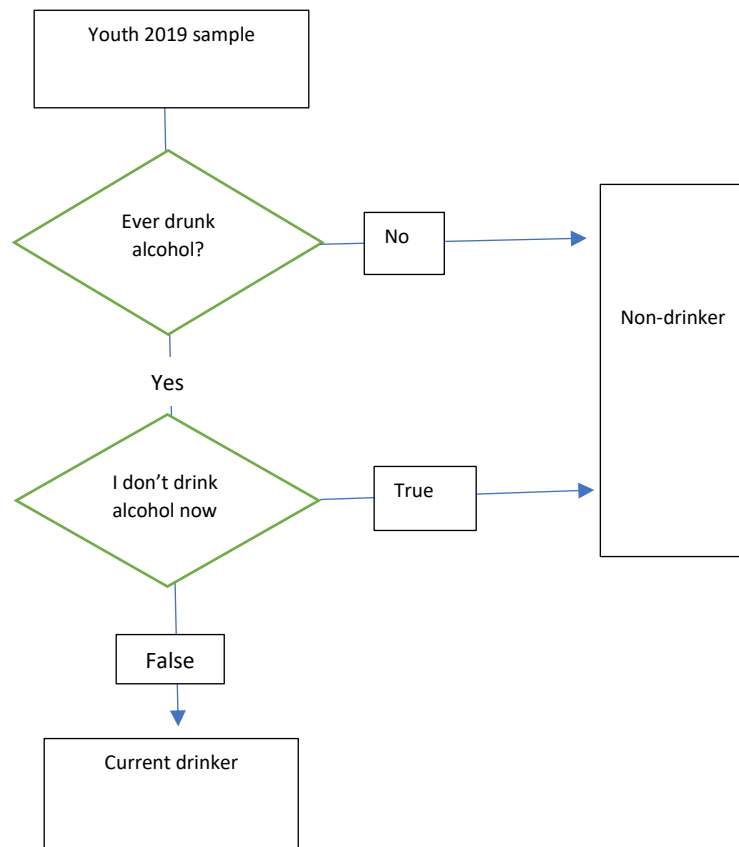
	Strongly disagree	
I know about my (Samoan/Cook Island/Tongan/Niuean) culture	Based on separate questions asked of Samoan, Tongan, Cook Island and Niuean participants: Do you know about your [Samoan/Cook Island/Tongan/Niuean] culture, such as language, songs, cultural practice or family history/ancestry? Response options: Yes No	Responses were pooled across the four specified ethnic groups: Yes/No
Samoan/Cook Island/Tongan/Niuean values are important to me	Based on separate questions asked of Samoan, Tongan, Cook Island and Niuean participants: Are [Samona/Cook Island/Tongan/Niuean] values important to you? Response options: Not at all important Not important Somewhat important Important Very important	Responses were pooled across the four specified ethnic groups: Yes = 'Important' or 'Very important' No = Not at all/Not/Somewhat important
It is important to me to be recognised as Samoan/Cook Island/Tongan/Niuean*	Based on separate questions asked of Samoan, Tongan, Cook Island and Niuean participants: How important is it to you to be recognised as a [Samoan/Cook Islander/Tongan/Niuean]? Response options: Not at all important Not important Somewhat important Important Very important	Responses were pooled across the four specified ethnic groups: Yes = 'Important' or 'Very important' No = Not at all/Not/Somewhat important
Treated unfairly because of ethnicity in past 12 months	Based on three questions: Have you ever been treated unfairly (e.g. treated differently) by a teacher/tutor because of your ethnic group? Have you ever been treated unfairly (e.g. treated differently, kept waiting) by the police because of your ethnicity or ethnic group? Have you ever been treated unfairly (e.g. picked on, hassled etc) by a health professional (e.g. doctor, nurse, dentist etc) because of your ethnic group? Response options: Yes, within the last 12 months Yes, more than 12 months ago I don't know/unsure	Participants were excluded for this variable if they did not respond to all three questions Yes = 'Yes, within the last 12 months' to any of the three questions

Experience of sexual abuse or coercion	<p>Have you ever been touched in a sexual way or made to do sexual things that you didn't want to do? (including sexual abuse or rape)</p> <p>Yes No Not sure</p>	<p>Yes = Yes or Not sure No = No</p>
Housing deprivation	<p>Housing deprivation was based on four indicators: In the last 12 months, how many times have you moved homes? Two or more moves was considered an indicator of housing deprivation.</p> <p>For some families, it is hard to find a house that they can afford or that has enough space for everyone to have their own bed. In the last 12 months, have you had to sleep in any of the following because it was hard for your family to afford or get a home, or there was not enough space? (do not include holidays or sleep-overs for fun). You may choose as many as you need Response options: No, in the last 12 months I have always had a home and my own bed A cabin, caravan or sleepout A garage A couch or on the floor A bed with another person (because there was nowhere else to sleep) Stay with lots of different people (couch surfing) In a motel, hostel, marae, boarding home or other emergency housing In a car or van Other, please state An affirmative response to any of the above was considered an indicator of housing deprivation</p> <p>Has your family ever had to split up because of housing problems (e.g. part of the family live in one house and the rest of the family living somewhere else)? An affirmative response was considered an indicator of housing deprivation</p> <p>Do your parents, or the people who act as your parents, ever worry about not having enough money to pay for the rent/mortgage where you live?</p>	<p>Yes = Experience of any of the four housing deprivation indicators defined in the previous column.</p>

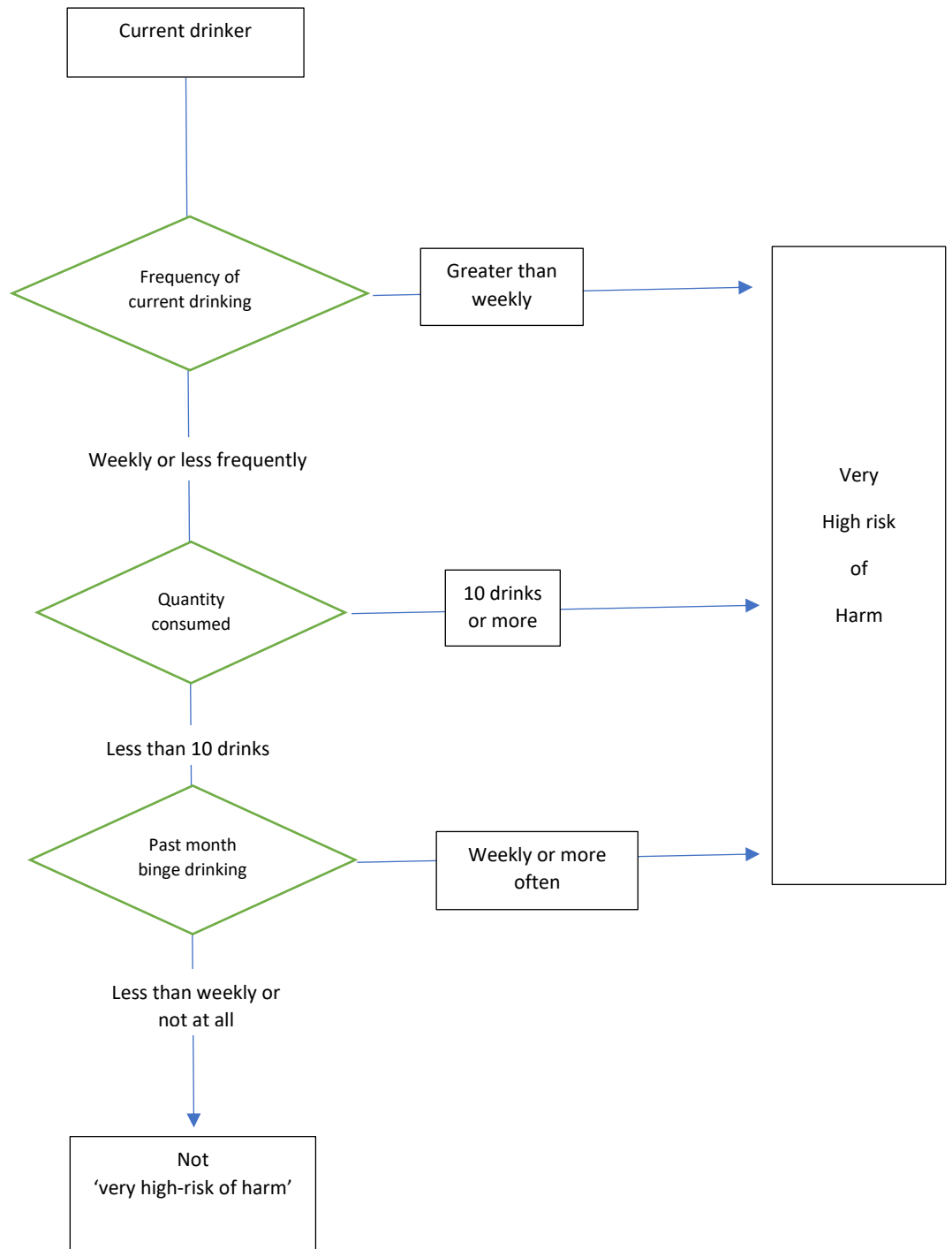
	<p>Response options: Never Occasionally Sometimes Often All the time I don't know</p> <p>A response of 'often' or 'all the time' was considered an indicator of housing deprivation</p>	
Witnessed violence to another child at home	<p>In the last 12 months have adults in your home hit or physically hurt a child (other than yourself)?</p> <p>Yes No</p>	Yes/No
Adults hit or hurt you at home	<p>In the last 12 months have adults in your home hit or physically hurt you?</p> <p>Yes No</p>	Yes/No
Witnessed violence between adults at home	<p>In the last 12 months have adults in your home hit or physically hurt each other?</p> <p>Yes No</p>	Yes/No
Past or present OT/CYFS involvement	<p>Have you ever been involved with Oranga Tamariki (OT) or Child, Youth and Family Services (CYFS)? E.g. someone was worried about your safety or protection.</p> <p>Yes No</p>	Yes/No
Youth voice (open text questions)	<p>What do you think are the biggest problems for young people today?</p>	
	<p>What do you think should be changed to support young people in New Zealand better?</p>	

Appendix B: Flow diagram for 'Risk of alcohol harm' categorisation

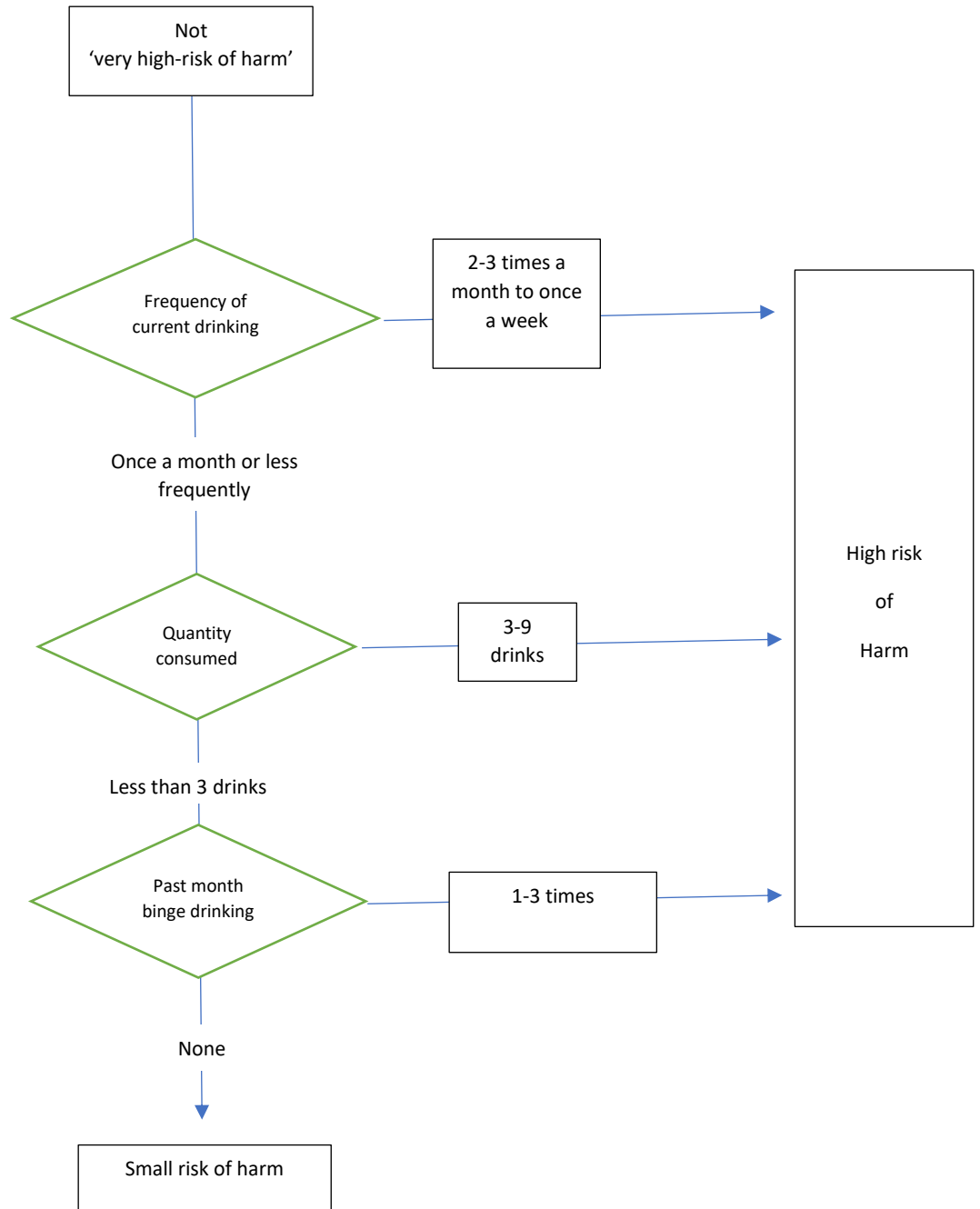
Step 1: Non-drinker categorisation



Step 2: Very high risk of harm categorisation, age 16 and over



Step 3: High risk of harm categorisation, age 16 and over



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