



Alcohol use in advanced age: *Findings from LiLACS NZ*

Te Puāwaitanga O Ngā Tapuwae Kia Ora Tonu

This report presents key findings about alcohol use in advanced age including patterns of use and the relationship between alcohol use and falls.

The findings are from a population-based sample of Māori (aged 80 to 90 years) and non-Māori (aged 85 years), living in the Bay of Plenty, who are taking part in a longitudinal study of advanced ageing, called Life and Living in Advanced Age: a Cohort Study in New Zealand - Te Puāwaitanga O Ngā Tapuwae Kia Ora Tonu (LiLACS NZ).

For data tables about alcohol use in advanced age and the LiLACS NZ sample, see the Appendix. For details on methodology, recruitment, and data presented in this report that do not feature in the appendix, see <https://www.fmhs.auckland.ac.nz/en/faculty/lilacs.html> and published articles.^{1,2}

Key findings

Most people in advanced age generally did not drink alcohol or only drank alcohol moderately. Māori drank less alcohol than non-Māori. People in advanced age who lived in areas of higher socioeconomic deprivation drank alcohol less often than did those who lived in less deprived areas. Those in areas of higher socioeconomic deprivation who did drink alcohol were more likely to drink hazardously. Alcohol consumption was not related to the number of falls over the last 12 months.

This report describes the prevalence of any alcohol use, and the frequency and amount of alcohol use in advanced age by gender, ethnic group and socioeconomic deprivation. It also explores whether alcohol use was related to falls. The findings from this report are split into two sections: findings from all LiLACS NZ participants; and findings from those who drank alcohol (drinkers).

For this report, **hazardous drinker** refers to someone who drank 6+ alcoholic drinks on any occasion, while a **moderate drinker** refers to someone who drank four or more times a week but less than six drinks on each occasion.

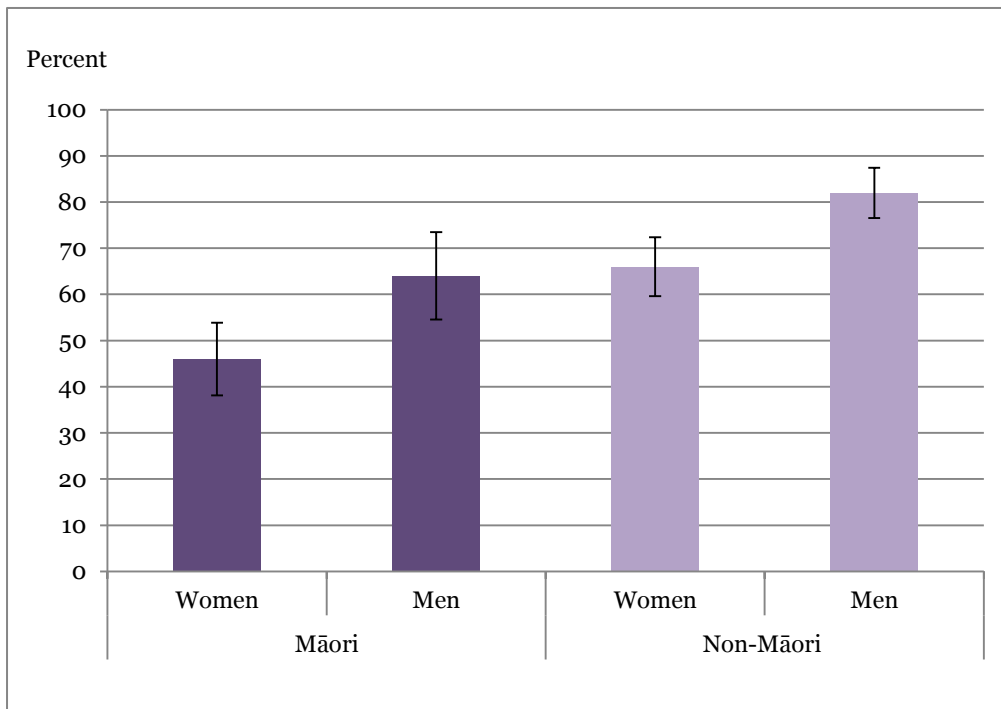
Findings from all LiLACS NZ participants

People in advanced age, especially Māori, drank alcohol moderately or not at all

Sixty-six percent of all people reported that they drank alcohol at least once in the last month and 27% of all people reported that they drank alcohol on four or more occasions a week (41% of drinkers).

Significantlyⁱ more men drank alcohol compared to women. Significantly more non-Māori reported that they drank alcohol in the last month than Māori: 64% of Māori men and 46% of Māori women compared to 82% of non-Māori men and 64% of non-Māori women (Figure 1).

Figure 1: Alcohol use in the last month in advanced age, by sex and ethnic group



Source: LiLACS NZ

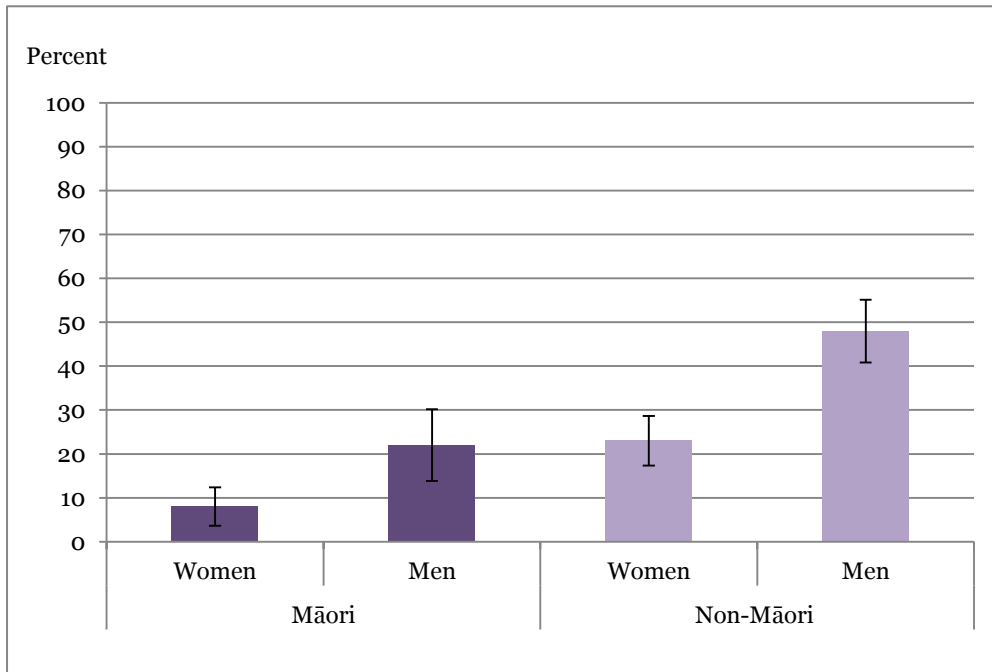
Note. This report uses prioritised ethnicity; self-identification as Māori was prioritised over other ethnicities if more than one was given

More men than women drank alcohol four or more times a week

Significantly more men drank alcohol four or more times a week compared to women. Fewer Māori than non-Māori drank alcohol four or more times a week. Twenty-two percent of all Māori men and 48% of all non-Māori men drank alcohol four or more times a week (Figure 2). By comparison 8% of all Māori women and 23% of all non-Māori women reported that they drank alcohol four or more times a week (Figure 2).

ⁱ The difference between two groups is statistically significant if their confidence intervals do not overlap. Sometimes, even when two confidence intervals overlap, the difference between these groups can be statistically significant. In these cases, if the text reports a difference, a statistical test (a 'Chi Square test, or regression') has been carried out to confirm that the finding is statistically significant.

Figure 2: Alcohol use four or more times a week in advanced age, by sex and ethnic group

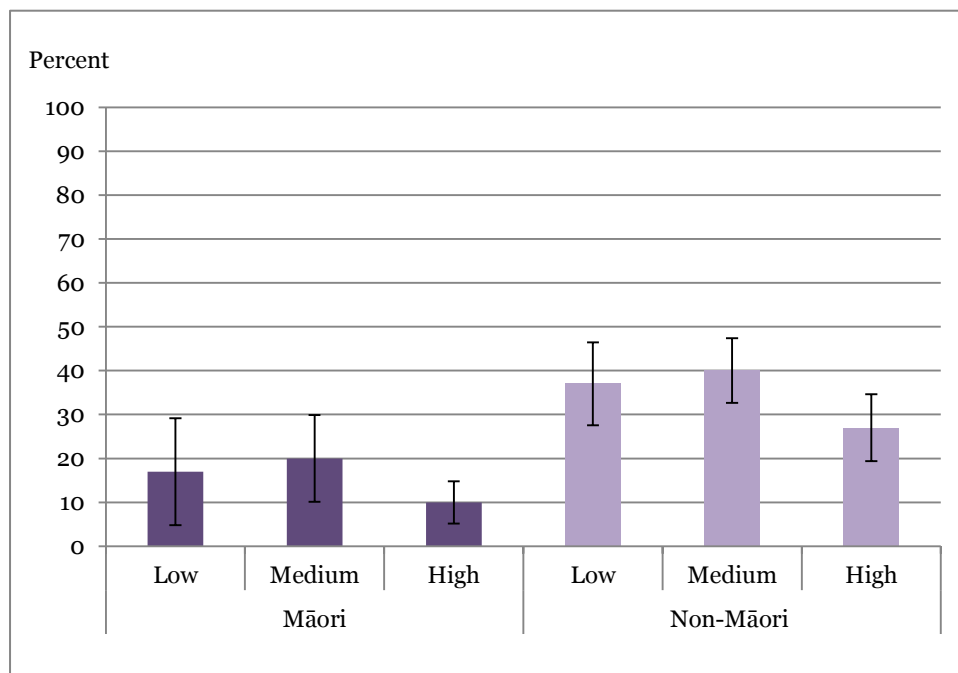


Source: LiLACS NZ

Note. This report uses prioritised ethnicity; self-identification as Māori was prioritised over other ethnicities if more than one was given

Fewer people who lived in areas of high socioeconomic deprivation drank alcohol four or more times a week compared to people living in areas of low and medium deprivation, after adjusting for sex (Figure 3).

Figure 3: Alcohol use four or more times a week in advanced age, by socioeconomic deprivation and ethnic group



Source: LiLACS NZ

Note: This report uses prioritised ethnicity; self-identification as Māori was prioritised over other ethnicities if more than one was given. The deciles in the New Zealand Deprivation Index (NZDep2006³) were used to define the level of socioeconomic deprivation in participants' neighbourhoods as 'Low' (Decile 1-4), 'Medium' (Decile 5-7) or 'High' (Decile 8-10). The higher the decile, the greater the level of deprivation in the neighbourhood.

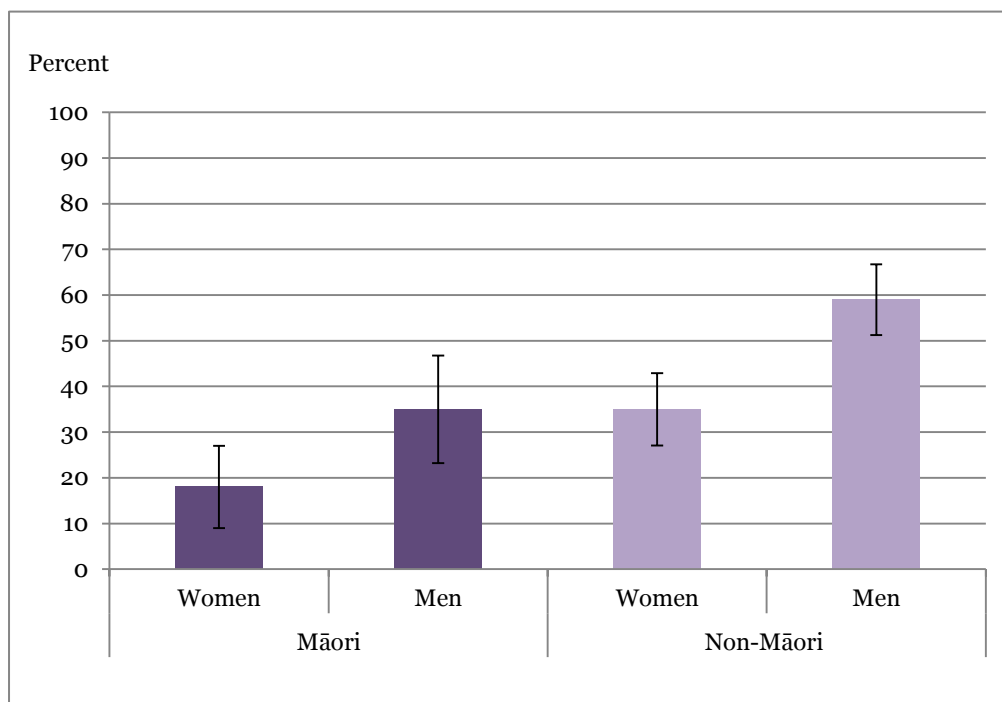
Findings from drinkers who participated in LiLACS NZ

Moderate drinking was common among non-Māori men

Of those who reported that they drink alcohol, significantly more men were moderate drinkers than women and more non-Māori were moderate drinkers than Māori.

Fifty-nine percent of non-Māori men reported drinking alcohol four or more times a week, whereas 35% of Māori men drank this frequently (Figure 4). This difference was significant adjusting for age.

Figure 4: Alcohol use 4 or more times a week among drinkers in advanced age, by sex and ethnic group



Source: LiLACS NZ

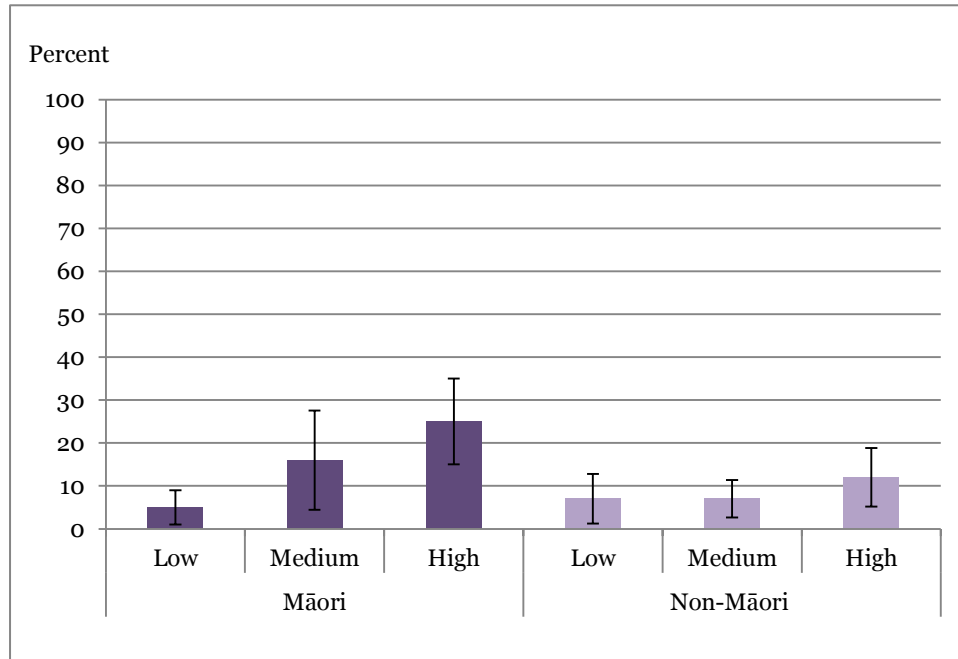
Note. This report uses prioritised ethnicity; self-identification as Māori was prioritised over other ethnicities if more than one was given

Drinkers in areas of higher socioeconomic deprivation drank 6+ alcoholic drinks on any occasion more often than drinkers in less deprived areas

Few people drank to a hazardous level. Of drinkers, 12% reported hazardous drinking.

Amongst drinkers, hazardous drinking was more common in areas of high socioeconomic deprivation than it was in low deprived areas (Figure 5). Thus, people in advanced age who lived in areas of high socioeconomic deprivation drank alcohol less frequently, but when they did drink alcohol, they drank more heavily, compared to those in less deprived areas.

Figure 5: Drinkers drinking 6+ drinks on any occasion in advanced age, by socioeconomic deprivation and ethnic group



Source: LiLACS NZ first wave of data collection

Note. This report uses prioritised ethnicity; self-identification as Māori was prioritised over other ethnicities if more than one was given. The deciles in the New Zealand Deprivation Index (NZDep2006³) were used to define the level of socioeconomic deprivation in participants' neighbourhoods as 'Low' (Decile 1-4), 'Medium' (Decile 5-7) or 'High' (Decile 8-10). The higher the decile, the greater the level of deprivation in the neighbourhood. Percentages are of the group of 'drinkers' (n = 433)

People were asked if they ever felt a need to cut down on their drinking. Māori drinkers were significantly more likely to report feeling they needed to cut down than were non-Māori drinkers.

Alcohol consumption was not related to falls

Alcohol consumption was not significantly related to the number of falls over the last 12 months after adjusting for age, ability to complete activities of daily living, and number of comorbidities.

What is the source of the data?

The source of the data is Life and Living in Advanced Age: a Cohort Study in New Zealand—Te Puāwaitanga O Ngā Tapuwae Kia Ora Tonu (LiLACS NZ). Data were gathered in face-to-face, standardised interviews with Māori aged 80-90 and non-Māori aged 85 at home. Nursing assessments of physical function and cardiorespiratory health were also completed.

The LiLACS NZ sample lives within the boundaries of the Bay of Plenty and Lakes District Health Boards, excluding the Taupo region of Lakes DHB. The participants were first interviewed and assessed in 2010 (the 'first wave' of data collection). This is a longitudinal study with annual data collection, subject to mortality and participant retention.

The alcohol use data reported on is from 671 participants who completed the full questionnaire (see Appendix Figure A-1) during the first wave of data collection.

What were the survey questions?

People were asked how often they had had a drink containing alcohol (never, monthly or less, 2-4 times a month, 2-3 times a week, or 4 or more times a week). They were asked how often they had had six or more drinks on one occasion (never, less than monthly, monthly, weekly, or daily or almost daily). They were also asked if they ever felt the need to cut down on their alcohol use. The survey also asked how many times they had fallen in the last 12 months (from 0 to 4 or more times).

Further information

You can find more information about the LiLACS NZ study on the website (www.fmhs.auckland.ac.nz/faculty/lilacs) and see also Hayman et al (2012)¹ for the study protocol and Dyall et al (2013)² for the recruitment detail.

References

1. Hayman K, Kerse N, Dyall L, et al. 2012. Life and living in advanced age: A cohort study in New Zealand, *Te Puāwaitanga O Ngā Tapuwae Kia Ora Tonu – LILACS NZ: Study protocol. BMC Geriatrics* 12(June). DOI: 10.1186/1471-2318-12-33 (accessed 18 March 2014).
2. Dyall L, Kepa M, Hayman K, et al. 2013. Engagement and recruitment of Māori and non-Māori people of advanced age to LiLACS NZ. *Australian & New Zealand Journal of Public Health* 37(2): 124-31.
3. Salmond C, Crampton P, Atkinson J. 2007. *NZDep2006 Index of Deprivation User's Manual*. Wellington: Department of Public Health, University of Otago.

LiLACS NZ – at a glance

Sample: 932 people of advanced age; Māori aged 80–90 years and non-Māori aged 85 years living in the Bay of Plenty and Lakes District Health Boards region. Non-Māori are 90% NZ European, 9% other European and 1% other. Participant numbers vary slightly according to topic being discussed.

Mode: Standardised home-based interview and standardised nursing assessment, repeated annually. Hospitalisation and mortality outcomes data were obtained, with permission, by matching the NHI with nationally held hospitalisation data from the Ministry of Health.

Timing: Results refer to the population sample recruited in the first wave of data gathering in 2010.

Funding: LiLACS NZ was originally funded by a programme grant from the Health Research Council of New Zealand. Ngā Pae o te Māramatanga, Heart Foundation NZ, Oakley Mental Health Foundation, Auckland Medical Research Foundation, the Faculty of Medical and Health Sciences also provided project support. The University of Auckland, the Rotorua Energy Trust and the Ministry of Health have funded LiLACS NZ from 2013.

Representation: The study is strengthened by the extensive breath of domains investigated and is designed to engage with a full cohort of Māori allowing equal explanatory power for separate analyses. The findings for Māori and non-Māori may not be generalizable beyond the Bay of Plenty region. However, the overall response rate in the first wave is consistent with other longitudinal studies of ageing; 56% of all Māori and 59% of all non-Māori who were invited participated. In gender and age the sample engaged was similar in proportion to the population of the area and the population of New Zealand. Although all age-eligible older adults were sought and invited, lower enrolments than expected from residential care facilities limits separate analyses of frailer participants.

For more information, see the LiLACS NZ webpage:

<https://www.fmhs.auckland.ac.nz/en/faculty/lilacs.html> and other Ministry of Health short reports.



Appendix: Detailed data tables

The following tables provide detailed data for the key indicators presented in this report. The tables present the prevalence and number of people by sex and ethnic group and 95% confidence intervals for all estimates. Generalised linear models were used for analysis of potentially significant predictors of outcomes and controlled for age, sex and ethnic group.

Table A-1: Total number of participants who answered the questions

	Māori		Non-Māori	
	Men	Women	Men	Women
How often do you have a drink containing alcohol?	99	155	188	212
Drinkers:				
How many drinks containing alcohol do you have on a typical occasion when drinking?	64	70	156	139
How often do you have 6 or more drinks on one occasion?	62	69	154	140
Do you ever feel you need to cut down on your drinking?	63	70	156	139

Table A-2: Alcohol use by men in advanced age

	Men					
	Māori (n = 99)			Non-Māori (n = 188)		
	n	(%)	(95% CI)	n	(%)	(95% CI)
How often do you have a drink containing alcohol?						
Never	36	(36)	(27–47)	33	(18)	(12–24)
Monthly or less	22	(22)	(14–32)	13	(7)	(4–12)
2–4 times a month	6	(6)	(2–13)	22	(12)	(7–17)
2–3 times a week	13	(13)	(7–21)	29	(15)	(11–21)
4 or more times a week	22	(22)	(14–32)	91	(48)	(41–56)
For those who drink:						
How many drinks containing alcohol do you have on a typical occasion when drinking?						
1 or 2	49	(77)	(64–86)	136	(87)	(81–92)
3 or 4	14	(22)	(13–34)	16	(10)	(6–16)
5 or 6	1	(2)	(0–8)	4	(3)	(1–6)
7 or more	0	-	-	0	-	-
How often do you have 6 or more drinks on one occasion?						
Never	50	(79)	(67–89)	139	(89)	(83–94)
Less than monthly	6	(10)	(4–20)	13	(8)	(5–14)
Monthly	4	(6)	(2–15)	1	(1)	(0–4)
Weekly	3	(5)	(1–13)	2	(1)	(0–5)
Daily or almost daily	0	-	-	1	(1)	(0–4)
Do you ever feel you need to cut down on your drinking?						
Yes	9	(14)	(7–25)	5	(3)	(1–7)

Note: Numbers do not always add up to total n because of missing data on individual questions.

Table A-3: Alcohol use by women in advanced age

	Women					
	Māori (n = 155)			Non-Māori (n = 212)		
	n	(%)	(95% CI)	n	(%)	(95% CI)
How often do you have a drink containing alcohol?						
Never	84	(54)	(46–62)	72	(34)	(28–41)
Monthly or less	39	(25)	(19–33)	46	(22)	(16–28)
2–4 times a month	10	(6)	(3–12)	27	(13)	(9–18)
2–3 times a week	9	(6)	(3–11)	18	(8)	(5–13)
4 or more times a week	13	(8)	(5–14)	49	(23)	(18–29)
For those who drink:						
How many drinks containing alcohol do you have on a typical occasion when drinking?						
1 or 2	61	(87)	(77–94)	134	(96)	(92–99)
3 or 4	7	(10)	(4–20)	5	(4)	(1–8)
5 or 6	2	(3)	(0–10)	0	-	-
7 or more	0	-	-	0	-	-
How often do you have 6 or more drinks on one occasion?						
Never	57	(83)	(72–91)	132	(94)	(89–98)
Less than monthly	11	(16)	(8–27)	8	(6)	(3–11)
Monthly	1	(1)	(0–8)	0	-	-
Weekly	0	-	-	0	-	-
Daily or almost daily	0	-	-	0	-	-
Do you ever feel you need to cut down on your drinking?						
Yes	7	(10)	(4–19)	4	(3)	(1–7)

Note: Numbers do not always add to total n because of missing data on individual questions.

Table A-4: Alcohol use in advanced age

Group of interest	Reference group	Adjusted Odds Ratio (95% CI)	Significant (*)	Adjustment variables
Drinking ever				
Men	Women	2.35 (1.67–3.31)	*	Age
Māori	Non-Māori	0.36 (0.24–0.54)	*	Age, sex
Māori men	Non-Māori men	0.41 (0.20–0.82)	*	Age
Māori women	Non-Māori women	0.34 (0.21–0.57)	*	Age
Most deprived areas	Least deprived areas	0.66 (0.42–1.05)	ns	Age, sex, ethnic group
Most deprived areas - men	Least deprived areas - men	0.47 (0.20–1.08)	ns	Age, ethnic group
Most deprived areas - women	Least deprived areas - women	0.78 (0.44–1.39)	ns	Age, ethnic group
Drinking four or more times a week				
Men	Women	3.24 (2.25–4.66)	*	Age
Māori	Non-Māori	0.22 (0.12–0.40)	*	Age, sex
Māori men	Non-Māori men	0.21 (0.09–0.48)	*	Age
Māori women	Non-Māori women	0.23 (0.10–0.56)	*	Age
Most deprived areas	Least deprived areas	0.57 (0.34–0.95)	*	Age, sex, ethnic group
Most deprived areas - men	Least deprived areas - men	0.46 (0.23–0.91)	*	Age, ethnic group
Most deprived areas - women	Least deprived areas - women	0.73 (0.32–1.63)	ns	Age, ethnic group
Any falls	No falls	1.09 (0.73–1.63)	ns	Age, sex, ethnic group, NEADL, comorbidities
Drinking 6 or more drinks on any occasion				
Men	Women	1.54 (0.84–2.82)	ns	Age
Māori	Non-Māori	3.00 (1.47–6.11)	*	sex
Māori men	Non-Māori men	2.63 (1.02–6.74)	*	Age
Māori women	Non-Māori women	3.67 (1.20–11.2)	*	Age
Most deprived areas	Least deprived areas	2.67 (1.04–6.86)	*	Age, sex, ethnic group
Most deprived areas - men	Least deprived areas - men	1.90 (0.63–5.77)	ns	Age, ethnic group
Most deprived areas - women	Least deprived areas - women	6.56 (0.80–53.84)	ns	Age, ethnic group
Falls	No falls	1.73 (0.91–3.27)	ns	Age, sex, ethnic group, NEADL, comorbidities
Ever feeling like you need to cut down [on alcohol use]				
Men	Women	1.30 (0.57–2.97)	ns	Age
Māori	Non-Māori	3.36 (1.14–9.91)	*	Age, sex
Māori men	Non-Māori men	2.99 (0.63–14.31)	ns	Age
Māori women	Non-Māori women	3.60 (0.79–16.39)	ns	Age
Most deprived areas	Least deprived areas	0.60 (0.21–1.69)	ns	Age, sex, ethnic group
Most deprived areas - men	Least deprived areas - men	0.29 (0.07–1.23)	ns	Age, ethnic group
Most deprived areas - women	Least deprived areas - women	1.35 (0.25–7.35)	ns	Age, ethnic group

LiLACS NZ background and sample

LiLACS NZ is a programme of research that is based on a longitudinal cohort study of New Zealanders in advanced age. In 2010, LiLACS NZ invited all Māori aged 80-90 years and all non-Māori aged 85 years within the Bay of Plenty and Lakes District Health Board regions (excluding Taupo area) to undertake a detailed health interview and physical assessment, and to give a blood sample. Those who agreed were interviewed between March 2010 and April 2011, defined as the *2010 first wave*. These participants were then followed up annually at the same time of year, which produced the 2011 second wave and in 2012 the third wave. Table A-5 shows the age, sex, ethnic group, living arrangements and socioeconomic deprivation area of the LiLACS NZ participants in the first wave.

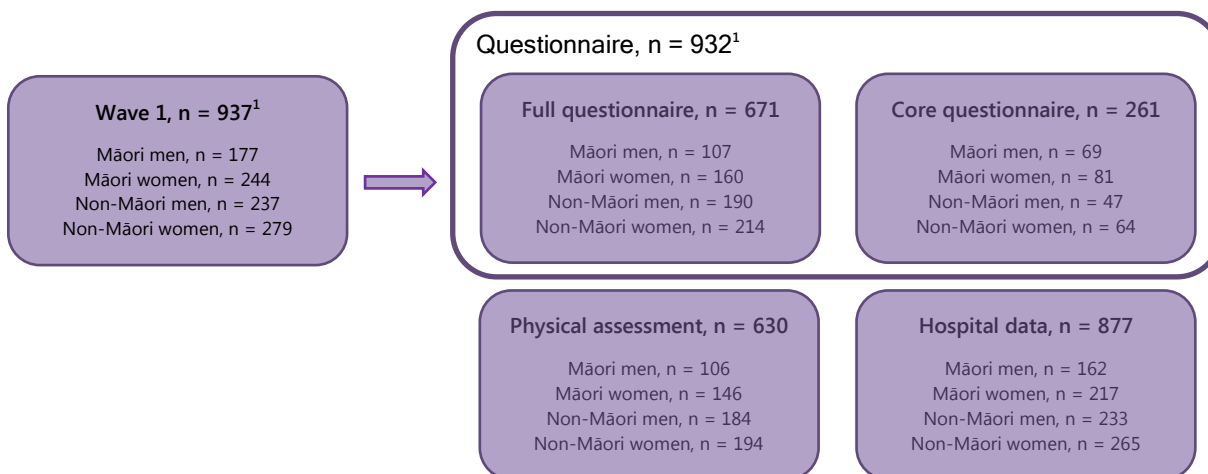
Table A-5: Demographic summary of LiLACS NZ participants

	Māori						Non-Māori					
	Men		Women		Total		Men		Women		Total	
Age - Mean (SD)	82.5	(2.8)	82.8	(2.7)	82.7	(2.8)	84.6	(0.5)	84.6	(0.5)	84.6	(0.5)
Living - n (%)												
Alone	29	(27%)	81	(51%)	110	(41%)	61	(32%)	134	(63%)	195	(48%)
Spouse only	40	(37%)	30	(19%)	70	(26%)	106	(56%)	48	(22%)	154	(38%)
Other	38	(36%)	49	(31%)	87	(33%)	23	(12%)	32	(15%)	55	(14%)
Deprivation - n (%)												
Decile 1-4 (Low)	19	(11%)	41	(17%)	60	(14%)	60	(25%)	69	(25%)	129	(25%)
Decile 5-7 (Med)	53	(30%)	56	(23%)	109	(26%)	91	(38%)	117	(42%)	208	(40%)
Decile 8-10 (High)	104	(59%)	147	(60%)	251	(60%)	86	(36%)	93	(33%)	179	(35%)

Source: LiLACS NZ

During their interview, all participants completed a *core* questionnaire of three pages about health and function. The majority of participants also completed the full questionnaire during their interview where, in addition to the core questions, they were asked more detailed questions about social, environmental, cultural, and health status. The alcohol use questions were part of the full questionnaire.

Figure A-1: LiLACS NZ recruitment process



Note 1: n = 4 recruits withdrew before first interview; n = 1 questionnaire lost, no data