

# LILACS NZ



## Income in advanced age: *Findings from LiLACS NZ*

### Te Puāwaitanga O Ngā Tapuwae Kia Ora Tonu

This report presents key findings about the main sources of income, how people felt about their money situation and the entitlement cards they had in advanced age.

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 income 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.<sup>1,2</sup>

### Key findings

**New Zealand Superannuation (NZS) was the main source of income for most people in advanced age. For twice as many Māori as non-Māori NZS was the only source of income. People receiving only NZS were more likely to feel they could not make ends meet.**

**Almost all people in advanced age had a SuperGold Card; fewer Māori than non-Māori had a High Use Health Card. Fewer Māori than non-Māori felt comfortable with their money situation in advanced age.**

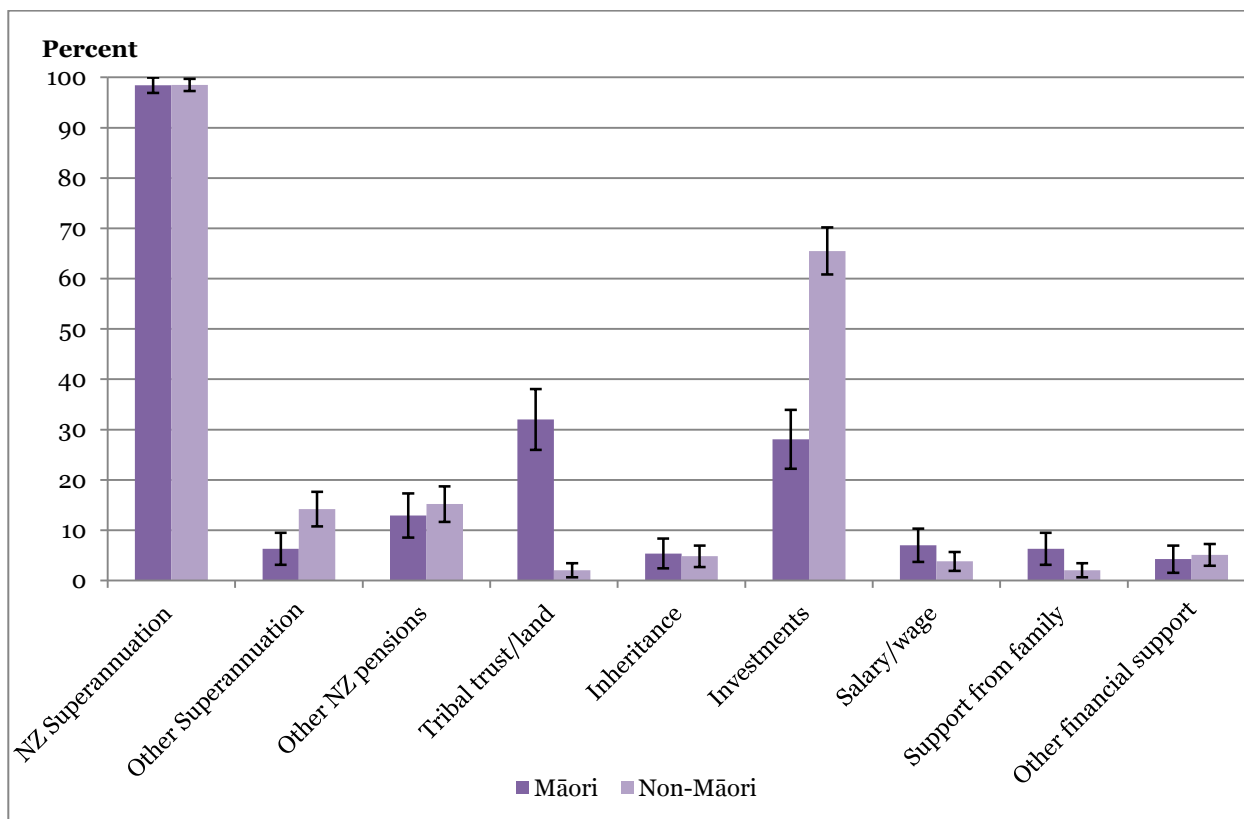
This report describes the prevalence of different sources of income, the main sources of income, and how those in advanced age felt about their money situation, by ethnic group and socioeconomic deprivation. The report also outlines the entitlement cards people in advanced age had by sex, ethnic group and socioeconomic deprivation.

### Findings

**The New Zealand Superannuation (NZS) was the main source of income for most people**

Almost all people in advanced age received the NZS (Figure 1).

**Figure 1: Sources of income for people in advanced age by ethnic group**



Source: LiLACS NZ

Note: All sources are listed, and people could choose more than one, so total % adds to more than 100. Tribal trust/ land: receives income from a tribal trust or tribal land.

### Māori received income from fewer sources than non-Māori

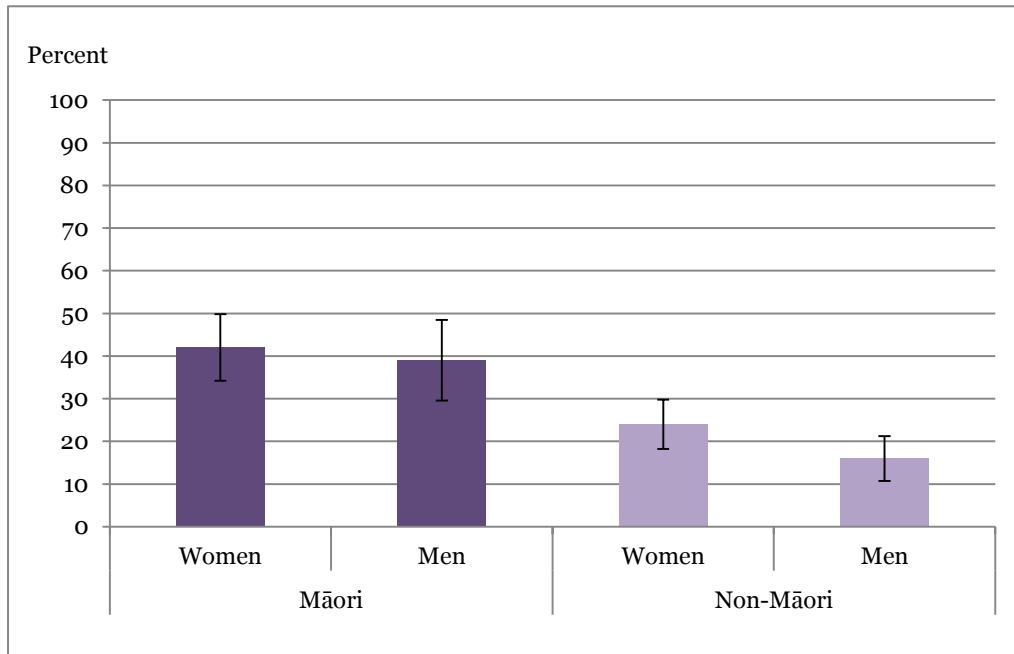
Significantly<sup>i</sup> fewer Māori (6%) received superannuation from another source as well as the NZS, compared with non-Māori (14%), and significantly fewer Māori (28%) received income from investments than non-Māori (65%). Significantly more Māori (32%) received tribal land trust money than non-Māori (2%).

Significantly fewer non-Māori women received other superannuation or pensions. Non-Māori women were also more likely to receive financial assistance from family than non-Māori men.

For 28% of people, NZS was the only source of income (Figure 2).

<sup>i</sup> 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: New Zealand Superannuation (NZS) as the only source of income 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

**NZS was the only source of income for more women than men, and for more Māori than non-Māori**

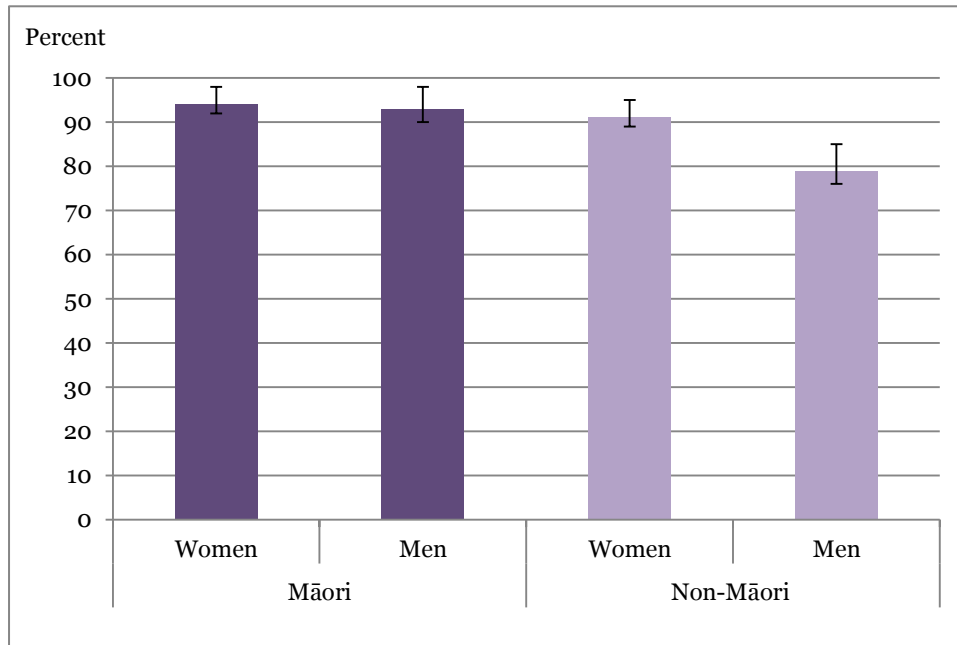
Twice as many Māori (41%) reported that the NZS was their only income compared to non-Māori (21%) (Figure 2). This difference was significant adjusting for age and sex. Significantly more women reported that NZS was their only source of income compared to men.

The prevalence of the NZS being the only source of income did not vary by socioeconomic deprivation when adjusted for age, sex and ethnic group (Figure 4).

**For most people (89%) NZS was their main source of income**

Significantly more Māori reported that the NZS was their main source of income than non-Māori (94% of Māori; 86% of non-Māori) (Figure 3). This was most marked for Māori men, adjusting for age. Significantly more women reported NZS as their main source of income, adjusting for age.

**Figure 3: NZS as the main source of income in advanced age, by sex and ethnic group**

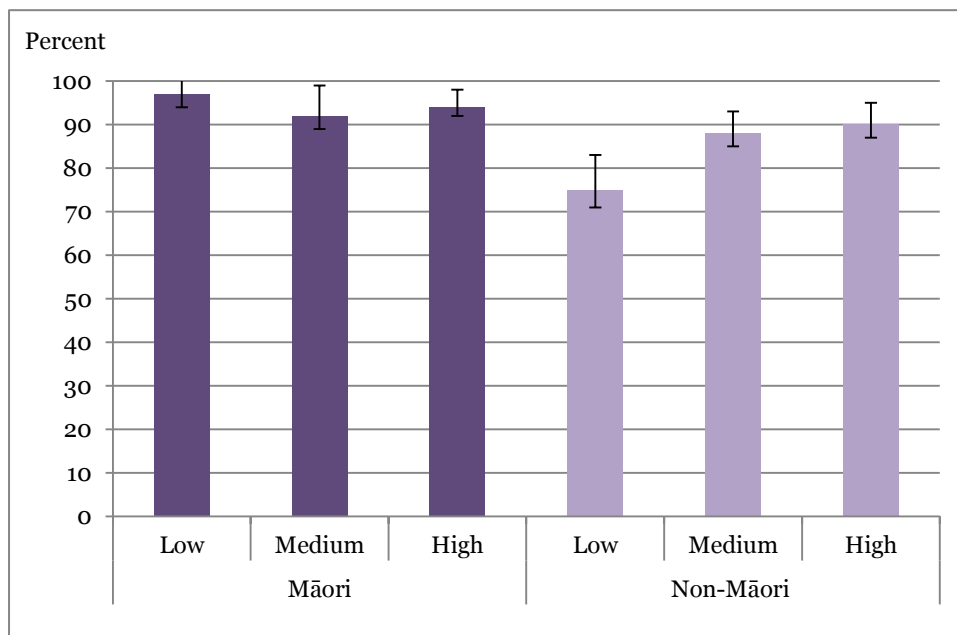


Source: LiLACS NZ

Note: This report uses prioritised ethnicity; self-identification as Māori was prioritised over other ethnicities if more than one was given. The deciles in the New Zealand Deprivation Index (NZDep2006<sup>3</sup>) 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

Those living in high deprivation areas were more likely to report that their main source of income was the NZS (Table A-6).

**Figure 4: NZS as the main source of income in advanced age, by socioeconomic deprivation and ethnic group**



Source: LiLACS NZ

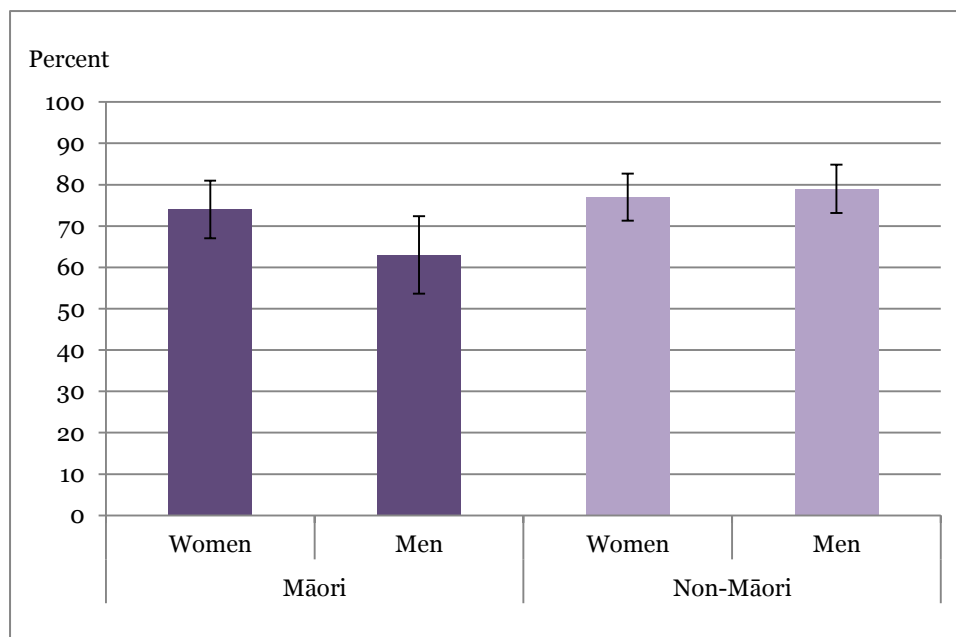
Note: This report uses prioritised ethnicity; self-identification as Māori was prioritised over other ethnicities if more than one was given. The deciles in the New Zealand Deprivation Index (NZDep2006<sup>3</sup>) were used to define the level of socioeconomic deprivation in participants' neighbourhoods 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

### Three quarters of people in advanced age felt comfortable with their money situation

The majority of people (75%) stated that they were comfortable with their money situation, 25% stated that they had just enough to get along and 1% stated that they could not make ends meet. Figure 5 shows the prevalence of those who reported feeling comfortable with their money situation which was similar for men and women and for Māori and non-Māori.

Feeling comfortable with their money situation did not vary according to the socioeconomic deprivation of the area in which the people lived.

**Figure 5: Feeling comfortable with money situation in advanced age, by sex and ethnic group**



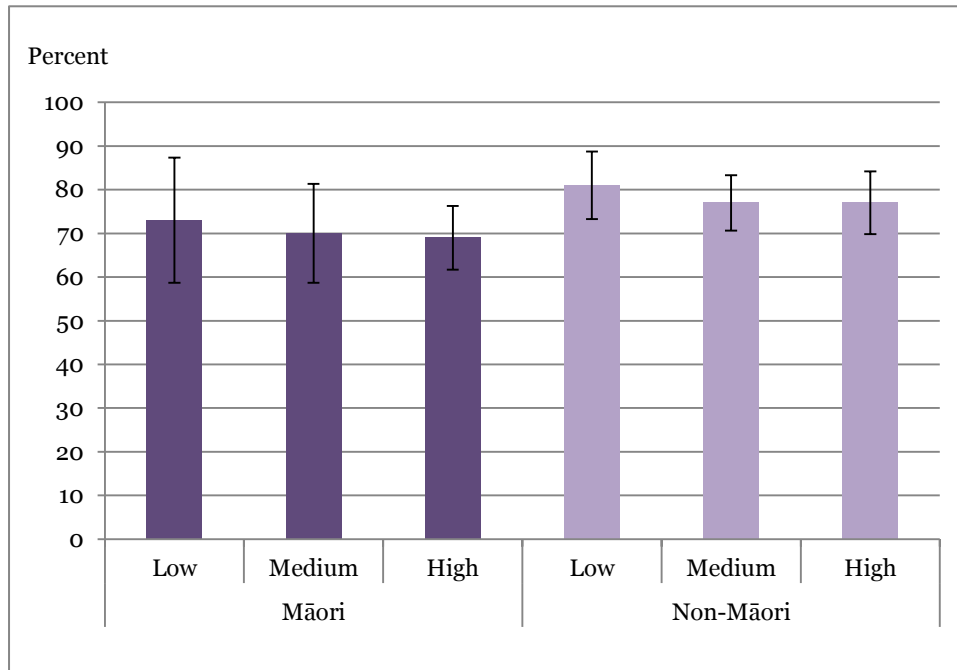
Source: LiLACS NZ

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

### People’s perception about their money situation was related to source of income

Perceptions of whether people could ‘not make ends meet’, ‘had just enough to get along’ or ‘were comfortable’ about their money situation were significantly related to source of income. All (100%) of those who felt they could not make ends meet had no income other than NZS. More people who felt they had ‘just enough to get along’ relied solely on NZS for income (50%) than those who reported that they were ‘comfortable’ (30%).

**Figure 6: Feeling comfortable with money situation in advanced age, by socioeconomic deprivation and ethnic group**



Source: LiLACS NZ

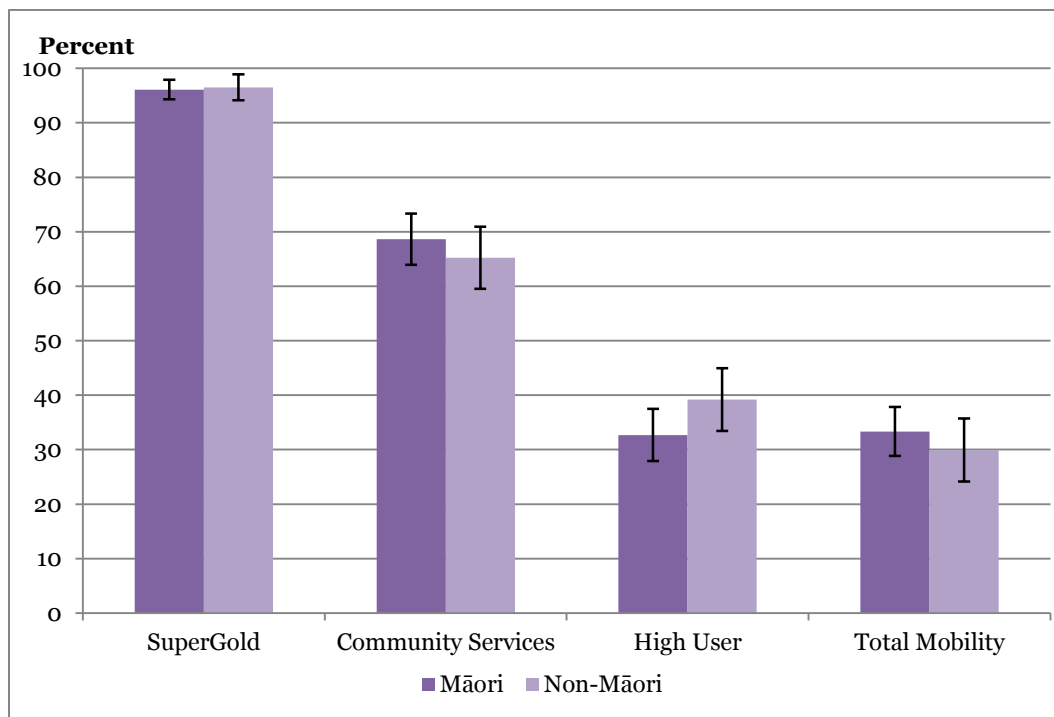
Note: This report uses prioritised ethnicity; self-identification as Māori was prioritised over other ethnicities if more than one was given. The deciles in the New Zealand Deprivation Index (NZDep2006<sup>3</sup>) were used to define the level of socioeconomic deprivation in participants' neighbourhoods 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

### Many people had entitlement cards

Entitlement cards include the Community Services Card, High Use Health Card, SuperGold Card and/or a Total Mobility card. Each card provides discount benefits (such as half-price taxi fares on Total Mobility, or reduced prescription costs on the High Use Health Card), and have various eligibility criteria (such as age 65+ for SuperGold Card or degree of disability for Total Mobility).

Almost all people had a SuperGold Card and two-thirds (67%) had a Community Services Card (Figure 6). Significantly fewer Māori (33%) reported having a High Use Health Card compared to non-Māori (39%), adjusting for age. Significantly fewer men had Total Mobility cards (26%) compared to women (36%), after adjusting for age and ethnic group. Having entitlement cards did not vary according to socioeconomic deprivation.

**Figure 6: Entitlement cards in advanced age by ethnic group**



Source: LiLACS NZ

## What is the source of the data?

The source of these 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, plus nursing assessments of physical function and cardiorespiratory health.

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 income data reported on is from 671 participants who completed the full questionnaire (see Appendix Figure A-1).

## What were the survey questions?

People were asked where their income came from, based on the 2006 NZ Census listing of sources of income, plus other relevant sources such as tribal land trust or support from family. Participants could choose as many sources as were relevant, such as NZS, superannuation from other sources (e.g. work, overseas schemes), other NZ pensions (e.g. war pension), tribal trust/land, inheritance, investments, salary/wages, support from family, and/or other financial support. They were also asked which, out of all of these, was their main source of income.

People were asked how they felt about their money situation, in terms of whether they felt that they ‘could not make ends meet’, ‘had just enough to get along on’, or ‘were comfortable’.

People were also asked if they had specific entitlement cards: Community Services Card, High Use Health Card, SuperGold Card and/or Total Mobility Card; and whether they had private

health insurance. They were also asked, ‘Thinking of your money situation right now, would you say: I can’t make ends meet; I have just enough to get along on; or, I am comfortable?’

## Further information

You can find more information about the LiLACS NZ study on the website (<https://www.fmhs.auckland.ac.nz/en/faculty/lilacs.html>) and see also Hayman et al (2012)<sup>1</sup> for the study protocol and Dyall et al (2013)<sup>2</sup> 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
What are your sources of income?	102	154	188	213
Do you have a SuperGold Card?	101	155	189	212
Do you have a Community Services Card?	100	155	187	210
Do you have a High User Health Card?	99	155	186	212
Do you have a Total Mobility Card?	100	154	188	211
Thinking of your money situation right now would you say?	101	155	189	212

**Table A-2: Sources of income in advanced age for men**

	Men					
	Māori (n = 102)			Non-Māori (n = 188)		
	n	(%)	(95% CI)	n	(%)	(95% CI)
What are your sources of income?						
NZ Superannuation (pension)	101	(99)	(97.1–100.0)	184	(98)	(96.0–100.0)
Other superannuation	6	(7)	(2.0–12.0)	35	(19)	(13.4–24.6)
Other NZ pensions	13	(15)	(8.1–21.9)	40	(22)	(16.1–27.9)
Tribal land trust	26	(29)	(20.2–37.8)	4	(2)	(0–4.0)
Inheritance	7	(8)	(2.7–13.3)	6	(3)	(0.6–5.4)
Investments	25	(28)	(19.3–36.7)	128	(69)	(62.4–75.6)
Salary/wage	7	(8)	(2.7–13.3)	9	(5)	(1.9–8.1)
Support from family	5	(6)	(1.4–10.6)	1	(1)	(0–2.4)
Other financial support	4	(5)	(0.8–9.2)	12	(7)	(3.4–10.6)
What are your sources of income? NZS	33	(42)	(32.4–51.6)	33	(18)	(12.5–33.5)
Out of these, which is your main source of income? NZS	95	(93)	(88.0–98.0)	149	(80)	(74.3–84.7)

**Table A-3: Sources of income in advanced age for women**

	Women					
	Māori (n = 155)			Non-Māori (n = 213)		
	n	(%)	(95% CI)	n	(%)	(95% CI)
What are your sources of income?						
NZ Superannuation (pension)	149	(98)	(95.8–100.0)	211	(99)	(97.7–100.0)
Other superannuation±±	6	(5)	(1.6–8.4)	19	(9)*	(5.2–12.8)
Other NZ pensions	16	(12)	(6.9–17.1)	20	(10)**	(6.0–14.0)
Tribal land trust±±±	46	(34)	(26.5–41.5)	4	(2)	(0.1–3.9)
Inheritance	5	(4)	(0.9–7.1)	13	(6)	(2.8–9.2)
Investments±±	37	(27)	(20.0–30.4)	128	(61)	(54.4–67.6)
Salary/wage	7	(8)	(3.7–12.3)	4	(2)	(0.1–3.9)
Support from family±	9	(7)	(3.0–11.0)	7	(3)*	(0.7–5.3)
Other financial support	5	(4)	(0.9–7.1)	8	(4)	(1.4–6.6)
What are your sources of income? NZS	55	(42)	(34.2–49.8)	52	(25)**	(19.2–30.8)
Out of these, which is your main source of income? NZS	145	(95)	(91.6–98.4)	193	(91)*	(87.2–94.8)

\*Using  $\chi$  test; \*p<0.05, \*\*p<0.001 between men and women of same ethnic group.

\*\*Using  $\chi^2$  test comparing ethnicity; ± p<0.05, ±±p< 0.001 between Māori and non-Māori not accounting for sex.

**Table A-4: Entitlement card use and perceived income in advanced age for men**

	Men					
	Māori (n = 102)			Non-Māori (n = 188)		
	n	(%)	(95% CI)	n	(%)	(95% CI)
Entitlement card						
Has a Community Services card	71	(71)	(62.2–79.8)	119	(64)	(57.1–70.9)
Has a SuperGold card	96	(95)	(90.8–99.2)	183	(97)	(94.3–99.7)
Has a High Use Health card	33	(33)	(23.9–42.1)	76	(41)	(34.0–48.0)
Has a Total Mobility card	34	(34)	(24.8–43.2)	40	(21)	(15.2–26.8)
Has private health insurance	24	(24)	(15.7–32.3)	55	(29)	(22.5–35.5)
Perceived economic status						
Can't make ends meet	6	(6)	(1.4–10.6)	2	(1)	(0–2.4)
Have just enough to get along on	51	(52)	(42.2–61.7)	38	(20)	(14.3–25.7)
Am comfortable	42	(42)	(32.4–51.6)	149	(79)	(73.2–84.8)

**Table A-5: Entitlement card use and perceived income in advanced age for women**

	Women					
	Māori (n = 155)			Non-Māori (n = 213)		
	n	(%)	(95% CI)	n	(%)	(95% CI)
<b>Entitlement card</b>						
Has a Community Services card	104	(67)	(59.6–74.4)	140	(67)	(60.7–73.3)
Has a SuperGold card	150	(97)	(95.3–99.7)	204	(96)	(93.4–98.6)
Has a High Use Health card	50	(31)	(24.7–39.2)	80	(38)	(31.5–44.5)
Has a Total Mobility card	51	(33)	(25.6–40.4)	80	(38)**	(30.5–43.5)
Has private health insurance	23	(15)*	(9.4–20.6)	42	(20)*	(14.6–25.4)
<b>Perceived economic status</b>						
Can't make ends meet	7	(5)	(1.6–8.4)	0	-	-
Have just enough to get along on	85	(56)	(48.2–63.8)	49	(23)	(17.3–28.7)
Am comfortable	61	(40)	(32.3–47.7)	163	(77)	(71.3–82.7)

**Table A-6: Income in advanced age**

Group of interest	Reference group	Adjusted Odds Ratio (95% CI)		Significant (*)	Adjustment variables
<b>Source of income as only NZS</b>					
Men	Women	0.67	(0.47–0.96)	*	Age
Māori	Non-Māori	2.52	(1.66–3.82)	*	Age, sex
Māori men	Non-Māori men	2.23	(1.05–4.75)	*	Age
Māori women	Non-Māori women	2.53	(1.51–4.24)	*	Age
Most deprived areas	Least deprived areas	1.00	(0.62–1.61)	ns	Age, sex, ethnic group
Most deprived areas - men	Least deprived areas - men	1.58	(0.67–3.71)	ns	Age, ethnic group
Most deprived areas - women	Least deprived areas - women	0.77	(0.42–1.39)	ns	Age, ethnic group
<b>Main source of income is NZS</b>					
Men	Women	0.47	(0.27–0.74)	*	Age
Māori	Non-Māori	2.98	(1.35–6.57)	*	Age, sex
Māori men	Non-Māori men	4.74	(1.33–16.9)	*	Age
Māori women	Non-Māori women	1.94	(0.70–5.45)	ns	Age
Most deprived areas	Least deprived areas	1.76	(1.01–3.07)	*	Age, sex, ethnic group
Most deprived areas - men	Least deprived areas - men	2.25	(1.07–4.76)	*	Age, ethnic group
Most deprived areas - women	Least deprived areas - women	1.30	(0.56–3.00)	ns	Age, ethnic group
<b>Having a High Use Health Card</b>					
Men	Women	1.12	(0.81–1.55)	ns	Age
Māori	Non-Māori	0.59	(0.38–0.91)	*	Age, sex
Māori men	Non-Māori men	0.51	(0.24–1.06)	ns	Age
Māori women	Non-Māori women	0.64	(0.38–1.10)	ns	Age
Most deprived areas	Least deprived areas	1.16	(0.75–1.81)	ns	Age, sex, ethnic group
Most deprived areas - men	Least deprived areas - men	0.98	(0.50–1.95)	ns	Age, ethnic group
Most deprived areas	Least deprived areas	1.32	(0.74–2.37)	ns	Age, ethnic group

- women	- women				
Having a Total Mobility Card					
Men	Women	0.62	(0.44–0.87)	*	Age
Māori	Non-Māori	1.26	(0.84–1.88)	ns	Age, sex
Māori men	Non-Māori men	2.26	(1.14–4.46)	*	Age
Māori women	Non-Māori women	0.90	(0.54–1.49)	ns	Age
Most deprived areas	Least deprived areas	1.15	(0.73–1.83)	ns	Age, sex, ethnic group
Most deprived areas - men	Least deprived areas - men	1.36	(0.61–3.02)	ns	Age, ethnic group
Most deprived areas - women	Least deprived areas - women	1.06	(0.59–1.89)	ns	Age, ethnic group
I am comfortable with my money situation					
Men	Women	0.91	(0.64–1.29)	ns	Age
Māori	Non-Māori	0.78	(0.50–1.22)	ns	Age, sex
Māori men	Non-Māori men	1.09	(0.46–2.57)	ns	Age
Māori women	Non-Māori women	0.76	(0.44–1.31)	ns	Age
Most deprived areas	Least deprived areas	0.83	(0.51–1.38)	ns	Age, sex, ethnic group
Most deprived areas - men	Least deprived areas - men	0.43	(0.18–1.02)	ns	Age, ethnic group
Most deprived areas - women	Least deprived areas - women	1.31	(0.69–2.49)	ns	Age, ethnic group

\*Significant odds ratio for comparison of group of interest to the reference group. ns = no significant difference

## 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-7 shows the age, sex, ethnic group, living arrangements and socioeconomic deprivation area of the LiLACS NZ participants in the first wave.

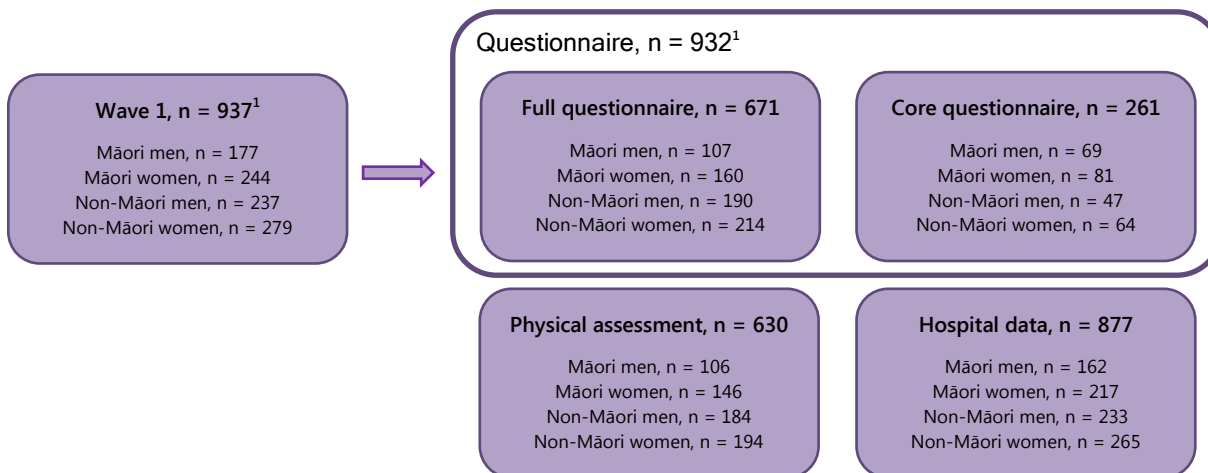
**Table A-7: Demographic summary of LiLACS NZ participants**

	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 income 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