



Auckland UniServices Limited



Re-Analysis of the CMDHB Baseline Survey

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1. Introduction

Phoenix Research undertook a baseline survey in Counties Manukau in 2006/07 to aid in the evaluation of the LBD programme and to inform the intervention strategies, and particularly the social marketing strategy. The surveys' focus was the general population as well as individuals with diabetes (including those that were undiagnosed).

This report provides an analysis of many of the key items in the survey, with a comparison of responses by ethnicity, age group, gender and socioeconomic status. The results presented in this report are intended as a replacement for the results presented in the previous Let's Beat Diabetes Benchmark Survey: Research Report for CMDHB (Wyllie & MacKinlay, 2007), as this report uses a more up-to-date weighting of the data based on Census 2006 figures.

The report is intended to be a source of data to inform other activities and reports within the evaluation and the programme itself. It therefore contains only a minimal interpretation and discussion of the results of the analyses.

2. Method

The section largely describes the weighting procedure applied to the data. Only a brief description of the survey methodology is described here. For a full explanation of this methodology see the Let's Beat Diabetes Benchmark Survey: Research Report for CMDHB (Wyllie & MacKinlay, 2007).

2.1. Survey Methodology

A total of 2,520 interviews were completed between 31 October 2006 and 8 March 2007. The interviewees were aged 16 years or older and were from the Counties Manukau DHB region. Oversampling of Maori, Pacific, and Asian peoples was conducted to provide subgroups large enough to make statistical comparisons both within and across time periods. This was achieved by three separate stages of sampling:

1. Main sample: Randomly selection of all ethnic groups from the Telecom white pages till quota for other ethnicities met.
2. Booster sample: Randomly selected from Telecom white pages of only Maori, Pacific and Asian persons till Maori quote and subsequently the Asian quota was met.
3. Booster Pacific sample: Randomly selected from CMDHB areas comprising 25% or more of Pacific peoples.

As a result the total unweighted sample was comprised of 594 Maori, 712 Pacific people, 599 Asian people and 998 from Other ethnicities.

Participants were asked to specify the ethnic group that they identified with the most and this is the ethnicity variable used in this report.

2.2. Weighting Procedure

Data was weighted for analysis to ensure that the data accurately reflected the composition of the population in terms of household size, age, gender, ethnicity and socioeconomic status. The data was weighted in a two-step procedure:

Step 1: A simple one variable cell weighting to adjust for unequal probability of selection due to household size.

	Number of People Usually Resident in Household							
	1	2	3	4	5	6	7	8+
Population %	4.6	16.6	16.4	22.9	16.2	9.6	5.7	8.0
Sample %	10.9	19.2	19.9	20.0	12.4	7.4	4.1	6.1
Raw Weighting	0.4	0.9	0.8	1.1	1.3	1.3	1.4	1.3
Adjusted Weighting*	1.0	2.1	2.0	2.7	3.1	3.1	3.3	3.1

*Adjusted to make people in one household homes count as one. This approach is recommended by Gelman and Little (1998).

Step 2: 'Raked' (also called 'marginal' or 'rim') weighting was used to adjust the weightings from the first step to provide post-stratification weighting by age, gender and SES (NZDep2006) to the 2006 Census population of Counties Manukau. This step was conducted separately within each ethnic group allow for a more accurate representation of differing distributions of these variables within the different ethnic groups. The size of the ethnic groups was adjusted simultaneously to make the ethnic group sizes representative of the population. The Rake.py module for SPSS was used to conduct this step, which employs the general loglinear analysis (GENLOG) procedure to adjust the case weights to fit the specified marginal weights (population %s) presented in the tables below.

Table 1: Demographics of the CMDHB Maori Population*, Sample and Weighted Sample

Demographic Variable	Category	Population %	Sample %	Weighted Sample %
SES	1-2	5.6	10.6	11.6
	3-4	3.1	11.8	5.8
	5-6	13.1	11.3	14.2
	7-8	10.4	19.4	11.0
	9-10	67.8	47.0	57.4
Age	16 to 24 years	28.7	16.5	30.0
	25 to 44 years	43.4	45.3	43.2
	45 to 64 years	23.1	31.9	22.6
	65+ years	4.8	6.3	4.2
Gender	Male	45.3	36.7	47.5
	Female	54.7	63.4	52.5
Total		13.76		

*Population 15+ yrs

Table 2: Demographics of the CMDHB Pacific Population*, Sample and Weighted Sample

Demographic Variable	Category	Population %	Sample %	Weighted Sample %
SES	1-2	0.2	3.4	2.2
	3-4	0.7	4.0	1.2
	5-6	1.8	2.1	2.0
	7-8	5.9	6.7	6.1
	9-10	91.5	83.9	88.6
Age	16 to 24 years	29.3	25.6	31.5
	25 to 44 years	43.3	50.0	41.6
	45 to 64 years	21.5	20.7	21.4
	65+ years	6.0	3.7	5.5
Gender	Male	47.4	44.4	50.3
	Female	52.6	55.6	49.7
Total		16.06		

*Population 15+ yrs

Table 3: Demographics of the CMDHB Asian Population*, Sample and Weighted Sample

Demographic Variable	Category	Population %	Sample %	Weighted Sample %
SES	1-2	28.3	29.8	27.9
	3-4	12.9	18.7	13.8
	5-6	17.8	9.0	17.5
	7-8	15.1	18.3	15.4
	9-10	25.9	24.3	25.4
Age	16 to 24 years	23.8	18.8	24.6
	25 to 44 years	43.2	55.9	42.9
	45 to 64 years	26.7	24.1	26.2
	65+ years	6.5	1.2	6.3
Gender	Male	47.7	46.6	48.2
	Female	52.3	53.4	51.8
Total		16.72		

*Population 15+ yrs

Table 4: Demographics of the CMDHB 'Other' Ethnic Groups Population*, Sample and Weighted Sample

Demographic Variable	Category	Population %	Sample %	Weighted Sample %
SES	1-2	34.8	28.1	36.7
	3-4	11.3	20.1	11.1
	5-6	21.8	18.5	23.2
	7-8	8.8	14.5	8.2
	9-10	23.2	18.9	20.7
Age	16 to 24 years	16.9	8.9	13.0
	25 to 44 years	35.4	33.5	34.8
	45 to 64 years	31.9	37.5	33.9
	65+ years	15.9	20.1	18.3
Gender	Male	48.5	37.2	46.8
	Female	51.5	62.8	53.2
Total		53.46		

*Population 15+ yrs

3. Results

3.1. Diabetes

3.1.1. Self-Reported Diabetes Prevalence

Table 5: Percentage of Participants with Self-Reported Diabetes by Ethnicity

	Maori	Pacific	Asian	Other	Total
Yes- Type 1	1.8	3.3	0.6	1.0	1.5
Yes- Type 2	2.2	3.8	4.2	4.0	3.6
Yes- not sure which type	2.1	4.6	2.2	1.0	2.0
No	94.0	88.3	93.0	94.1	92.9

The self-reported prevalence of diabetes (Type I, II, and unknown combined) was significantly higher among Pacific peoples than among Maori and Other ethnic group peoples, but Asian peoples were not significantly different to any other ethnic group.

Table 6: Self reported diabetes by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
Yes- Type 1	0.4	0.9	2.9	1.7	1.5
Yes- Type 2	0.2	1.7	5.1	13.1	3.6
Yes- not sure which type	0.0	2.2	2.8	3.2	2.0
No	99.4	95.1	89.1	81.9	92.9

The proportion of diabetes significantly increased with the increase in age. The 25-44 group had significantly higher rates of diabetes than the 16-24 group, the 45-64 group had significantly higher rates than the two younger groups, and the 65+ group had significantly higher rates than the three younger groups.

Table 7: Self Reported Diabetes by Gender

	Male	Female	Total
Yes- Type 1	1.3	1.6	1.5
Yes- Type 2	2.8	4.4	3.6
Yes- not sure which type	0.9	3.1	2.0
No	95.0	90.9	92.9

The table showed that females had a significantly higher proportion of diabetes than males.

Table 8: Self Reported Diabetes by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
Yes- Type 1	0.6	0.6	1.2	1.2	2.4	1.5
Yes- Type 2	1.7	2.1	5.1	3.1	4.7	3.6
Yes- not sure which type	1.4	0.5	1.8	0.7	3.2	2.0
No	96.4	96.8	92.0	95.0	89.8	92.9

Those living in areas of highest deprivation (NZDep 9-10) had a significantly higher proportion of diabetes than those living in the two lowest NZDep quintiles (1-4). Those living in NZDep quintile 3 (5-6) also had significantly higher rates of diabetes than those in the lowest deprivation areas (NZDep 1-2).

Table 9: Self Reported Gestational Diabetes Mellitus (GDM) by Ethnicity*

Gestational Diabetes	Maori	Pacific	Asian	Other	Total
yes	44.5	41.9	35.2	27.6	35.6
No	55.5	58.1	64.8	72.4	64.4

*Percentages in this table represent % of those who have had a baby.

Although the Maori and Pacific participants showed the highest proportion of diabetes, there were no significant differences in rates of GDM by ethnic group. The number of participants who answered this question was low and therefore the size of difference necessary to be significant was relatively high in comparison to those questions that the majority of people answered.

Table 10: Percentage of Diabetes cases that persisted after delivery by Ethnicity

Gestational Diabetes	Maori	Pacific	Asian	Other	Total
yes	33.7	65.3	27.9	37.8	43.6
No	66.3	34.7	72.1	62.2	56.4

Although the Pacific ethnicity showed the highest proportion of diabetes cases that persisted after delivery, the difference between ethnic groups was not statistically significant. This also relates to the low number of respondents who had given birth.

Table 11: Self Reported Gestational Diabetes Mellitus by Age Group

Gestational Diabetes	16-24 years	25-44 years	45-64 years	65+ years	Total
yes	0.0	62.2	28.9	10.2	35.6
No	100.0	37.8	71.1	89.8	64.4

Not surprisingly, the age group 25-44 showed the highest proportion of GDM as this is the peak age of child bearing period. Rates of GDM were significantly higher in this age group compared to all other groups.

Table 12: Percentage of Diabetes cases that persisted after delivery by Age Group

Gestational Diabetes	16-24 years	25-44 years	45-64 years	65+ years	Total
yes	0.0	26.0	70.2	61.8	43.6
No	0.0	74.0	29.8	38.2	56.4

The age group 45-64 showed a significantly higher proportion than the age group 25-44 to have diabetes persisting after delivery.

Table 13: Self Reported Gestational Diabetes Mellitus by Socioeconomic Status

Gestational Diabetes	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
yes	48.9	15.3	19.4	29.1	41.5	35.6
No	51.1	84.7	80.6	70.9	58.5	64.4

Although there were large differences in the percentages of women experiencing GDM in areas with different levels of deprivation, none of these differences were statistically significant due to the low number of respondents for whom this question was relevant.

Table 14: Percentage of Diabetes cases that persisted after delivery by Socioeconomic Status

Gestational Diabetes	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
yes	0.0	50.0	0.0	60.8	58.0	43.6
No	100.0	50.0	100.0	39.2	42.0	56.4

Table 15: Frequency of Having Positive Family History of Diabetes

Category	Group	%
Ethnicity	Maori	31.9
	Pacific	36.2
	Asian	32.9
	Other	21.2
Age Group	16-24	22.0
	25-44	30.6
	45-64	30.7
	65+	23.0
Gender	Male	26.0
	Female	29.7
Socioeconomic Status	NZDep 1-2	20.1
	NZDep 3-4	19.6
	NZDep 5-6	26
	NZDep 7-8	26.9
	NZDep 9-10	35.4
Total		27.9

Maori, Pacific and Asian peoples had significantly higher proportion of participants reporting a family history of diabetes. Those in the 25-64 age range had significantly higher proportions of participants reporting a family history of diabetes. Females reported a family history of diabetes more than males. Those living in areas with the highest levels of deprivation (NZDep 9-10) had a significantly higher proportion of participants reporting a family history of diabetes than those in the three lowest deprivation quintiles (NZDep 1-6).

3.1.2. Health Services Utilisation and Diabetes-Related Checks and Advice Received at Last Visit

Table 16: Consultation with a Doctor or Nurse in the past 12 months by Ethnicity

Consultation in Past Year	Maori	Pacific	Asian	Other	Total
yes	56.8	57.0	55.6	70.2	62.7
No	43.2	43.0	44.4	29.8	37.3

The 'Other' ethnic group had a significantly higher proportion of participants who had had a consultation with a doctor or nurse than all of the other ethnic groups.

Table 17: Consultation with a Doctor or Nurse in the past 12 months by Age Group

Consultation in Past Year	16-24 years	25-44 years	45-64 years	65+ years	Total
	%	%	%	%	%
yes	43.4	60.3	70.5	88.9	62.7
No	56.6	39.7	29.5	11.1	37.3

The proportion of participants who had had a consultation with a doctor or nurse increased with the increase in the age. The 25-44 group had significantly higher proportion of consultations than the 16-24 group, the 45-64 group had significantly higher rates than the two younger groups, and the 65+ group had significantly higher rates than the three younger groups. The youngest age group 16-24 had significantly the lowest proportion of consultations among all age groups.

Table 18: Consultation with a Doctor or Nurse in the past 12 months by Gender

Consultation in Past Year	Male	Female	Total
yes	55.3	69.5	62.7
No	44.7	30.5	37.3

Women had significantly a higher proportion of consultations than men in the past 12 months.

Table 19: Consultation with a Doctor or Nurse in the past 12 months by Socioeconomic Status

Consultation in Past Year	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
yes	67.4	57.9	62.7	63.0	60.9	62.7
No	32.6	42.1	37.3	37.0	39.1	37.3

Socioeconomic status had no effect on the proportion of consultations with a doctor or nurse in the past 12 months.

Table 20: Blood pressure measurement performed during consultation by Ethnicity

	Maori	Pacific	Asian	Other	Total
yes	86.7	85.7	78.1	92.0	88.0
No	13.3	14.3	21.9	8.0	12.0

The Other ethnic group showed a significantly higher proportion of blood pressure measurement as compared to Pacific and Asian ethnic groups.

Table 21: Blood pressure measurement performed during consultation by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
yes	69.2	84.4	95.5	98.8	88.0
No	30.8	15.6	4.5	1.2	12.0

The proportion of blood pressure measurement increased with the increase in the age. The 25-44 group had significantly higher proportion than the 16-24 group, the 45-64 group had significantly higher rates than the two younger groups, and the 65+ group had significantly higher rates than the three younger groups.

Table 22: Blood pressure measurement performed during consultation by Gender

	Male	Female	Total
yes	86.5	89.1	88.0
No	13.5	10.9	12.0

The proportion of blood pressure measurement did not vary significantly by gender.

Table 23: Blood pressure measurement performed during consultation by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
yes	90.9	86.2	87.4	84.5	87.5	88.0
No	9.1	13.8	12.6	15.5	12.5	12.0

Blood pressure measurement proportions did not vary significantly by socioeconomic status.

Table 24: Cholesterol testing referral during consultation performed by Ethnicity

	Maori	Pacific	Asian	Other	Total
yes	59.6	63.7	57.7	63.2	61.8
No	40.4	36.3	42.3	36.8	38.2

The proportion of cholesterol testing did not vary significantly by ethnicity.

Table 25: Cholesterol testing referral during consultation performed by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
yes	25.9	51.3	77.3	87.1	61.8
No	74.1	48.7	22.7	12.9	38.2

The proportion of cholesterol testing increased with increase in age. The group 25-44 had a significantly higher proportion than the group 16-24, the 45-64 group had significantly higher

rates than the two younger groups, and the 65+ group had significantly higher rates than the three younger groups.

Table 26: Cholesterol testing referral during consultation performed by Gender

	Male	Female	Total
yes	65.8	58.9	61.8
No	34.2	41.1	38.2

Men had significantly a higher proportion of cholesterol testing than women.

Table 27: Cholesterol testing referral during consultation performed by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
yes	64.3	59.5	62.1	54.4	62.3	61.8
No	35.7	40.5	37.9	45.6	37.7	38.2

Cholesterol testing proportion did not vary significantly by socioeconomic status.

Table 28: Diabetes testing referral during consultation performed by Ethnicity

	Maori	Pacific	Asian	Other	Total
yes	53.3	66.3	56.0	54.2	56.2
No	46.7	33.7	44.0	45.8	43.8

The figures showed that the Pacific ethnicity had a significantly higher proportion of diabetes testing as compared to Maori and Other ethnic groups, but Asian peoples were not significantly different to any other ethnic group.

Table 29: Diabetes testing referral during consultation performed by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
yes	26.5	48.1	70.4	77.3	56.2
No	73.5	51.9	29.6	22.7	43.8

The group 25-44 had a significantly higher proportion of diabetes testing than group 16-24, and the groups 45-64 and 65+ both had significantly higher proportions than the groups 16-24 and 25-44.

Table 30: Diabetes testing referral during consultation performed by Gender

	Male	Female	Total
yes	58.2	54.8	56.2
No	41.8	45.2	43.8

Diabetes testing rates did not vary significantly by gender.

Table 31: Diabetes testing referral during consultation performed by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
yes	52.1	49.1	56.2	54.2	60.8	56.2
No	47.9	50.9	43.8	45.8	39.2	43.8

Diabetes testing rates did not vary significantly by socioeconomic status.

Table 32: Weight measurement performed during consultation by Ethnicity

	Maori	Pacific	Asian	Other	Total
yes	77.4	85.8	76.2	73.9	76.8
No	22.6	14.2	23.8	26.1	23.2

The proportion of weight measurement during consultation was significantly higher among the Pacific ethnicity than the Asian and Other ethnic groups.

Table 33: Weight measurement performed during consultation by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
yes	72.4	72.6	80.2	83.6	76.8
No	27.6	27.4	19.8	16.4	23.2

The older age group 65+ had the highest proportion of weight measurement which was significantly different to groups 25-44 and 16-24. The 45-64 age group also had significantly higher proportion of participants reporting having their weight measured than the 25-44 age group.

Table 34: Weight measurement performed during consultation by Gender

	Male	Female	Total
yes	74.2	78.6	76.8
No	25.8	21.4	23.2

Females had a significantly higher proportion of weight measurement than males.

Table 35: Weight measurement performed during consultation by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
yes	70.6	77.0	73.4	81.2	81.1	76.8
No	29.4	23.0	26.6	18.8	18.9	23.2

Those living in areas of highest deprivation (NZDep 9-10) had a significantly higher proportion of weight measurement than those living in areas with the lowest deprivation (NZDep 1-2).

Table 36: Smoking Cessation advice given to smokers during consultation by Ethnicity

	Maori	Pacific	Asian	Other	Total
yes	87.9	85.4	77.9	79.0	83.0
No	12.1	14.6	22.1	21.0	17.0

Table 37: Smoking Cessation advice given to smokers during consultation by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
yes	80.5	81.7	87.0	79.3	83.0
No	19.5	18.3	13.0	20.7	17.0

Table 38: Smoking Cessation advice given to smokers during consultation by Gender

	Male	Female	Total
yes	79.6	86.0	83.0
No	20.4	14.0	17.0

Table 39: Smoking Cessation advice given to smokers during consultation by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
yes	70.1	51.8	90.0	83.4	86.5	83.0
No	29.9	48.2	10.0	16.6	13.5	17.0

Table 40: Healthy eating & weight advice given during consultation by Ethnicity

	Maori	Pacific	Asian	Other	Total
yes	53.2	77.2	57.6	35.1	48.4
No	46.8	22.8	42.4	64.9	51.6

The table showed that the Pacific ethnicity had a significantly higher proportion of consultation about healthy eating and weight than the Maori, Asian and Other ethnic groups. Maori and Asian ethnicities also had a significantly higher proportion of consultation on healthy eating and diet as compared to Other ethnic group. The Other ethnic group was significantly the least to get consultation as compared to the Maori, Pacific and Asian ethnicities.

Table 41: Healthy eating & weight advice given during consultation by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
yes	49.1	50.1	49.4	41.8	48.4
No	50.9	49.9	50.6	58.2	51.6

There was no significant difference in the proportion of consultation on healthy eating or weight by age group.

Table 42: Healthy eating & weight advice given during consultation by Gender

	Male	Female	Total
yes	49.7	47.5	48.4
No	50.3	52.5	51.6

There was no significant difference in the proportion of consultation on healthy eating or weight by gender.

Table 43: Healthy eating & weight advice given during consultation by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
yes	35.8	41.1	40.9	48.6	61.3	48.4
No	64.2	58.9	59.1	51.4	38.7	51.6

Socioeconomic status had a significant effect on the proportion of people having consultation on healthy eating and weight. Those living in areas with the highest deprivation (NZDep9-10) had a significantly higher proportion of consultations about healthy eating and weight than those living in areas of lesser deprivation (NZDep 1-8).

Table 44: Risk of Diabetes or Heart Disease advice given during consultation by Ethnicity

	Maori	Pacific	Asian	Other	Total
yes	42.4	71.1	45.0	33.9	43.0
No	57.6	28.9	55.0	66.1	57.0

A significantly higher proportion of the Pacific ethnicity had advice on risk of diabetes and heart disease as compared to the Maori, Asian and Other ethnicities. The Asian participants also had a significantly higher proportion receiving advice on the risk of diabetes than the Other ethnic group.

Table 45: Risk of Diabetes or Heart Disease advice given during consultation by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
yes	28.7	40.6	50.0	48.1	43.0
No	71.3	59.4	50.0	51.9	57.0

The proportion of getting advice on diabetes and heart disease was significantly high among those 25 years or older, and the 45-64 age group had a significantly higher proportion receiving advice than the 25-44 age group.

Table 46: Risk of Diabetes or Heart Disease advice given during consultation by Gender

	Male	Female	Total
yes	46.8	40.2	43.0
No	53.2	59.8	57.0

More male participants had received advice about diabetes or heart disease than females.

Table 47: Risk of Diabetes or Heart Disease advice given during consultation by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
yes	27.6	34.4	42.4	42.4	55.1	43.0
No	72.4	65.6	57.6	57.6	44.9	57.0

Those living in areas of highest deprivations (NZDep 9-10) had a significantly higher proportion receiving advice about diabetes or heart disease than those living in all other deprivation levels. Those living in the third and fourth quintiles of NZDep (5-8) also had a higher proportion receiving this advice than those in the areas of lowest deprivation (NZDep 1-2).

Table 48: Exercise or Physical Activity Advice given during consultation by Ethnicity

	Maori	Pacific	Asian	Other	Total
yes	54.9	77.3	55.6	44.7	53.3
No	45.1	22.7	44.4	55.3	46.7

Pacific participants had a significantly higher proportion who had received advice about physical activity or exercise compared to all other ethnic groups. The Other ethnic group also had a significantly lower proportion getting advice on physical activity compared to Maori and Asian peoples.

Table 49: Exercise or Physical Activity Advice given during consultation by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
yes	50.3	52.6	58.2	48.4	53.3
No	49.7	47.4	41.8	51.6	46.7

There was no significant difference in the proportion of receiving advice about exercise or physical activity by age group.

Table 50: Exercise or Physical Activity Advice given during consultation by Gender

	Male	Female	Total
yes	57.9	50.0	53.3
No	42.1	50.0	46.7

Males had a significantly higher proportion receiving advice on exercise and physical activity.

Table 51: Exercise or Physical Activity Advice given during consultation by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
yes	41.6	45.9	51.1	50.4	64.1	53.3
No	58.4	54.1	48.9	49.6	35.9	46.7

Those living in areas of highest deprivation (NZDep 9-10) had a higher proportion receiving advice on exercise and physical activity than those living in all other deprivation levels.

3.1.3. Attitudes & Beliefs About Diabetes

Table 52: Percentage of agreement on not knowing anything about diabetes by Ethnicity

	Maori	Pacific	Asian	Other	Total
Agree strongly	22.4	0.0	7.9	9.7	10.4
Agree	1.6	0.0	0.0	6.2	5.6
Agree a little	19.4	0.0	7.7	7.4	8.2
Neither agree nor disagree	0.0	0.0	0.0	1.6	1.4
Disagree a little	6.5	0.0	5.5	22.8	20.7
Disagree	23.7	78.6	62.9	15.7	18.9
Disagree strongly	26.4	21.4	16.0	36.5	34.8

Table 53: Percentage of agreement on not knowing anything about diabetes by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
Agree strongly	4.0	15.0	8.8	8.7	10.4
Agree	23.1	2.6	2.4	4.3	5.6
Agree a little	0.0	11.1	3.9	14.7	8.2
Neither agree nor disagree	0.0	2.1	0.7	2.2	1.4
Disagree a little	4.1	27.8	19.2	20.6	20.7
Disagree	37.0	13.4	17.1	20.2	18.9
Disagree strongly	31.8	28.0	47.8	29.2	34.8

Table 54: Percentage of agreement on not knowing anything about diabetes by Gender

	Male	Female	Total
Agree strongly	10.7	10.2	10.4
Agree	1.6	8.5	5.6
Agree a little	10.6	6.4	8.2
Neither agree nor disagree	1.8	1.2	1.4
Disagree a little	26.6	16.2	20.7
Disagree	16.9	20.4	18.9
Disagree strongly	31.8	37.0	34.8

Table 55: Percentage of agreement on not knowing anything about diabetes by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
Agree strongly	8.2	4.2	13.6	8.9	11.8	10.4
Agree	9.7	5.2	3.5	12.7	2.9	5.6
Agree a little	11.3	8.5	6.6	0.0	9.8	8.2
Neither agree nor disagree	0.0	1.4	1.1	0.0	5.3	1.4
Disagree a little	19.1	24.7	18.7	44.2	18.6	20.7
Disagree	12.0	21.3	17.9	17.1	32.1	18.9
Disagree strongly	39.8	34.5	38.7	17.1	19.6	34.8

Table 56: Percentage of people's perception of their knowledge of diabetes by Ethnicity

	Maori	Pacific	Asian	Other	Total
Poor	30.4	27.2	20.2	23.2	25.0
Fair	30.5	30.2	31.4	34.9	32.4
Good	21.1	23.0	33.0	25.4	25.4
Very good	18.1	19.6	15.4	16.6	17.3

The Other ethnic group had a significantly higher proportion of participants perceiving that they generally have good (good or very good) knowledge of diabetes compared to Maori and Pacific participants.

Table 57: Percentage of people's perception of their knowledge of diabetes by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
Poor	37.0	24.3	16.9	22.4	25.0
Fair	36.3	33.1	30.4	25.6	32.4
Good	18.6	26.6	28.9	26.3	25.4
Very good	8.1	15.9	23.8	25.7	17.3

Older age groups (45-64 and 65+) had a higher proportion of participants perceiving that they had good (good or very good) knowledge of diabetes than the two younger age groups (16-24 and 25-44). Those in the 25-44 group also had a higher proportion perceiving that they had good knowledge of diabetes than the 16-24 group.

Table 58: Percentage of people's perception of their knowledge of diabetes by Gender

	Male	Female	Total
Poor	32.1	18.3	25.0
Fair	30.7	33.9	32.4
Good	22.7	27.9	25.4
Very good	14.4	19.9	17.3

Significantly more females perceived that they had a good (good or very good) knowledge of diabetes than males.

Table 59: Percentage of people's perception of their knowledge of diabetes by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
	20.8	19.5	30.5	24.3	26.8	25.0
Poor	33.7	38.5	29.2	32.7	31.4	32.4
Fair	27.5	25.7	23.2	23.8	25.2	25.4
Good	18.0	16.4	17.2	19.3	16.6	17.3
Very good	20.8	19.5	30.5	24.3	26.8	25.0

Those living in areas of lowest deprivation (NZDep 1-2) and moderate deprivation (NZDep 5-6) had a significantly higher proportion of participants who perceived their knowledge of diabetes to be good than those living in areas of highest deprivation (NZDep 9-10). Those living in areas of moderate deprivation also had a higher proportion with perceived good

knowledge about diabetes than those living in the next highest level of deprivation (NZDep 7-8).

Table 60: “How much you agree to: I am worried that I or someone in my family has diabetes or may get it” by Ethnicity

	Maori	Pacific	Asian	Other	Total
Agree strongly	23.5	38.7	15.4	10.2	18.6
Agree	13.0	15.3	18.1	8.4	12.1
Agree a little	11.5	12.4	13.8	8.7	10.8
Neither agree nor disagree	3.1	1.3	1.0	3.1	2.4
Disagree a little	9.1	9.4	9.5	8.7	9.0
Disagree	16.8	10.8	21.5	23.2	19.6
Disagree strongly	23.0	12.1	20.6	37.7	27.5

A higher proportion of Pacific participants agreed that they were worried about themselves or a family member getting diabetes than all other ethnic groups. Maori and Asian participants were also more worried than Other ethnic group participants.

Table 61: “How much you agree to: I am worried that I or someone in my family has diabetes or may get it” by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
Agree strongly	16.8	21.6	17.9	11.6	18.6
Agree	18.8	11.2	10.0	6.1	12.1
Agree a little	13.1	11.6	8.5	8.1	10.8
Neither agree nor disagree	1.3	2.4	3.4	2.6	2.4
Disagree a little	11.3	8.6	7.7	9.1	9.0
Disagree	16.5	17.5	22.0	28.8	19.6
Disagree strongly	22.2	27.1	30.5	33.8	27.5

There were no significant differences in concern about diabetes between age groups.

Table 62: “How much you agree to: I am worried that I or someone in my family has diabetes or may get it” by Gender

	Male	Female	Total
Agree strongly	15.1	21.8	18.6
Agree	13.0	11.3	12.1
Agree a little	11.9	9.7	10.8
Neither agree nor disagree	2.5	2.4	2.4
Disagree a little	10.4	7.8	9.0
Disagree	18.9	20.2	19.6
Disagree strongly	28.2	26.9	27.5

There was no significant difference in concern about diabetes between males and females.

Table 63: “How much you agree to: I am worried that I or someone in my family has diabetes or may get it” by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
Agree strongly	10.0	12.0	12.1	23.5	26.9	18.6
Agree	11.0	8.8	13.9	9.6	13.5	12.1
Agree a little	11.9	7.7	7.7	10.0	12.2	10.8
Neither agree nor disagree	2.4	1.6	4.2	2.4	1.9	2.4
Disagree a little	6.6	11.8	11.0	11.9	8.4	9.0
Disagree	20.5	26.6	20.6	21.0	16.6	19.6
Disagree strongly	37.5	31.5	30.4	21.5	20.6	27.5

People living in areas of highest deprivation (NZDep 9-10) had a higher proportion of participants who were worried about themselves or a family member getting diabetes compared to all other levels of deprivation. Those living in the next highest level of deprivation (NZDep 7-8) were also more worried about diabetes than those in the two lowest deprivation quintiles (NZDep 1-4).

Table 64: “How much you agree to: I am worried that someone in my family has diabetes or may get it” by Ethnicity

	Maori	Pacific	Asian	Other	Total
Agree strongly	38.7	52.7	66.4	26.8	42.4
Agree	20.0	16.5	3.1	32.8	21.4
Agree a little	9.7	11.4	7.0	9.3	9.6
Neither agree nor disagree	0.0	0.0	2.8	0.0	0.4
Disagree a little	3.6	5.9	7.3	5.8	5.7
Disagree	20.6	5.2	3.6	12.0	10.1
Disagree strongly	7.4	8.3	9.9	13.3	10.4

There was no statistically significant difference in the proportions who agreed to the statement that they were worried about diabetes between ethnic groups.

Table 65: “How much you agree to: I am worried that someone in my family has diabetes or may get it” by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
Agree strongly	30.2	55.8	34.3	47.5	42.4
Agree	68.7	16.3	22.8	19.0	21.4
Agree a little	0.0	7.7	13.8	5.1	9.6
Neither agree nor disagree	0.0	0.0	0.9	0.0	0.4
Disagree a little	0.0	5.2	6.8	4.8	5.7
Disagree	0.0	3.3	12.5	11.1	10.1
Disagree strongly	1.1	11.7	8.9	12.5	10.4

The 16-24 and 25-44 age groups had a higher proportion who agreed to the statement that they were worried about diabetes compared to the 45-64 and 65+ age groups.

Table 66: "How much you agree to: I am worried that someone in my family has diabetes or may get it" by Gender

	Male	Female	Total
Agree strongly	30.2	49.9	42.4
Agree	20.3	22.0	21.4
Agree a little	11.5	8.4	9.6
Neither agree nor disagree	1.2	0.0	0.4
Disagree a little	5.9	5.6	5.7
Disagree	15.3	6.8	10.1
Disagree strongly	15.6	7.2	10.4

There was no statistically significant gender difference in the proportion who agreed to the statement that they were worried about diabetes.

Table 67: "How much you agree to: I am worried that someone in my family has diabetes or may get it" by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
Agree strongly	23.2	27.2	40.9	44.7	46.7	42.4
Agree	28.5	22.2	34.3	26.8	15.2	21.4
Agree a little	0.0	18.0	7.7	8.8	11.2	9.6
Neither agree nor disagree	0.0	10.1	0.0	0.0	0.0	0.4
Disagree a little	12.6	12.7	0.0	9.2	5.6	5.7
Disagree	6.3	0.0	6.9	10.5	12.4	10.1
Disagree strongly	29.4	9.8	10.3	0.0	8.8	10.4

There was no statistically significant socioeconomic difference in the proportion who agreed to the statement that they were worried about diabetes.

Table 68: Percentage of people who think that it is mainly people who eat a lot of sugar that get diabetes

Variable	Group	%
Ethnicity	Maori	52
	Pacific	66.8
	Asian	63.5
	Other	40.3
	Total	51.5
Age Group	16-24	68.2
	25-44	49.1
	45-64	41.2
	65+	52.8
	Total	51.5
Gender	Male	59.3
	Female	44.4
	Total	51.5
Socioeconomic Status	NZDep 1-2	46.9
	NZDep 3-4	53.3
	NZDep 5-6	37.8
	NZDep 7-8	54.9
	NZDep 9-10	58.4
	Total	51.5

Pacific and Asian participants had a significantly higher proportion who thought that it is mainly people who eat a lot of sugar who get diabetes compared to Maori and Other ethnic group participants. Maori participants also had a significantly higher proportion believing this than member of the Other ethnic group.

Also, the youngest age group 16-24 had a significantly higher proportion believing that this information was true compared to all older age groups. Those aged 45-64 also had significantly fewer participants believing this to be true than those in the 25-44 and 65+ age groups.

Males had a significantly higher proportion of participant believing that this statement was true.

Those living in areas of highest deprivation had a significantly higher proportion who believed this statement than those in areas of lowest deprivation (NZDep 1-2) or moderate deprivation (NZDep 5-6). Those living in moderate deprivation areas also had a lower proportion believing this statement was true than those in the next highest (NZDep 7-8) and next lowest (NZDep 3-4) levels of deprivation.

Table 69: Percentage of people who think that Diabetes doesn't affect young people

Variable	Group	%
Ethnicity	Maori	9.1
	Pacific	18.3
	Asian	9.7
	Other	3.8
Age Group	16-24	7.6
	25-44	6.8
	45-64	9.9
	65+	11.7
Gender	Male	9.8
	Female	7.1
Socioeconomic Status	NZDep 1-2	4.9
	NZDep 3-4	9
	NZDep 5-6	4.7
	NZDep 7-8	6
	NZDep 9-10	12.4
Total		8.4

Pacific participants had a significantly higher proportion believing that diabetes doesn't affect young people than all other ethnic groups. Maori and Asian participants also had a higher proportion believing this than Other ethnic group participants.

There was no significant difference by age group.

Males had a significantly higher proportion thinking that diabetes doesn't affect young people.

Those living in areas with highest deprivation (NZDep 9-10) had a significantly higher proportion of participants believing this statement than all other levels of deprivation except quintile two (NZDep 3-4).

Table 70: Percentage of people who think that they can have diabetes and not realise it

Category	Group	%
Ethnicity	Maori	98.2
	Pacific	91.8
	Asian	92
	Other	97.2
Age Group	16-24	94.4
	25-44	96.8
	45-64	95
	65+	95.4
Gender	Male	95.1
	Female	96.1
Socioeconomic Status	NZDep 1-2	95.9
	NZDep 3-4	96.7
	NZDep 5-6	96.7
	NZDep 7-8	95.1
	NZDep 9-10	94.9
Total		95.6

Maori and Other ethnic group participants had a significantly higher proportion of participants believing that you can have diabetes and not realise it than Asian and Pacific participants. There were no other significant difference by age group, gender or socioeconomic status.

Table 71: Percentage of people who think that having diabetes increase their risk of developing heart disease

Category	Group	%
Ethnicity	Maori	94.7
	Pacific	95.7
	Asian	95.2
	Other	95.1
Age Group	16-24	93.2
	25-44	94.8
	45-64	95.5
	65+	98.9
Gender	Male	94.8
	Female	95.5
Socioeconomic Status	NZDep 1-2	97.1
	NZDep 3-4	93.7
	NZDep 5-6	96.2
	NZDep 7-8	93.7
	NZDep 9-10	94.3
Total		95.2

Most of the participants agreed to the statement that having diabetes increases the risk of heart disease.

There were no statistically significant difference across ethnic groups, gender or socioeconomic status.

Those aged 65+ had a significantly higher proportion believing this statement was true than the two youngest age groups (16-24 and 25-44).

Table 72: Percentage of people who think that there is nothing they can do to prevent getting diabetes

Category	Group	%
Ethnicity	Maori	10.5
	Pacific	20.1
	Asian	9.3
	Other	6.8
Age Group	16-24	10.6
	25-44	7.8
	45-64	12.1
	65+	15
Gender	Male	10.7
	Female	10.0
Socioeconomic Status	NZDep 1-2	4.3
	NZDep 3-4	8.1
	NZDep 5-6	9.9
	NZDep 7-8	8.7
	NZDep 9-10	15
Total		10.4

Pacific participants had a significantly higher proportion who agreed with the statement that there is nothing they can do to prevent diabetes compared to all other ethnic groups.

Participants aged 45 or older had a significantly higher proportion who thought this statement was true compared to those aged 25-44.

There was no difference between males and females.

Those living in areas of highest deprivation (NZDep 9-10) or moderate deprivation (NZDep 5-6) had a higher proportion of participants who agreed to this statement than those living in areas of lowest deprivation (NZDep 1-2).

3.2. Obesity

3.2.1. Self-Reported Overweight and Obesity Prevalence

Table 73: Percentage of Self Reported Overweight

Category	Group	%
Ethnicity	Maori	43.9
	Pacific	51.5
	Asian	25.5
	Other	36.7
Age Group	16-24	23.2
	25-44	44.6
	45-64	45.5
	65+	31.6
Gender	Male	35.3
	Female	42.0
Socioeconomic Status	NZDep 1-2	31.8
	NZDep 3-4	37
	NZDep 5-6	36.6
	NZDep 7-8	35.7
	NZDep 9-10	45.1
Total		38.8

Maori, Pacific and Other ethnic group participants were more likely to self-report being overweight than Asian participants. Maori and Pacific participants were also more likely to report being overweight than Other ethnic group participants.

Those aged 25-64 were more likely to report being overweight than younger (16-24) or older (65+) participants.

Females had a higher proportion of participants who reported being overweight.

Those living in areas of highest deprivation (NZDep 9-10) had a higher proportion who reported being overweight than those living in areas of lowest deprivation (NZDep 1-2) or moderate deprivation (NZDep 5-6).

Table 74: Percentage of Self Reported Obesity

Category	Group	%
Ethnicity	Maori	29.2
	Pacific	48.6
	Asian	25.6
	Other	18.9
Age Group	16-24	21
	25-44	33.3
	45-64	26.1
	65+	23.6
Gender	Male	26.2
	Female	30.3
Socioeconomic Status	NZDep 1-2	17.9
	NZDep 3-4	19.4
	NZDep 5-6	25.3
	NZDep 7-8	24.7
	NZDep 9-10	36.8
Total		28.5

Pacific participants had a higher proportion reporting that they were obese than all other ethnic groups. Maori also had a higher proportion of participants reporting that they were obese than those in the Other ethnic group.

There were no differences in the proportions reporting obesity by age group or gender.

Those living in areas of highest deprivation (NZDep 9-10) had a significantly higher proportion reporting that they were obese than those living in the two lowest deprivation quintiles (NZDep 1-4).

3.2.2. Obesity-Related Attitudes and Beliefs

Table 75: “How much you agree to: I know the recommended weight for me to be healthy” by Ethnicity

	Maori	Pacific	Asian	Other	Total
Agree strongly	43.3	47.6	44.2	46.5	45.6
Agree	29.8	23.6	35.9	31.3	30.5
Agree a little	9.8	10.3	9.6	7.4	8.7
Neither agree nor disagree	1.4	0.7	0.6	3.0	1.9
Disagree a little	7.3	5.6	3.9	5.0	5.3
Disagree	6.0	6.4	3.7	4.9	5.1
Disagree strongly	2.5	5.8	2.2	2.0	2.8

Pacific participants had a significantly higher proportion who believed they knew the recommended weight for themselves to be healthy compared to the Asian and Other ethnic groups.

Table 76: “How much you agree to: I know the recommended weight for me to be healthy” by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
Agree strongly	32.4	48.1	51.2	48.7	45.6
Agree	33.4	28.8	30.3	30.8	30.5
Agree a little	13.0	7.8	6.4	9.8	8.7
Neither agree nor disagree	2.0	2.0	1.0	3.3	1.9
Disagree a little	8.0	4.9	4.3	4.5	5.3
Disagree	8.1	5.5	3.7	2.0	5.1
Disagree strongly	3.1	3.0	3.1	0.9	2.8

Participants aged 16-24 had a significantly higher proportion who did not believe they knew the recommended weight for themselves to be healthy compared to all older age groups. The 25-44 age group also had significantly more participants who were not confident that they knew their recommended weight than the 65+ age group.

Table 77: “How much you agree to: I know the recommended weight for me to be healthy” by Gender

	Male	Female	Total
Agree strongly	43.4	47.7	45.6
Agree	30.2	30.7	30.5
Agree a little	10.3	7.4	8.7
Neither agree nor disagree	1.2	2.4	1.9
Disagree a little	6.0	4.7	5.3
Disagree	6.0	4.4	5.1
Disagree strongly	2.9	2.7	2.8

A higher proportion of males did not agree that they knew their recommended weight.

Table 78: “How much you agree to: I know the recommended weight for me to be healthy” by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
Agree strongly	51.1	45.8	40.2	48.3	44.0	45.6
Agree	28.7	33.0	36.8	26.5	29.3	30.5
Agree a little	8.4	8.0	5.6	8.6	10.5	8.7
Neither agree nor disagree	2.8	0.8	3.9	0.9	0.9	1.9
Disagree a little	3.5	5.1	5.8	6.4	6.1	5.3
Disagree	4.7	4.3	6.1	7.0	4.8	5.1
Disagree strongly	0.9	3.1	1.7	2.3	4.4	2.8

Those living in areas with highest deprivation (NZDep 9-10) had a significantly higher proportion of participants who did not agree that they knew their recommended weight compared to those living in areas of lowest deprivation (NZDep 1-2).

Table 79: “How much you agree to: I know the recommended body shape for me to be healthy” by Ethnicity

	Maori	Pacific	Asian	Other	Total
Agree strongly	43.6	48.4	37.6	43.6	43.4
Agree	29.2	22.0	35.7	33.4	31.0
Agree a little	10.8	13.7	10.4	7.6	9.8
Neither agree nor disagree	1.0	1.0	1.9	2.0	1.6
Disagree a little	5.3	5.9	6.1	5.7	5.7
Disagree	6.9	4.5	6.0	4.9	5.4
Disagree strongly	3.1	4.4	2.3	2.8	3.0

There were no significant ethnic group differences in the proportion of participants who agreed or disagreed to the statement that they know the recommended body shape for them to be healthy.

Table 80: “How much you agree to: I know the recommended body shape for me to be healthy” by Age group

	16-24 years	25-44 years	45-64 years	65+ years	Total
Agree strongly	34.0	45.4	47.7	44.3	43.4
Agree	32.7	28.6	32.5	32.1	31.0
Agree a little	14.1	9.7	6.6	9.7	9.8
Neither agree nor disagree	3.2	1.5	0.6	1.4	1.6
Disagree a little	8.1	5.5	4.9	4.1	5.7
Disagree	5.9	5.6	5.0	5.1	5.4
Disagree strongly	2.1	3.6	2.8	3.3	3.0

There were no significant age group differences in the proportion of participants who agreed or disagreed to the statement that they know the recommended body shape for them to be healthy.

Table 81: “How much you agree to: I know the recommended body shape for me to be healthy” by Gender

	Male	Female	Total
Agree strongly	45.8	41.2	43.4
Agree	29.0	32.7	31.0
Agree a little	9.0	10.5	9.8
Neither agree nor disagree	1.6	1.6	1.6
Disagree a little	6.0	5.4	5.7
Disagree	5.5	5.4	5.4
Disagree strongly	2.9	3.1	3.0

There was no significant gender difference in the proportion of participants who agreed or disagreed to the statement that they know the recommended body shape for them to be healthy.

Table 82: “How much you agree to: I know the recommended body shape for me to be healthy” by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
Agree strongly	46.8	43.2	39.1	45.0	42.9	43.4
Agree	31.0	37.2	35.3	26.1	29.0	31.0
Agree a little	8.1	8.0	9.6	12.0	10.7	9.8
Neither agree nor disagree	1.8	1.8	2.0	0.8	1.5	1.6
Disagree a little	4.6	3.8	5.0	8.7	6.4	5.7
Disagree	5.5	4.7	5.1	5.2	5.7	5.4
Disagree strongly	2.2	1.4	3.9	2.2	3.7	3.0

There were no significant socioeconomic status differences in the proportion of participants who agreed or disagreed to the statement that they know the recommended body shape for them to be healthy.

Table 83: “How much you agree to: I am worried that I or someone in my family has health problem or may get health problems because of being overweight” by Ethnicity

	Maori	Pacific	Asian	Other	Total
Agree strongly	30.6	47.3	21.7	15.1	24.9
Agree	17.0	15.9	16.8	11.4	14.3
Agree a little	13.6	13.1	10.7	8.5	10.7
Neither agree nor disagree	1.1	0.7	1.1	2.0	1.5
Disagree a little	7.6	6.6	8.1	10.0	8.6
Disagree	15.1	7.9	19.9	20.2	17.0
Disagree strongly	14.9	8.4	21.6	32.7	23.0

Pacific participants had a significantly higher proportion who were worried about health problems related to being overweight than all other ethnic groups. Maori and Asian participants were also more concerned than the Other ethnic group, and Maori were more concerned than Asian participants.

Table 84: “How much you agree to: I am worried that I or someone in my family has health problem or may get health problems because of being overweight” by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
Agree strongly	23.2	27.5	23.9	21.7	24.9
Agree	14.2	15.4	15.4	7.3	14.3
Agree a little	15.3	12.6	6.7	5.2	10.7
Neither agree nor disagree	1.1	1.6	1.7	1.0	1.5
Disagree a little	7.8	7.5	9.9	10.7	8.6
Disagree	17.7	14.3	17.4	24.5	17.0
Disagree strongly	20.7	21.0	24.8	29.6	23.0

Those aged 16-64 were more concerned about health problem related to being overweight than those aged 65+. The 25-44 age group were also more concerned than the 45-64 age group.

Table 85: “How much you agree to: I am worried that I or someone in my family has health problem or may get health problems because of being overweight” by Gender

	Male	Female	Total
Agree strongly	22.5	27.1	24.9
Agree	14.3	14.2	14.3
Agree a little	12.6	9.1	10.7
Neither agree nor disagree	1.3	1.6	1.5
Disagree a little	9.0	8.2	8.6
Disagree	15.3	18.6	17.0
Disagree strongly	24.9	21.2	23.0

There was no gender difference in the participants’ concerns about health problems relating to being overweight.

Table 86: “How much you agree to: I am worried that I or someone in my family has health problem or may get health problems because of being overweight” by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
Agree strongly	15.5	13.3	17.0	23.5	36.7	24.9
Agree	12.0	12.9	12.8	12.2	17.0	14.3
Agree a little	10.3	11.6	11.5	11.3	10.3	10.7
Neither agree nor disagree	2.1	1.5	1.6	2.4	0.8	1.5
Disagree a little	9.2	7.6	10.5	11.6	6.9	8.6
Disagree	19.3	22.6	21.3	16.7	12.8	17.0
Disagree strongly	31.7	30.4	25.2	22.4	15.4	23.0

Those living in areas of highest deprivation had a higher proportion of participants who were concerned about health problems related to being overweight than those living at all other levels of deprivation.

3.3. Physical Activity

3.3.1. Levels of Physical Activity and Sedentary Behaviour

Table 87: Level of Physical Activity in the last seven days by Ethnicity

	Maori	Pacific	Asian	Other	Total
1 day	2.8	4.5	5.4	3.6	3.9
2 days	5.9	9.2	14.3	8.9	9.3
3 days	9.7	9.7	10.8	12.5	11.2
4 days	10.7	10.8	11.3	10.1	10.6
5 days	12.9	16.9	13.7	13.6	14.0
6 days	6.1	12.0	4.4	4.1	5.9
7 days	45.9	31.5	33.0	40.1	38.6
None	6.0	5.3	7.1	7.0	6.5

Table 88: Level of Physical Activity in the last seven days by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
1 day	2.5	4.4	4.7	2.8	3.9
2 days	11.1	9.9	8.2	6.2	9.3
3 days	8.9	13.6	10.5	8.5	11.2
4 days	11.5	10.3	11.6	6.9	10.6
5 days	14.7	17.3	11.9	6.6	14.0
6 days	6.6	5.6	4.9	8.4	5.9
7 days	42.3	32.2	40.9	47.8	38.6
None	2.3	6.5	7.2	12.8	6.5

Table 89: Level of Physical Activity in the last seven days by Gender

	Male	Female	Total
1 day	4.0	3.8	3.9
2 days	8.8	9.7	9.3
3 days	10.1	12.2	11.2
4 days	10.1	11.0	10.6
5 days	12.4	15.6	14.0
6 days	7.8	4.3	5.9
7 days	42.1	35.4	38.6
None	4.8	8.1	6.5

Table 90: Level of Physical Activity in the last seven days by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
1 day	3.1	3.1	6.0	3.3	3.8	3.9
2 days	11.3	10.2	5.1	9.5	9.5	9.3
3 days	13.1	14.9	8.3	8.0	11.1	11.2
4 days	7.8	11.0	9.9	12.9	11.8	10.6
5 days	12.1	14.9	16.9	15.4	13.5	14.0
6 days	5.7	6.0	4.7	3.8	7.1	5.9
7 days	42.2	32.4	41.1	38.5	36.8	38.6
None	4.8	7.5	7.8	8.8	6.3	6.5

Table 91: Level of Vigorous Physical Activity in the last seven days by Ethnicity

	Maori	Pacific	Asian	Other	Total
1 day	10.7	14.0	15.6	12.4	12.9
2 days	18.1	17.3	14.5	13.4	15.2
3 days	15.4	13.2	10.6	13.0	13.1
4 days	8.7	6.7	6.5	5.7	6.6
5 days	10.4	7.8	5.5	7.7	7.9
6 days	2.9	4.3	1.2	1.6	2.2
7 days	14.2	7.8	5.7	10.8	10.1
None	19.6	28.8	40.5	35.5	31.9

Table 92: Level of Vigorous Physical Activity in the last seven days by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
1 day	16.5	14.9	9.2	7.4	12.9
2 days	18.6	17.0	12.9	7.3	15.2
3 days	14.9	13.7	12.4	9.1	13.1
4 days	6.7	6.2	7.4	6.0	6.6
5 days	9.0	9.9	6.8	1.0	7.9
6 days	3.1	2.6	1.1	1.8	2.2
7 days	13.7	8.4	10.0	9.1	10.1
None	17.5	27.3	40.3	58.2	31.9

Table 93: Level of Vigorous Physical Activity in the last seven days by Gender

	Male	Female	Total
1 day	12.8	12.9	12.9
2 days	15.1	15.4	15.2
3 days	12.5	13.7	13.1
4 days	7.1	6.2	6.6
5 days	9.4	6.5	7.9
6 days	3.4	1.2	2.2
7 days	12.1	8.2	10.1
None	27.6	36.0	31.9

Table 94: Level of Vigorous Physical Activity in the last seven days by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
1 day	12.7	12.4	13.4	12.9	12.8	12.9
2 days	13.4	18.4	16.5	14.6	15.3	15.2
3 days	13.2	10.6	12.2	10.8	14.5	13.1
4 days	9.4	8.9	2.1	7.5	6.1	6.6
5 days	5.6	8.2	12.4	7.1	7.6	7.9
6 days	2.1	2.6	1.6	2.5	2.4	2.2
7 days	7.2	11.9	13.5	10.1	10.1	10.1
None	36.4	27.0	28.3	34.4	31.2	31.9

Table 95: Prevalence of recommended Physical Activity (≥ 3.5 hours/week or 30mins/day)

Category	Group	%
Ethnicity	Maori	68.90%
	Pacific	63.10%
	Asian	49.50%
	Other	60.70%
Age Group	16-24	66.40%
	25-44	56.70%
	45-64	63.20%
	65+	59.20%
Gender	Male	66.90%
	Female	55.40%
Socioeconomic Status	NZDep 1-2	62.40%
	NZDep 3-4	55.10%
	NZDep 5-6	61.10%
	NZDep 7-8	60.40%
	NZDep 9-10	61.20%
Total		60.90%

Asian participants had a significantly lower proportion of participants engaging in 30mins/day of physical activity compared to all other ethnic groups. The Other ethnic group also had significantly less participants engaging in the recommend amount of activity compared to Maori participants.

Those in the 25-44 age group had a significantly lower proportion of participants engaging in the recommended amount of activity compared to those aged 45 years or older.

Females had a significantly lower proportion of participants engaging in this level of activity.

There were no socioeconomic differences in the proportion of participants' engaging in this level of activity.

Table 96: Prevalence of recommended Vigorous Physical Activity (≥ 1.75 hours/week)

Category	Group	%
Ethnicity	Maori	53.40%
	Pacific	43.10%
	Asian	31.90%
	Other	39.60%
Age Group	16-24	55.00%
	25-44	41.20%
	45-64	37.20%
	65+	29.30%
Gender	Male	49.00%
	Female	35.00%
Socioeconomic Status	NZDep 1-2	40.80%
	NZDep 3-4	40.70%
	NZDep 5-6	46.10%
	NZDep 7-8	37.30%
	NZDep 9-10	41.60%
Total		41.70%

There were no significant ethnic group differences in the proportion of participants engaging in 1.75 hours or more per week of vigorous physical activity.

Those aged 45 years or older were less likely to have engaged in this amount of vigorous activity than those in the younger age groups. The 65+ age group were also less likely to have engaged in this amount of activity compared to the 45-64 age group.

Females were less likely to have engaged in this amount of vigorous activity.

There were no socioeconomic differences in the proportion of participants engaging in this amount of vigorous activity.

Table 97: Self reported level of physical activity compared to the recommended levels by Ethnicity

	Maori	Pacific	Asian	Other	Total
Less than recommended minimum	40.9	44.6	56.1	47.7	47.2
More than the recommended	22.4	20.6	11.8	19.7	19.1
Same/ about the recommended level	27.0	31.3	25.9	24.2	26.3
Don't know/ Don't know what recommended level is	9.7	3.5	6.2	8.4	7.4

Asian participants had a higher proportion who believed that they were engaging in less than the recommended minimum level of physical activity compared to all other ethnic groups.

Table 98: Self Reported level of physical activity compared to the recommended levels by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
Less than recommended minimum	45.2	51.1	43.3	47.2	47.2
More than the recommended	22.6	17.4	21.1	12.8	19.1
Same/ about the recommended level	27.6	25.8	26.0	26.2	26.3
Don't know/ Don't know what recommended level is	4.6	5.7	9.6	13.8	7.4

Those in the 25-44 age group had a significantly higher proportion who believed they were engaging in less than the recommended minimum level of physical activity compared to those in the 45-64 age group.

Table 99: Self reported level of physical activity compared to the recommended levels by Gender

	Male	Female	Total
Less than recommended minimum	40.9	53.0	47.2
More than the recommended	24.1	14.4	19.1
Same/ about the recommended level	26.2	26.3	26.3
Don't know/ Don't know what recommended level is	8.7	6.3	7.4

Female participants had a significantly higher proportion who believed they were engaging in less than the recommended minimum level of physical activity compared to males.

Table 100: Self reported level of physical activity compared to the recommended levels by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
Less than recommended minimum	42.9	48.3	50.7	48.1	47.9	47.2
More than the recommended	25.0	19.8	15.9	16.5	17.3	19.1
Same/ about the recommended level	22.8	26.6	25.6	30.1	27.7	26.3
Don't know/ Don't know what recommended level is	9.3	5.3	7.8	5.2	7.2	7.4

There were no significant socioeconomic differences in the proportions who believed they were engaging in less than the recommended minimum level of physical activity.

3.3.2. Physical Activity-Related Attitudes and Beliefs

Table 101: Percentage of those interested to be more physically active by Ethnicity

	Maori	Pacific	Asian	Other	Total
Yes	66.5	76.6	72.2	57.8	65.3
No	33.5	23.4	27.8	42.2	34.7

Maori, Pacific and Asian participants had a significantly higher proportion who were interested in being more physically active than Other ethnic group participants. Pacific participants were also more likely to be interested in becoming more physically active than Maori participants.

Table 102: Percentage of those interested to be more physically active by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
Yes	70.5	73.6	60.6	37.7	65.3
No	29.5	26.4	39.4	62.3	34.7

Those aged 65+ were less likely to be interested in becoming more physically active than all younger age groups. The 45-64 age group were also less likely to be interested in becoming more physically active than the 16-24 and 25-44 age groups.

Table 103: Percentage of those interested to be more physically active by Gender

	Male	Female	Total
Yes	62.1	68.2	65.3
No	37.9	31.8	34.7

Females were more likely to be interested in becoming more physically active than males.

Table 104: Percentage of those interested to be more physically active by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
Yes	64.0	65.8	57.9	64.6	69.1	65.3
No	36.0	34.2	42.1	35.4	30.9	34.7

Those living in areas with the highest levels of deprivation (NZDep 9-10) had a higher proportion of participants who were interested in becoming more physically active than those living in areas of moderate deprivation (NZDep 5-6).

Table 105: Percentage of how People feel about their current level of physical activity by Ethnicity

	Maori	Pacific	Asian	Other	Total
doing enough	64.5	73.1	65.5	74.4	71.1
need to do a bit more	32.2	22.0	30.8	22.1	25.3
Need to do a lot more	3.4	4.8	3.7	3.5	3.6

Pacific participants had a higher proportion who thought they needed to do a bit more or a lot more physical activity than Maori or Other ethnic group participants.

Table 106: Percentage of how People feel about their current level of physical activity by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
doing enough	64.3	69.6	71.7	78.6	71.1
need to do a bit more	34.1	26.9	23.0	18.3	25.3
Need to do a lot more	1.5	3.5	5.2	3.2	3.6

Participants aged 65+ were less likely than all younger age groups to believe that they needed to do a bit more or a lot more physical activity.

Table 107: Percentage of how People feel about their current level of physical activity by Gender

	Male	Female	Total
doing enough	72.7	69.3	71.1
need to do a bit more	23.4	27.4	25.3
Need to do a lot more	3.9	3.3	3.6

There was no gender difference in the proportion who thought they needed to do a bit more or a lot more physical activity.

Table 108: Percentage of how People feel about their current level of physical activity by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
doing enough	76.4	69.3	71.6	78.5	65.5	71.1

need to do a bit more	20.7	28.0	26.5	17.2	29.4	25.3
Need to do a lot more	2.9	2.6	2.0	4.4	5.1	3.6

There were no socioeconomic differences in the proportions who thought they needed to do a bit more or a lot more physical activity.

Table 109: How difficult people think to be more physically active by Ethnicity

	Maori	Pacific	Asian	Other	Total
Not difficult	24.5	33.1	25.9	21.2	25.2
A little difficult	31.4	36.5	36.6	32.7	33.9
Somewhat difficult	26.0	16.4	26.9	31.2	26.3
Very difficult	18.1	14.0	10.5	14.9	14.6

Pacific participants had a higher proportion reporting no difficulty in becoming more physically active compared to Maori and Other ethnic groups.

Table 110: How difficult people think to be more physically active by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
Not difficult	31.1	22.6	23.9	26.7	25.2
A little difficult	42.2	30.1	33.6	31.6	33.9
Somewhat difficult	18.9	30.3	26.0	27.3	26.3
Very difficult	7.8	17.0	16.5	14.5	14.6

The 16-24 age group had a significantly higher proportion of participants reporting no difficulty in becoming more physically active compared to all older age groups.

Table 111: How difficult people think to be more physically active by Gender

	Male	Female	Total
Not difficult	29.8	21.4	25.2
A little difficult	31.9	35.6	33.9
Somewhat difficult	26.8	26.0	26.3
Very difficult	11.6	17.0	14.6

Females had a significantly higher proportion reporting difficulty in becoming more physically active.

Table 112: How difficult people think to be more physically active by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
Not difficult	26.1	18.5	21.0	22.6	28.1	25.2
A little difficult	30.4	33.5	34.4	33.2	35.9	33.9
Somewhat difficult	31.6	33.5	26.5	33.4	20.4	26.3
Very difficult	12.0	14.5	18.1	10.8	15.6	14.6

There were no socioeconomic differences in proportions reporting no difficulty in becoming more physically active.

Table 113: How much people agree to the fact that costs of things needed such as baby sitters, clothes, equipment, and gym membership can prevent them from being active by Ethnicity

	Maori	Pacific	Asian	Other	Total
Agree strongly	19.8	22.5	17.2	12.5	16.7
Agree	13.6	16.6	12.6	8.7	11.9
Agree a little	8.2	16.5	16.5	11.3	12.6
Neither agree nor disagree	1.9	1.4	2.0	1.5	1.7
Disagree a little	14.4	18.9	12.7	13.1	14.4
Disagree	16.8	10.0	22.3	18.1	17.1
Disagree strongly	25.2	14.2	16.6	34.8	25.7

Pacific and Asian participants had significantly higher proportions agreeing with the statement that cost prevents them from being more active compared to the Other ethnic group. Pacific participants also had higher proportions reporting a cost barrier to exercise than Maori participants.

Table 114: How much people agree to the fact that costs of things needed such as baby sitters, clothes, equipment, and gym membership can prevent them from being active by Age group

	16-24 years	25-44 years	45-64 years	65+ years	Total
Agree strongly	14.4	19.7	15.7	6.6	16.7
Agree	13.5	11.9	11.2	8.7	11.9
Agree a little	15.5	14.2	6.4	16.8	12.6
Neither agree nor disagree	1.7	1.0	2.3	3.5	1.7
Disagree a little	17.1	12.3	14.7	18.4	14.4
Disagree	20.2	14.8	16.1	28.9	17.1
Disagree strongly	17.5	26.1	33.6	17.0	25.7

Participants in the 25-44 age group had significantly higher proportions agreeing with the statement that cost prevents them from being more active compared to the 45-64 age group.

Table 115: How much people agree to the fact that costs of things needed such as baby sitters, clothes, equipment, and gym membership can prevent them from being active by Gender

	Male	Female	Total
Agree strongly	11.7	20.4	16.7
Agree	10.9	12.6	11.9
Agree a little	12.2	12.9	12.6
Neither agree nor disagree	2.1	1.3	1.7
Disagree a little	17.2	12.2	14.4
Disagree	16.6	17.6	17.1
Disagree strongly	29.2	23.0	25.7

More females than males agreed with the statement that cost prevents them from being more active.

Table 116: How much people agree to the fact that costs of things needed such as baby sitters, clothes, equipment, and gym membership can prevent them from being active by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
Agree strongly	12.3	13.4	13.6	13.7	21.8	16.7
Agree	5.6	7.8	12.7	13.8	15.6	11.9
Agree a little	10.9	14.0	7.8	11.7	15.2	12.6
Neither agree nor disagree	1.6	1.5	3.1	3.4	0.8	1.7
Disagree a little	15.3	15.5	11.6	13.0	14.9	14.4
Disagree	17.2	21.7	19.6	17.1	15.1	17.1
Disagree strongly	37.1	26.2	31.6	27.2	16.5	25.7

Those participants living in areas of highest deprivation (NZDep 9-10) had a significantly higher proportion agreeing with the statement that cost prevents them from being more active compared to those living in areas with least to moderate deprivation (NZDep 1-6).

Table 117: How much People agree to the fact that there aren't enough places in their area to go or join such as parks, walking groups or sports club by Ethnicity

	Maori	Pacific	Asian	Other	Total
Agree strongly	5.1	14.0	12.2	5.6	8.3
Agree	5.7	7.0	13.4	4.2	6.7
Agree a little	9.7	7.7	8.9	4.9	7.2
Neither agree nor disagree	0.5	0.4	2.0	1.7	1.3
Disagree a little	13.0	14.4	15.8	11.7	13.2
Disagree	18.8	19.0	21.4	19.4	19.6
Disagree strongly	47.1	37.4	26.4	52.5	43.8

Pacific and Asian participants had a higher proportion agreeing with the statement that there aren't enough places in their area to engage in physical activity compared to the Other ethnic group. Asian participants also had a higher proportion agreeing to this statement than Maori participants.

Table 118: How much People agree to the fact that there aren't enough places in their area to go or join such as parks, walking groups or sports club by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
Agree strongly	5.8	6.5	9.6	25.1	8.3
Agree	9.1	6.2	5.9	5.5	6.7
Agree a little	15.9	4.6	5.5	2.1	7.2
Neither agree nor disagree	2.0	1.1	1.1	0.8	1.3
Disagree a little	12.5	12.8	13.7	17.1	13.2
Disagree	23.6	17.2	21.3	15.6	19.6
Disagree strongly	31.1	51.5	43.0	33.7	43.8

The younger (16-24) and older (65+) participants had higher proportions agreeing with the statement that there aren't enough places in their area to engage in physical activity compared to those in the 25-44 age group. Those in the 16-24 age group also agreed with this statement more than those in the 45-64 age group.

Table 119: How much People agree to the fact that there aren't enough places in their area to go or join such as parks, walking groups or sports club by Gender

	Male	Female	Total
Agree strongly	5.5	10.3	8.3
Agree	7.0	6.5	6.7
Agree a little	7.6	6.8	7.2
Neither agree nor disagree	1.4	1.2	1.3
Disagree a little	13.0	13.4	13.2
Disagree	18.1	20.7	19.6
Disagree strongly	47.3	41.1	43.8

There was no gender difference in the proportion agreeing with the statement that there aren't enough places in their area to engage in physical activity.

Table 120: How much People agree to the fact that there aren't enough places in their area to go or join such as parks, walking groups or sports club by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
Agree strongly	3.3	7.9	12.6	8.6	9.5	8.3
Agree	3.8	8.4	6.1	9.5	7.6	6.7
Agree a little	6.6	7.1	5.5	8.9	7.7	7.2
Neither agree nor disagree	0.6	1.5	1.0	0.9	1.8	1.3
Disagree a little	9.7	15.1	13.8	10.0	15.3	13.2
Disagree	20.3	24.6	18.7	21.8	17.8	19.6
Disagree strongly	55.7	35.4	42.3	40.4	40.3	43.8

Those living in areas of moderate to high deprivation (NZDep 5-10) had significantly higher proportions agreeing with the statement that there aren't enough places in their area to engage in physical activity compared to those living in lesser deprived areas (NZDep 1-4).

Table 121: Support given to children to be physically active by Ethnicity

	Maori	Pacific	Asian	Other	Total
A lot of support	74.7	68.0	60.8	71.1	69.4
Some	17.1	19.6	26.5	23.4	21.5
A little	5.7	9.0	9.9	2.2	6.1
None	2.5	3.4	2.9	3.3	3.1

Maori and Other ethnic group participants had significantly higher proportions reporting that they gave a lot of support to their children compared to Asian participants.

Table 122: Support given to children to be physically active by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
A lot of support	51.3	73.9	74.6	79.7	69.4
Some	32.9	18.5	19.5	8.4	21.5
A little	9.2	5.3	5.1	4.2	6.1
None	6.6	2.3	0.9	7.8	3.1

The 16-24 age group had a significantly lower proportion reporting that they gave a lot of support to their children compared to all other age groups.

Table 123: Support given to children to be physically active by Gender

	Male	Female	Total
A lot of support	65.8	72.4	69.4
Some	24.4	19.1	21.5
A little	6.0	6.1	6.1
None	3.9	2.4	3.1

Female participants had a significantly higher proportion reporting that they gave a lot of support to their children.

Table 124: Support given to children to be physically active by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
A lot of support	72.7	67.1	65.8	66.5	69.8	69.4
Some	19.7	23.6	25.6	23.0	20.6	21.5
A little	3.9	6.3	8.0	9.1	5.9	6.1
None	3.7	3.1	0.6	1.3	3.8	3.1

There were no significant socioeconomic differences in the proportion reporting that they gave a lot of support to their children.

Table 125: What the People think of the overall level of physical activity of their kids by Ethnicity

	Maori	Pacific	Asian	Other	Total
need to do a lot more	12.7	23.8	15.5	4.0	12.9
need to do a bit more	28.5	32.7	35.7	25.2	29.7
doing enough	58.8	43.6	48.8	70.8	57.4

Maori, Pacific and Asian participants had significantly lower proportions who believed that their children were currently doing enough physical activity compared to the Other ethnic group. Pacific participants also had a lower proportion who believed that their children were currently doing enough physical activity compared to Maori participants.

Table 126: What the People think of the overall level of physical activity of their kids by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
need to do a lot more	13.1	11.5	16.6	18.6	12.9
need to do a bit more	35.8	28.2	29.2	13.9	29.7
doing enough	51.2	60.3	54.2	67.5	57.4

There were no age group differences in the proportions who believed that their children were currently doing enough physical activity.

Table 127: What the People think of the overall level of physical activity of their kids by Gender

	Male	Female	Total
need to do a lot more	13.8	12.2	12.9
need to do a bit more	30.1	29.3	29.7
doing enough	56.1	58.5	57.4

There was no gender difference in the proportion who believed that their children were currently doing enough physical activity.

Table 128: What the People think of the overall level of physical activity of their kids by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
need to do a lot more	7.5	8.1	6.5	10.7	18.5	12.9
need to do a bit more	24.9	34.4	33.3	38.0	28.4	29.7
doing enough	67.6	57.6	60.3	51.3	53.1	57.4

Participants living in areas of highest deprivation (NZDep 9-10) had a significantly lower proportion who believed that their children were currently doing enough physical activity compared to those in moderate (NZDep 5-6) or lowest deprivation (NZDep 1-2) areas.

3.4. Nutrition

3.4.1. Nutritional Behaviour

Table 129: Vegetables intake per day by Ethnicity

	Maori	Pacific	Asian	Other	Total
Don't eat	3.4	4.1	1.9	2.1	2.7
One serving per day	33.4	47.3	34.7	29.9	34.6
Two servings per day	33.4	34.1	42.1	32.8	34.8
Three servings per day	23.3	13.1	18.8	28.7	23.0
Four or more servings per day	6.5	1.5	2.6	6.5	4.9

Pacific respondents had a significantly higher proportion with an adequate (≥ 3 /day) vegetable intake than respondents from all other ethnic groups. Asian respondents had a significantly lower proportion with an adequate vegetable intake than Maori or Other ethnic group respondents.

Table 130: Vegetables intake per day by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
Don't eat	6.3	1.7	1.3	2.3	2.7
One serving per day	40.4	31.0	34.8	35.7	34.6
Two servings per day	31.4	37.6	37.5	24.1	34.8
Three servings per day	19.7	23.7	21.4	31.6	23.0
Four or more servings per day	2.2	6.0	4.9	6.3	4.9

There were no significant age group differences in the proportion of participants having an inadequate (≤ 3 /day) daily intake of vegetables.

Table 131: Vegetables intake per day by Gender

	Male	Female	Total
Don't eat	3.5	1.9	2.7
One serving per day	41.9	27.2	34.6
Two servings per day	34.2	35.4	34.8
Three servings per day	17.5	28.6	23.0
Four or more servings per day	3.0	6.9	4.9

There was no significant gender difference in the proportion of participants having an inadequate (≤ 3 /day) daily intake of vegetables.

Table 132: Vegetables intake per day by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
Don't eat	1.8	1.8	2.3	3.9	3.2	2.7
One serving per day	23.9	27.8	32.5	37.7	42.5	34.6
Two servings per day	37.2	39.6	33.9	34.2	32.8	34.8
Three servings per day	32.0	25.5	22.9	20.3	17.9	23.0
Four or more servings per day	5.1	5.4	8.4	4.0	3.6	4.9

There were no significant socioeconomic differences in the proportion of participants having an inadequate (≤ 3 /day) daily intake of vegetables.

Table 133: Fruits intake per day by Ethnicity

	Maori	Pacific	Asian	Other	Total
Don't eat fruit	8.7	4.6	5.6	9.6	7.9
One serving per day	23.1	24.8	33.2	23.8	25.5
Two servings per day	31.9	37.1	33.8	34.9	34.5
Three servings per day	27.2	27.0	22.3	26.4	25.9
Four or more servings per day	9.1	6.6	5.1	5.3	6.2

There were no significant ethnic group differences in the proportion of participants having an inadequate (≤ 2 /day) daily intake of fruit.

Table 134: Fruits intake per day by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
Don't eat fruit	7.7	8.4	8.1	5.7	7.9
One serving per day	25.3	23.7	25.0	33.6	25.5
Two servings per day	37.1	33.6	34.7	31.8	34.5
Three servings per day	22.6	26.0	27.8	26.5	25.9
Four or more servings per day	7.2	8.2	4.3	2.4	6.2

There were no significant age group differences in the proportion of participants having an inadequate (≤ 2 /day) daily intake of fruit.

Table 135: Fruits intake per day by Gender

	Male	Female	Total
Don't eat fruit	10.7	5.1	7.9
One serving per day	28.1	23.1	25.5
Two servings per day	36.3	32.6	34.5
Three servings per day	21.0	30.6	25.9
Four or more servings per day	3.8	8.6	6.2

There was no significant gender difference in the proportion of participants having an inadequate (≤ 2 /day) daily intake of fruit.

Table 136: Fruits intake per day by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
Don't eat fruit	7.7	4.5	9.9	7.9	7.9	7.9
One serving per day	23.2	31.2	26.2	28.2	24.8	25.5
Two servings per day	33.4	34.5	35.6	30.2	35.7	34.5
Three servings per day	31.7	23.6	20.8	26.3	24.9	25.9
Four or more servings per day (specify)	4.1	6.2	7.5	7.5	6.7	6.2

There were no significant socioeconomic differences in the proportion of participants having an inadequate (≤ 2 /day) daily intake of fruit.

Table 137: Frequency of Fizzy drinks consumption in the last week by Ethnicity

	Maori	Pacific	Asian	Other	Total
1 day	16.7	19.3	14.9	12.0	14.7
2 days	8.9	15.9	11.6	8.1	10.2
3 days	8.9	9.0	5.4	4.8	6.5
4 days	4.0	6.4	1.8	2.8	3.5
5 days	3.8	5.1	2.1	4.3	4.0
7 days	13.4	14.2	8.2	9.4	10.8
None	44.4	30.2	55.9	58.5	50.3

Maori and Pacific participants had a higher proportion who drank 'fizzy' in the previous week compared to the Asian and Other ethnic groups. Pacific also had a higher proportion who drank 'fizzy' in the previous week compared to Maori.

Table 138: Frequency of Fizzy drinks consumption in the last week by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
1 day	15.0	18.5	12.4	6.8	14.7
2 days	13.7	11.8	8.1	3.3	10.2
3 days	11.8	6.6	3.9	2.5	6.5
4 days	4.8	3.7	3.1	1.2	3.5
5 days	9.6	3.1	2.0	1.4	4.0
7 days	23.6	9.6	5.5	4.0	10.8
None	21.6	46.7	65.0	80.9	50.3

Respondents aged 65 and over were significantly more likely than other age groups to report that they have not drunk any 'fizzy' in the last week. People in the 45-64 year age group were significantly more likely than younger age groups to report they have not drunk any 'fizzy' in the last week. People in the 25-44 year age group were significantly more likely than young people in the 16-24 year group to report they have not drunk any 'fizzies' in the last week.

Table 139: Frequency of Fizzy drinks consumption in the last week by Gender

	Male	Female	Total
1 day	15.0	14.5	14.7
2 days	11.4	9.1	10.2
3 days	8.6	4.5	6.5
4 days	5.3	1.9	3.5
5 days	6.0	2.2	4.0
7 days	16.4	5.7	10.8
None	37.3	62.2	50.3

Female participants were significantly more likely than males to report that they had not drunk any ‘fizzies’ in the last week.

Table 140: Frequency of Fizzy drinks consumption in the last week by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
1 day	11.8	13.9	11.3	20.4	16.7	14.7
2 days	6.6	10.2	9.7	11.6	12.1	10.2
3 days	5.3	4.0	7.4	5.3	7.6	6.5
4 days	2.9	4.6	1.9	1.5	4.7	3.5
5 days	2.6	5.5	5.4	2.9	4.1	4.0
7 days	10.0	7.5	5.5	9.7	14.5	10.8
None	60.7	54.3	58.6	48.4	40.2	50.3

Respondents living in areas of highest deprivation (NZDep 9-10) had a significantly higher proportion reporting that they had drunk ‘fizzy’ in the previous week compared to the three lowest deprivation quintiles (NZDep 1-6). Those living in areas with the next highest level of deprivation (NZDep 7-8) were also more likely to report having drunk ‘fizzy’ than those in areas with the lowest deprivation (NZDep 1-2).

Table 141: Frequency of Eating more than needed in the past week by Ethnicity

	Maori	Pacific	Asian	Other	Total
1 day	19.3	20.1	17.5	15.5	17.4
2 days	16.1	18.8	18.6	15.6	16.8
3 days	8.8	10.4	4.9	4.6	6.5
4 days	3.3	8.7	1.9	3.9	4.3
5 days	2.7	4.3	1.0	2.5	2.6
7 days	15.2	11.7	6.0	12.5	11.8
None	34.6	26.1	50.1	45.4	40.6

Maori and Pacific participants had a significantly higher proportion reporting that they had overeaten on one or more days in the previous week compared to the Asian and Other ethnic groups. Pacific participants also had a higher proportion reporting they had overeaten on one or more days in the last week compared to Maori.

Table 142: Frequency of Eating more than needed in the past week by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
1 day	17.1	19.9	13.6	18.7	17.4
2 days	18.3	18.7	16.2	8.5	16.8
3 days	8.1	6.3	5.8	5.9	6.5
4 days	6.9	4.4	3.5	0.6	4.3
5 days	3.3	2.9	1.9	1.7	2.6
7 days	10.3	13.6	12.3	7.6	11.8
None	36.0	34.2	46.7	56.9	40.6

Respondents aged 65 years and over had a significantly lower proportion reporting that they had overeaten on one or more days in the last week compared to all other age groups. Those in the 45-64 group also had a significantly lower proportion reporting that they had overeaten on one or more days in the last week compared to the two younger age groups.

Table 143: Frequency of Eating more than needed in the past week by Gender

	Male	Female	Total
1 day	16.4	18.3	17.4
2 days	16.2	17.2	16.8
3 days	6.2	6.8	6.5
4 days	4.4	4.1	4.3
5 days	2.1	3.0	2.6
7 days	13.5	10.3	11.8
None	41.1	40.3	40.6

There was no significant gender difference in the proportion reporting they had overeaten on one or more days in the previous week.

Table 144: Frequency of Eating more than needed in the past week by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
1 day	16.1	19.1	16.4	17.4	18.2	17.4
2 days	16.7	15.2	15.9	17.2	17.4	16.8
3 days	3.8	8.4	3.5	6.1	9.1	6.5
4 days	3.3	4.5	4.1	3.0	5.1	4.3
5 days	2.2	3.3	2.0	1.9	3.1	2.6
7 days	13.3	11.9	9.2	10.7	12.3	11.8
None	44.6	37.4	48.9	43.6	34.8	40.6

Those living in areas of highest deprivation had a significantly higher proportion who reported that they had overeaten on one or more days in the last week compared to those living in the lowest (NZDep 1-2) or moderate (NZDep 5-6) level of deprivation.

Table 145: Frequency of having breakfast in the last week by Ethnicity

	Maori	Pacific	Asian	Other	Total
1 day	4.5	4.3	2.8	1.4	2.8
2 days	6.7	8.2	3.2	3.2	4.8
3 days	4.5	8.3	2.7	2.9	4.1
4 days	6.3	7.5	4.7	3.5	4.9
5 days	4.6	7.8	6.5	3.5	5.0
6 days	2.5	2.5	1.1	2.5	2.3
7 days	60.7	50.8	72.4	77.4	68.6
None	10.2	10.6	6.7	5.7	7.6

Maori and Pacific participants had a significantly lower proportion who reported that they had eaten breakfast every day in the last week compare to the Asian and Other ethnic groups. Pacific participants also had a lower proportion who reported that they had eaten breakfast every day in the last week compared to Maori.

Table 146: Frequency of having breakfast in the last week by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
1 day	5.4	2.4	2.3	0.0	2.8
2 days	8.4	4.4	3.8	1.4	4.8
3 days	4.7	5.9	2.7	0.5	4.1
4 days	7.8	6.2	2.8	0.5	4.9
5 days	7.4	5.7	3.3	2.1	5.0
6 days	3.0	2.1	2.1	1.8	2.3
7 days	51.3	66.3	75.3	92.8	68.6
None	12.0	7.0	7.7	0.9	7.6

Respondents aged 65 and over had a significantly higher proportion reporting that they had eaten breakfast every day in the last week compared to all younger age groups. Respondents in the 45-64 year age group also had a significantly higher proportion reporting that they had eaten breakfast every day in the last week compared to the two younger age groups, and those in the 25-44 age group had a significantly higher proportion reporting that they had eaten breakfast every day in the last week compared to the youngest age group.

Table 147: Frequency of having breakfast in the last week by Gender

	Male	Female	Total
1 day	3.6	2.0	2.8
2 days	6.0	3.7	4.8
3 days	4.1	4.1	4.1
4 days	5.7	4.3	4.9
5 days	5.3	4.7	5.0
6 days	3.1	1.5	2.3
7 days	63.3	73.4	68.6
None	9.0	6.3	7.6

Female participants had a significantly higher proportion reporting that they had eaten breakfast every day in the last week.

Table 148: Frequency of having breakfast in the last week by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
1 day	0.9	1.5	1.3	2.9	4.7	2.8
2 days	3.8	6.6	2.8	6.1	5.4	4.8
3 days	1.6	5.0	3.7	3.1	5.8	4.1
4 days	4.9	1.7	5.3	3.6	5.9	4.9
5 days	3.3	4.9	3.6	9.0	5.5	5.0
6 days	1.3	3.3	4.1	1.1	2.2	2.3
7 days	81.4	70.3	73.1	66.5	59.2	68.6
None	2.8	6.7	6.1	7.7	11.3	7.6

Those living in areas of lowest deprivation (NZDep 9-10) had a significantly higher proportion reporting that they had eaten breakfast every day in the last week compared to those in all other levels of deprivation (NZDep 3-10). Those living in the next two higher deprivation quintiles (NZDep 3-6) also had a higher proportion reporting that they had eaten breakfast every day in the last week compared to those living in areas of highest deprivation.

Table 149: Frequency of Cooking meat or vegetables with butter or lard

	Maori	Pacific	Asian	Other	Total
Usually	11.4	16.9	13.8	4.5	9.1
Sometimes	41.0	48.1	28.2	23.6	31.3
Never	47.6	35.0	58.0	71.9	59.7

Pacific participants had a significantly lower proportion who never cooked meat or vegetables with butter or lard compared to all other ethnic groups. Maori and Asian participants also had lower proportions who never cooked meat or vegetables with butter or lard compared to those in the Other ethnic group.

Table 150: Frequency of Cooking meat or vegetables with butter or lard by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
Usually	12.1	10.9	8.3	2.8	9.1
Sometimes	43.0	35.5	26.8	20.0	31.3
Never	44.9	53.6	64.8	77.2	59.7

Participants aged 45 years or older had a significantly higher proportion who never cooked meat or vegetables with butter or lard compared to the younger age groups. Those in the 65+ age group also had a significantly higher proportion who never cooked meat or vegetables with butter or lard compared to the 45-64 age group.

Table 151: Frequency of Cooking meat or vegetables with butter or lard by Gender

	Male	Female	Total
Usually	10.6	8.5	9.1
Sometimes	33.8	30.3	31.3
Never	55.6	61.3	59.7

Females had a significantly higher proportion who never cooked meat or vegetables with butter or lard.

Table 152: Frequency of Cooking meat or vegetables with butter or lard by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
Usually	5.1	6.2	7.0	8.8	13.5	9.1
Sometimes	24.5	25.3	27.2	25.2	40.6	31.3
Never	70.4	68.5	65.8	66.0	45.9	59.7

Those living in areas with the highest deprivation (NZDep 9-10) had a significantly lower proportion who never cooked meat or vegetables with butter or lard compared to all other levels of deprivation.

Table 153: Frequency of Cooking meat with fat removed or drained by Ethnicity

	Maori	Pacific	Asian	Other	Total
Usually	53.5	41.0	52.3	62.9	55.4
Sometimes	27.0	40.7	18.2	21.3	25.3
Never	18.6	18.0	20.2	15.6	17.4
Vegetarian	0.9	0.4	9.3	0.2	1.9

Pacific participants had a significantly lower proportion who usually removed or drained fat when cooking meat compared to the Maori and Other ethnic groups. Asian participants also had a significantly lower proportion who usually removed or drained fat when cooking meat compared to the Other ethnic group.

Table 154: Frequency of Cooking meat with fat removed or drained by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
Usually	49.5	56.2	52.5	65.2	55.4
Sometimes	28.3	26.5	25.8	16.9	25.3
Never	21.5	15.4	18.7	18.0	17.4
Vegetarian	0.7	1.9	2.9	0.0	1.9

Those in the 65+ age group had a significantly higher proportion who usually removed or drained fat when cooking meat compared to the 16-24 and 45-64 age groups.

Table 155: Frequency of Cooking meat with fat removed or drained by Gender

	Male	Female	Total
Usually	46.2	59.3	55.4
Sometimes	27.8	24.2	25.3
Never	24.1	14.6	17.4
Vegetarian	1.9	1.9	1.9

Female participants had a significantly higher proportion who usually removed or drained fat when cooking meat.

Table 156: Frequency of Cooking meat with fat removed or drained by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
Usually	67.7	59.3	54.8	58.2	46.9	55.4
Sometimes	16.2	21.4	22.2	19.2	33.9	25.3
Never	14.5	16.8	19.2	20.3	18.0	17.4
Vegetarian	1.6	2.4	3.9	2.3	1.2	1.9

Those participants living in areas with the lowest deprivation (NZDep 1-2) had a significantly higher proportion who usually removed or drained fat when cooking meat compared to those in areas of moderate (NZDep 5-6) and highest deprivation (NZDep 9-10).

Table 157: Frequency of Cooking chicken with the skin on by Ethnicity

	Maori	Pacific	Asian	Other	Total
Usually	49.9	45.4	21.2	32.3	36.5
Sometimes	27.7	35.7	26.2	34.1	31.7
Never	18.2	17.7	44.4	26.5	26.2
Vegetarian	0.0	0.1	5.9	0.1	1.0
Don't cook chicken	4.2	1.1	2.3	7.0	4.6

Asian participants had a significantly lower proportion who usually cooked chicken with the skin on compared to all other ethnic groups. Other ethnic group participants also had a significantly lower proportion who usually cooked chicken with the skin on compared to Maori and Pacific participants.

Table 158: Frequency of Cooking chicken with the skin on by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
Usually	49.0	36.4	34.6	31.2	36.5
Sometimes	30.0	34.4	34.1	17.5	31.7
Never	15.0	26.6	24.1	39.3	26.2
Vegetarian	0.6	1.1	1.3	0.3	1.0
Don't cook chicken	5.4	1.5	6.0	11.6	4.6

Participants aged 16-24 had a significantly higher proportion who usually cooked chicken with the skin on than all other age groups.

Table 159: Frequency of Cooking chicken with the skin on by Gender

	Male	Female	Total
Usually	38.7	35.6	36.5
Sometimes	25.0	34.5	31.7
Never	26.9	25.9	26.2
Vegetarian	0.9	1.1	1.0
Don't cook chicken	8.6	3.0	4.6

There was no significant gender difference in the proportion who usually cooked chicken with the skin on.

Table 160: Frequency of Cooking chicken with the skin on by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
Usually	26.2	25.0	34.7	37.3	45.4	36.5
Sometimes	38.3	43.1	27.9	22.2	28.8	31.7
Never	29.2	27.9	25.7	36.3	21.8	26.2
Vegetarian	1.0	2.4	2.2	2.7	0.0	1.0
Don't cook chicken	5.3	1.5	9.5	1.5	4.0	4.6

Those participants who were living in area of highest deprivation (NZDep 9-10) had a significantly higher proportion who usually cooked chicken with the skin on compared to those living in the two lowest deprivation quintiles (NZDep 1-4).

3.4.2. Nutrition-Related Attitudes and Beliefs

Table 161: What the people think the Recommended daily intake of fruits & vegetables are by Ethnicity

	Maori	Pacific	Asian	Other	Total
One	2.6	5.5	10.9	4.1	5.1
Two	9.8	17.4	19.9	4.9	10.2
Three	6.9	19.6	16.9	10.6	12.3
Four	5.6	8.0	4.3	2.4	4.2
Five	70.1	43.1	44.1	73.7	63.5
6 or more	5.0	6.3	4.0	4.3	4.7

Pacific and Asian participants had a significantly lower proportion who knew that the recommended daily intake of fruit and vegetables was five or more compared to Maori and Other ethnic group participants.

Table 162: What the people think the Recommended daily intake of fruits & vegetables are by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
One	2.0	4.1	7.8	8.4	5.1
Two	8.9	9.3	14.4	5.8	10.2
Three	12.1	12.3	13.6	8.8	12.3
Four	2.3	5.1	4.5	4.2	4.2
Five	68.2	65.5	54.7	68.0	63.5
6 or more	6.6	3.6	4.9	4.8	4.7

The youngest (16-24) and oldest (65+) participants had a significantly higher proportion who knew that the recommended daily intake of fruit and vegetables was five or more compared to the two middle age groups (25-64).

Table 163: What the people think the recommended daily intake of fruits & vegetables are by Gender

	Male	Female	Total
One	7.4	3.3	5.1
Two	12.8	8.1	10.2
Three	15.3	9.8	12.3
Four	4.8	3.8	4.2
Five	54.6	70.5	63.5
6 or more	5.0	4.5	4.7

Females were significantly more likely than males to correctly report that the recommended daily intake is five servings or more per day.

Table 164: What the people think the Recommended daily intake of fruits & vegetables are by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
One	5.2	3.1	3.2	8.6	5.5	5.1
Two	7.3	6.6	10.0	8.9	13.3	10.2
Three	11.2	9.8	9.8	14.0	14.2	12.3
Four	2.7	4.4	5.3	2.8	5.1	4.2
Five	69.6	71.7	69.6	61.2	55.4	63.5
6 or more	3.9	4.4	2.2	4.5	6.5	4.7

Respondents from the lowest two quintiles of deprivation (NZDep 1-4) were significantly more likely than those from areas with the highest deprivation (NZDep 9-10) to correctly report that the recommended daily intake is five servings or more per day.

Table 165: Frequency of People interested in Eating more Healthily

Category	Group	%
Ethnicity	Maori	65.3
	Pacific	81.1
	Asian	74.8
	Other	53.5
Age Group	16-24	68.2
	25-44	73.4
	45-64	58.7
	65+	39.4
Gender	Male	62.5
	Female	66.1
Socioeconomic Status	NZDep 1-2	59.4
	NZDep 3-4	58.6
	NZDep 5-6	56.3
	NZDep 7-8	67.4
	NZDep 9-10	71.1
Total		64.4

Maori, Pacific and Asian participants had significantly higher proportions who were interested in eating more healthily than those in the Other ethnic group. Pacific and Asian participants also had higher proportions who were interested in eating more healthily compared to Maori.

Participants aged 16-64 had significantly higher proportions of participants who were interested in eating more healthily compared to those aged 65+. The 16-24 age group also had a significantly higher proportion who were interested in eating more healthily compared to the 45-64 age group.

There was no significant gender difference in the proportion of participants who were interested in eating more healthily.

Those living in areas of highest deprivation had significantly higher proportions who were interested in eating more healthily compared to those living in the lowest three deprivation quintiles (NZDep 1-6).

Table 166: How People feel about their current diet by Ethnicity

	Maori	Pacific	Asian	Other	Total
It is healthy enough	55.0	54.2	62.8	64.2	61.3
It could be a bit healthier	38.4	31.2	27.7	33.8	33.7
It could be a lot healthier	6.6	14.6	9.6	2.1	5.0

Maori, Pacific and Asian participants had significantly higher proportions who felt that their current diet could be a lot healthier compared to the Other ethnic group.

Table 167: How People feel about their current diet by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
It is healthy enough	40.0	59.6	64.8	79.7	61.3
It could be a bit healthier	48.4	36.5	30.4	20.0	33.7
It could be a lot healthier	11.7	3.9	4.8	0.4	5.0

The 16-24 age group had a significantly higher proportion who felt that their current diet could be a lot healthier compared to all older participants.

Table 168: How People feel about their current diet by Gender

	Male	Female	Total
It is healthy enough	59.4	63.1	61.3
It could be a bit healthier	34.6	32.8	33.7
It could be a lot healthier	6.0	4.1	5.0

There was no gender difference in the proportion who felt that their current diet could be a lot healthier.

Table 169: How People feel about their current diet by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
It is healthy enough	69.1	65.7	58.3	63.4	54.6	61.3
It could be a bit healthier	30.0	30.5	38.8	31.2	35.3	33.7
It could be a lot healthier	0.9	3.9	2.9	5.3	10.0	5.0

Participants living in areas of highest deprivation (NZDep 9-10) had a significantly higher proportion who felt that their current diet could be a lot healthier compared to those living in moderate (NZDep 5-6) and lowest (NZDep 1-2) levels of deprivation.

Table 170: How difficult People find it to eat more healthily by Ethnicity

	Maori	Pacific	Asian	Other	Total
Not difficult	36.4	42.8	49.6	38.5	41.2
A little difficult	36.5	30.7	28.0	36.5	33.5
Somewhat difficult	16.8	14.4	17.7	20.0	17.7
Very difficult	10.3	12.1	4.7	5.0	7.6

Asian participants had a significantly higher proportion who did not find it difficult to eat more healthily compared to Maori and Other ethnic group participants.

Table 171: How difficult People find it to eat more healthily by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
Not difficult	34.1	38.3	47.5	61.4	41.2
A little difficult	40.9	34.5	28.6	20.4	33.5
Somewhat difficult	18.8	19.5	15.3	10.8	17.7
Very difficult	6.2	7.8	8.6	7.4	7.6

Participants in the 45-64 and 65+ age groups had significantly higher proportions who did not find it difficult to eat more healthily compared to the two younger age groups.

Table 172: How difficult People find it to eat more healthily by Gender

	Male	Female	Total
Not difficult	42.6	40.1	41.2
A little difficult	32.7	34.3	33.5
Somewhat difficult	16.6	18.5	17.7
Very difficult	8.1	7.2	7.6

There was no gender difference in the proportion who found it difficult to eat more healthily.

Table 173: How difficult People find it to eat more healthily by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
Not difficult	41.7	41.1	45.4	39.0	40.2	41.2
A little difficult	40.1	35.5	21.8	32.7	33.9	33.5
Somewhat difficult	12.6	18.2	27.9	22.4	15.7	17.7
Very difficult	5.6	5.2	4.9	5.9	10.2	7.6

There were no socioeconomic differences in the proportions who did not find it difficult to eat more healthily.

Table 174: “How much do you agree to this statement: I can’t afford the cost of healthier types of food” by Ethnicity

	Maori	Pacific	Asian	Other	Total
Agree strongly	24.3	18.3	8.6	8.3	14.1
Agree	9.6	13.3	7.7	10.1	10.3
Agree a little	11.5	18.3	12.1	17.8	15.5
Neither agree nor disagree	2.6	3.2	1.5	3.1	2.7
Disagree a little	11.4	13.6	15.8	10.1	12.1
Disagree	22.1	17.7	26.0	13.2	18.3
Disagree strongly	18.4	15.6	28.2	37.4	26.9

Maori and Pacific participants had higher proportions who agreed with the statement that they can’t afford the cost of healthier types of food compared to Asian participants. Pacific participants also had a higher proportion who agreed with this statement compared to the Other ethnic group.

Table 175: “How much do you agree to this statement: I can’t afford the cost of healthier types of food” by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
Agree strongly	11.4	15.0	16.0	9.4	14.1
Agree	10.6	10.6	9.6	8.4	10.3
Agree a little	16.3	14.8	16.7	13.4	15.5
Neither agree nor disagree	4.4	2.7	1.5	0.0	2.7
Disagree a little	14.2	11.6	9.3	20.3	12.1
Disagree	21.5	16.6	18.2	18.6	18.3
Disagree strongly	21.7	28.7	28.7	30.0	26.9

There were no age group differences in the proportions who agreed with the statement that they can’t afford the cost of healthier types of food.

Table 176: “How much do you agree to this statement: I can’t afford the cost of healthier types of food” by Gender

	Male	Female	Total
Agree strongly	13.3	14.7	14.1
Agree	10.7	9.9	10.3
Agree a little	14.2	16.6	15.5
Neither agree nor disagree	1.6	3.7	2.7
Disagree a little	10.9	13.1	12.1
Disagree	17.0	19.4	18.3
Disagree strongly	32.2	22.6	26.9

There was no gender difference in the proportion who agreed with the statement that they can’t afford the cost of healthier types of food.

Table 177: “How much do you agree to this statement: I can’t afford the cost of healthier types of food” by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
Agree strongly	7.7	10.2	14.5	11.7	18.2	14.1
Agree	8.2	7.5	11.8	10.4	11.3	10.3
Agree a little	13.6	12.9	15.5	20.3	15.8	15.5
Neither agree nor disagree	2.7	4.9	3.7	0.5	2.6	2.7
Disagree a little	11.1	15.1	7.5	12.0	13.5	12.1
Disagree	21.9	11.9	17.6	17.2	18.2	18.3
Disagree strongly	34.9	37.5	29.4	27.8	20.3	26.9

Participants living in areas of highest deprivation were more likely to agree with the statement that they can’t afford the cost of healthier types of food compared to those living in areas with the lowest deprivation (NZDep 1-2).

Table 178: “How much do you agree to this statement: I don’t know enough about which foods are healthy for you” by Ethnicity

	Maori	Pacific	Asian	Other	Total
Agree strongly	7.5	12.0	6.9	4.4	7.2
Agree	6.6	7.7	11.1	5.9	7.3
Agree a little	9.8	13.2	12.3	6.2	9.5
Neither agree nor disagree	0.9	1.3	3.1	1.8	1.7
Disagree a little	11.8	22.3	22.3	16.2	17.6
Disagree	21.7	12.2	24.2	19.5	19.2
Disagree strongly	41.7	31.3	20.2	45.8	37.5

Pacific and Asian participants had higher proportions who agreed with the statement that they don’t know enough about which foods are healthy compared to the Other ethnic group.

Table 179: “How much do you agree to this statement: I don’t know enough about which foods are healthy for you” by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
Agree strongly	5.6	7.3	6.6	17.5	7.2
Agree	7.9	6.4	8.3	8.6	7.3
Agree a little	11.0	9.7	9.3	0.0	9.5
Neither agree nor disagree	1.6	2.1	1.3	0.0	1.7
Disagree a little	20.0	15.0	17.9	28.0	17.6
Disagree	24.4	17.1	18.3	16.9	19.2
Disagree strongly	29.6	42.2	38.2	29.0	37.5

There were no age group differences in the proportions who agreed with the statement that they don’t know enough about which foods are healthy.

Table 180: “How much do you agree to this statement: I don’t know enough about which foods are healthy for you” by Gender

	Male	Female	Total
Agree strongly	8.0	6.5	7.2
Agree	9.2	5.8	7.3
Agree a little	10.0	9.2	9.5
Neither agree nor disagree	2.0	1.5	1.7
Disagree a little	19.2	16.2	17.6
Disagree	16.6	21.4	19.2
Disagree strongly	35.0	39.5	37.5

Males had a significantly higher proportion who agreed with the statement that they don’t know enough about which foods are healthy.

Table 181: “How much do you agree to this statement: I don’t know enough about which foods are healthy for you” by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
Agree strongly	3.9	2.3	6.9	5.5	10.0	7.2
Agree	6.6	8.8	6.8	6.5	7.8	7.3
Agree a little	9.0	11.7	4.6	9.1	11.0	9.5
Neither agree nor disagree	1.4	3.2	0.0	3.4	1.7	1.7
Disagree a little	18.9	14.7	14.1	11.3	19.9	17.6
Disagree	15.2	21.3	24.1	22.4	18.7	19.2
Disagree strongly	45.0	38.0	43.4	41.7	31.0	37.5

There were no socioeconomic difference in the proportions who agreed with the statement that they don’t know enough about which foods are healthy.

Table 182: “How much do you agree to this statement: There is not enough healthy food available in the places where I eat or shop” by Ethnicity

	Maori	Pacific	Asian	Other	Total
Agree strongly	8.3	7.0	3.9	4.4	5.7
Agree	3.0	8.4	14.0	2.8	5.9
Agree a little	7.2	8.1	10.6	2.9	6.3
Neither agree nor disagree	2.1	0.9	1.0	0.3	1.0
Disagree a little	14.6	17.1	18.8	15.6	16.2
Disagree	15.7	20.6	20.7	19.1	18.9
Disagree strongly	49.1	37.8	31.0	54.8	45.9

Maori, Pacific and Asian participants had higher proportion who agreed with the statement that there is not enough healthy food available in the places where they eat or shop compared to those in the Other ethnic group.

Table 183: “How much do you agree to this statement: There is not enough healthy food available in the places where I eat or shop” by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
Agree strongly	6.6	4.3	8.8	0.0	5.7
Agree	6.0	4.1	5.6	27.6	5.9
Agree a little	8.8	5.6	4.6	6.9	6.3
Neither agree nor disagree	1.4	0.8	1.1	0.0	1.0
Disagree a little	16.9	17.3	13.6	15.0	16.2
Disagree	18.9	20.1	19.8	2.5	18.9
Disagree strongly	41.4	47.9	46.5	48.1	45.9

The 65+ age group had a significantly higher proportion who agreed with the statement that there is not enough healthy food available in the places where they eat or shop compared to the 25-44 age group.

Table 184: “How much do you agree to this statement: There is not enough healthy food available in the places where I eat or shop” by Gender

	Male	Female	Total
Agree strongly	4.2	7.0	5.7
Agree	5.5	6.3	5.9
Agree a little	7.3	5.4	6.3
Neither agree nor disagree	0.6	1.3	1.0
Disagree a little	17.6	15.1	16.2
Disagree	17.3	20.3	18.9
Disagree strongly	47.5	44.6	45.9

There was no gender difference in the proportion who agreed with the statement that there is not enough healthy food available in the places where they eat or shop.

Table 185: “How much do you agree to this statement: There is not enough healthy food available in the places where I eat or shop” by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
Agree strongly	4.9	6.7	4.1	7.5	6.0	5.7
Agree	5.9	4.8	7.7	2.2	6.4	5.9
Agree a little	5.8	9.6	4.8	4.7	6.7	6.3
Neither agree nor disagree	0.7	1.7	0.0	0.0	1.5	1.0
Disagree a little	11.1	14.1	20.4	17.2	17.7	16.2
Disagree	19.0	22.5	9.4	19.1	21.1	18.9
Disagree strongly	52.6	40.6	53.6	49.3	40.6	45.9

There were no socioeconomic differences in the proportions who agreed with the statement that there is not enough healthy food available in the places where they eat or shop.

Table 186: Support given to own children to eat healthily by Ethnicity

	Maori	Pacific	Asian	Other	Total
A lot of support	71.0	65.5	74.7	77.3	72.5
Some	18.5	23.1	16.0	19.1	19.4
A little	7.6	9.3	7.3	1.7	6.0
None	2.9	2.1	2.0	1.8	2.2

Maori, Pacific and Asian participants had significantly lower proportions reporting that they give a lot of support to their own children to eat healthily compared to the Other ethnic group.

Table 187: Support given to own children to eat healthily by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
A lot of support	46.7	80.4	76.1	81.3	72.5
Some	28.9	16.2	18.3	18.7	19.4
A little	17.1	2.8	3.7	0.0	6.0
None	7.3	0.5	1.9	0.0	2.2

The 25-44 age group had a lower proportion reporting that they give a lot of support to their own children to eat healthily compared to all other age groups. The 16-24 and 45-64 age groups also had lower proportions reporting that they give a lot of support to their own children to eat healthily compared to the 65+ age group.

Table 188: Support given to own children to eat healthily by Gender

	Male	Female	Total
A lot of support	68.0	76.3	72.5
Some	22.7	16.6	19.4
A little	6.3	5.7	6.0
None	3.0	1.5	2.2

Females were significantly more likely to report giving a lot of support to their own children to eat healthily.

Table 189: Support given to own children to eat healthily by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
A lot of support	78.9	81.2	67.8	75.6	69.0	72.5
Some	14.7	15.2	26.2	17.2	20.5	19.4
A little	4.8	3.6	5.9	6.8	6.7	6.0
None	1.6	0.0	0.0	0.4	3.8	2.2

Participants living in areas of highest deprivation (NZDep 9-10) had a significantly higher proportion reporting that they give a lot of support to their own children to eat healthily compared to those living in moderate deprivation (NZDep 5-6).

Table 190: How People feel about what their kids eat (amount and type) by Ethnicity

	Maori	Pacific	Asian	Other	Total
could be a lot healthier	17.6	29.1	24.0	8.4	18.4
could be a bit healthier	41.4	36.4	30.9	48.3	40.6
It is healthy enough	41.0	34.5	45.1	43.4	41.0

Maori, Pacific and Asian participants had significantly higher proportions who felt that their children's diets could be a bit or a lot healthier compared to the Other ethnic group.

Table 191: How People feel about what their kids eat (amount and type) by Age Group

	16-24 years	25-44 years	45-64 years	65+ years	Total
could be a lot healthier	15.9	18.7	20.5	16.0	18.4
could be a bit healthier	42.7	41.8	37.8	14.9	40.6
It is healthy enough	41.4	39.4	41.7	69.1	41.0

The 25-44 age group had a significantly higher proportion who felt that their children's diets could be a bit or a lot healthier compared to all other age groups. The 16-24 age group also had a higher proportion who felt that their children's diets could be a bit or a lot healthier compared to the 45-64 and 65+ age groups. The 45-64 age group also had a higher proportion who felt that their children's diets could be a bit or a lot healthier compared to the 65+ age group.

Table 192: How People feel about what their kids eat (amount and type) by Gender

	Male	Female	Total
could be a lot healthier	17.9	18.8	18.4
could be a bit healthier	40.1	41.1	40.6
It is healthy enough	42.0	40.1	41.0

There was no gender difference in the proportion who felt that their children's diets could be a bit or a lot healthier.

Table 193: How People feel about what their kids eat (amount and type) by Socioeconomic Status

	NZDep 1-2	NZDep 3-4	NZDep 5-6	NZDep 7-8	NZDep 9-10	Total
could be a lot healthier	10.6	12.1	15.9	17.0	23.9	18.4
could be a bit healthier	42.7	47.2	42.0	50.4	36.4	40.6
It is healthy enough	46.8	40.7	42.2	32.6	39.6	41.0

Participants living in areas of highest deprivation (NZDep 9-10) had a significantly higher proportion who felt that their children's diets could be a bit or a lot healthier compared to those living in the next lower level of deprivation (NZDep 7-8).

3.5. Logistic Regression Models for the Relationship of SES, Age, Gender, and Ethnicity with Diabetes, Obesity, Diet and Physical Activity.

Table 194 shows the results of the binary logistic regression models, looking at the effect of deprivation (NZDep2006), age, gender and ethnicity on various binary indicators of diabetes prevalence, behaviours and attitudes/beliefs relating to risk factors for diabetes, and services relating to diabetes that were provided at their last GP visit. The results that are marked 'Excluded' are where the likelihood ratio for the factor was not significant and was therefore excluded from the model. The models show the increased, or decreased, likelihood of the participants responding with the 'Indicator Response' when they are members of each of the 'Indicator Groups'. The exception is NZDep, which was entered as an ordinal variable in the models. The base groups for each likelihood estimate were 16-24 for age, female for gender, and Other for ethnicity.

3.5.1. Diabetes

- Diabetes prevalence was more likely among Maori, Pacific, Asian, females, older people and people in areas of higher deprivation.
- A family history of diabetes was more likely among Maori, Pacific, Asian, older people and people in areas of higher deprivation.
- Knowledge about diabetes was not related to any of the factors.
- Maori, Pacific, Asians, and people in areas of higher deprivation were more likely to be worried that they or a member of their family has diabetes or may get diabetes.
- Pacific and Asian people were less likely to know that you could have diabetes without knowing it.

3.5.2. Obesity

- 16-24 year olds were less likely than all other age groups to know that having diabetes increased the risk for heart disease.
- Pacific peoples, people 65 years or older, and those living in more deprived areas were less likely to believe that nothing could be done to prevent diabetes, whereas 25-44 year olds were more likely to believe that nothing could be done.
- Maori, Pacific, females, older people, and people living in areas with higher levels of deprivation were more likely to self-report being 'overweight', whereas Asian peoples were less likely to report being 'overweight'.
- Maori, Pacific, females, and older people were more likely to self-report being 'obese'.
- Maori, Pacific, females, older people, and people living in areas with higher levels of deprivation were more likely to self-report being 'overweight' or 'obese' (combined), whereas Asian peoples were less likely to report being 'overweight' or 'obese' (combined).
- Maori, Pacific, Asians, and people living in less deprived areas were more likely to know the recommended weight for their height.
- People living in more deprived areas were more likely not to know the recommended body shape to be healthy.
- Maori, Pacific, Asians, 25-44 year olds, and people living in areas with higher levels of deprivation were less likely to be not worried about the health implications of being overweight, whereas people 65 years or older were more likely not to be worrying about their weight.

3.5.3. Diet

- Asians and males were more likely to have inadequate fruit intake.
- Maori, Pacific, Asians, males, and people living in areas with higher levels of deprivation were more likely to have inadequate vegetable intake, whereas those 65 years or older were less likely to have inadequate vegetable intake.
- Maori, Pacific, Asians, males, and people living in areas with higher levels of deprivation were more likely to have inadequate fruit and vegetable intake (combined), whereas 25-44 year olds and those 65 years or older were less likely to have inadequate vegetable intake.
- Maori, Pacific, Asians, males, and 25-64 year olds were less likely to know the recommended daily fruit and vegetable intake of 5+/day.
- Maori, Pacific, Asians, and females were more likely to cook with butter.
- Maori and older people were more likely to not trim the fat when cooking.
- Maori, older people, and those living in areas with higher levels of deprivation were more likely to cook chicken with the skin on, whereas Asians were less likely to cook chicken with the skin on.
- Pacific people, males, and people living in areas with higher levels of deprivation were more likely to drink highly sugared fizzy drinks, whereas Asians and older people were less likely to drink fizzy drinks.
- Maori and Pacific were more likely to report eating more than they needed, whereas Asians and those 45 years or older were less likely to report over-eating.
- Maori, Pacific, males, and those living in areas with higher levels of deprivation were more likely to report skipping breakfast, whereas older people were less likely to report skipping breakfast.
- Those living in areas with higher levels of deprivation were less likely to report that they were doing enough to have a healthy diet, whereas older people were more likely to feel that they were doing enough.
- Maori, Pacific, 25-44 year olds, and those living in areas with higher levels of deprivation were more likely to report having difficulty to have a healthier diet.
- Maori, Pacific and those living in areas with higher levels of deprivation were more likely to say that they could not afford the cost of healthier food, whereas Asians and those 65 years or older were less likely to report cost as a barrier to eating healthy.
- Maori, Pacific, and Asian people were more likely to report having a lack of knowledge about healthy food.
- Maori, Pacific, and Asian people were more likely to report having a lack of healthy food where they shop.
- Maori, Pacific, Asians, and 25-44 year olds were more likely to be interested in eating more healthily, whereas those 45 years or older were less likely to be interested in eating healthily.
- Maori, Pacific, and Asian peoples were less likely to support their children to eat healthily, whereas older people were more likely to support their children eating healthily.
- Maori, Pacific, Asians and 25-44 year olds were more likely to feel that their children could eat healthier.

3.5.4. Physical Activity

- Females and those 45 years or older were more likely to report engaging in less than 1.75 hours of vigorous activity each week.
- Asians, females and 25-44 year olds were more likely to report engaging in less than 3.5 hours of moderate activity each week, whereas Maori were less likely to report engaging in less than 3.5 hours of moderate activity each week.

- Those 45 years or older were less likely to report engaging in less than a total of 2.5 hours of activity each week.
- Those living in areas with higher levels of deprivation were less likely to feel that they were doing enough physical activity.
- Maori, Pacific, Asian, and females were more likely to report being interested in getting more active, whereas those 45 years or older were less likely to be interested in getting more active.
- Maori, Pacific, and females were more likely to report having difficulty becoming more active.
- Pacific, Asians, females, and 25-44 year olds were more likely to report having a cost barrier to becoming more active.
- Maori, Pacific, Asians, females, and 16-24 year olds were more likely to report lack of access to parks and spaces as a barrier to exercising more.
- Maori, Pacific, Asians, and 16-24 year olds were less likely to be supporting their kids to be active.
- Maori, Pacific, Asians and 25-44 year olds were more likely think that their kids need to do more exercise.
- Maori, males, and those living in areas with higher levels of deprivation were more likely to be smokers, whereas Asians and those 65 years or older were less likely to be smokers.

Table 194: Results of Logistic Regression Models with NZDep, Age, Gender and Ethnicity as Independent Variables

Item	Indicator Response (vs Other Responses)	NZ Dep	Age		Gender		Ethnicity		Model Fit (p)*
		OR (95%CI)	Indicator Group (vs 16-24)	OR (95%CI)	Indicator Group (vs Female)	OR (95%CI)	Indicator Group (vs Other)	OR (95%CI)	
DIABETES									
Diabetes (Type I or II)	Yes	1.3 (1.2-1.5)	25-44	8.9 (2.9-27)	Male	0.5 (0.4-0.8)	Maori	1.2 (0.7-2.1)	0.36
			45-64	26.2 (8.7-79.1)			Pacific	2.4 (1.5-3.8)	
			65+	51.6 (16.7-159.4)			Asian	1.7 (1.1-2.7)	
Family history of diabetes	Yes	1.2 (1.1-1.2)	25-44	1.8 (1.4-2.3)	Male	Excluded	Maori	1.8 (1.4-2.4)	
			45-64	2 (1.5-2.6)			Pacific	1.8 (1.4-2.4)	
			65+	1.5 (1-2.1)			Asian	1.8 (1.4-2.3)	
Dont know anything about diabetes	Yes	Excluded	25-44	Excluded	Male	Excluded	Maori	Excluded	n/a
			45-64	Excluded			Pacific	Excluded	
			65+	Excluded			Asian	Excluded	
Not worried that I or family member has diabetes or may get diabetes	Yes	0.9 (0.9-1)	25-44	Excluded	Male	Excluded	Maori	0.5 (0.4-0.7)	0.29
			45-64	Excluded			Pacific	0.3 (0.2-0.3)	
			65+	Excluded			Asian	0.6 (0.4-0.7)	
U can have diabetes & not know	False	Excluded	25-44	Excluded	Male	Excluded	Maori	0.5 (0.2-1.3)	1.00
			45-64	Excluded			Pacific	3.1 (1.9-5)	
			65+	Excluded			Asian	3 (1.9-5)	
Having diabetes increase risk for heart disease	False	Excluded	25-44	0.8 (0.5-1.3)	Male	Excluded	Maori	Excluded	1.00
			45-64	0.8 (0.4-1.3)			Pacific	Excluded	
			65+	0.2 (0-0.6)			Asian	Excluded	
Nothing could be done to prevent diabetes	True	0.9 (0.8-1)	25-44	1.4 (1.1-1.9)	Male	Excluded	Maori	0.8 (0.6-1.1)	0.11
			45-64	0.8 (0.6-1.1)			Pacific	0.6 (0.4-0.8)	
			65+	0.5 (0.4-0.8)			Asian	1.2 (0.8-1.6)	
RISK: OBESITY									
Overweight	Yes	1.1 (1-1.2)	25-44	2.9 (2.3-3.7)	Male	0.8 (0.7-0.9)	Maori	1.4 (1.1-1.8)	0.51
			45-64	3.3 (2.5-4.2)			Pacific	1.7 (1.3-2.2)	

		NZ Dep	Age		Gender		Ethnicity		
Item	Indicator Response (vs Other Responses)	OR (95%CI)	Indicator Group (vs 16-24)	OR (95%CI)	Indicator Group (vs Female)	OR (95%CI)	Indicator Group (vs Other)	OR (95%CI)	Model Fit (p)*
			65+	1.8 (1.3-2.5)			Asian	0.6 (0.5-0.8)	
Obese	Yes	Excluded	25-44	4.2 (2.7-6.8)	Male	0.7 (0.6-1)	Maori	2.4 (1.6-3.5)	0.64
			45-64	3.8 (2.3-6.3)			Pacific	5 (3.6-6.9)	
			65+	2.5 (1.3-4.8)			Asian	0.9 (0.6-1.4)	
Obese or Overweight	Yes	1.1 (1-1.2)	25-44	2.9 (2.3-3.7)	Male	0.8 (0.7-0.9)	Maori	1.4 (1.1-1.8)	0.51
			45-64	3.3 (2.5-4.2)			Pacific	1.7 (1.3-2.2)	
			65+	1.8 (1.3-2.5)			Asian	0.6 (0.5-0.8)	
Dont Know the recommended weight	Agree	1.1 (1-1.2)	25-44	Excluded	Male	Excluded	Maori	0.7 (0.5-0.9)	0.52
			45-64	Excluded			Pacific	0.6 (0.4-0.8)	
			65+	Excluded			Asian	0.4 (0.2-0.6)	
Dont know the recommended body shape	Agree	1.1 (1-1.2)	25-44	Excluded	Male	Excluded	Maori	Excluded	0.57
			45-64	Excluded			Pacific	Excluded	
			65+	Excluded			Asian	Excluded	
Not worried that overwt brings healthproblems	Agree	0.9 (0.8-0.9)	25-44	0.7 (0.6-0.9)	Male	Excluded	Maori	0.4 (0.3-0.5)	0.91
			45-64	1 (0.8-1.2)			Pacific	0.3 (0.2-0.4)	
			65+	1.4 (1-1.9)			Asian	0.7 (0.6-0.9)	
RISK: DIET									
Inadequate Fruit	<2/day	Excluded	25-44	Excluded	Male	1.7 (1.4-2)	Maori	0.9 (0.7-1.2)	0.16
			45-64	Excluded			Pacific	0.8 (0.6-1.1)	
			65+	Excluded			Asian	1.4 (1.1-1.8)	
Inadequate Vegetables	<3/day	1.1 (1-1.1)	25-44	0.8 (0.7-1.1)	Male	2.5 (2.1-3)	Maori	1.4 (1.1-1.9)	0.03
			45-64	1 (0.8-1.3)			Pacific	2.7 (2-3.6)	
			65+	0.6 (0.4-0.8)			Asian	1.9 (1.5-2.4)	
Inadequate Fruits/Vegetables	<5/day	1.1 (1-1.2)	25-44	0.8 (0.6-1)	Male	2.4 (2-2.9)	Maori	1.3 (1-1.7)	0.03
			45-64	0.9 (0.7-1.2)			Pacific	2.1 (1.6-2.9)	
			65+	0.7 (0.5-0.9)			Asian	1.9 (1.5-2.5)	
Fruit & Vegetables recommended Intake	<5day	Excluded	25-44	1.5 (1.2-2)	Male	1.7 (1.4-2)	Maori	1.6 (1.2-2.1)	0.03
			45-64	2.1 (1.6-2.8)			Pacific	3 (2.3-3.8)	
			65+	1.4 (0.9-2)			Asian	2.9 (2.3-3.7)	

Item	Indicator Response (vs Other Responses)	NZ Dep	Age		Gender		Ethnicity		Model Fit (p)*
		OR (95%CI)	Indicator Group (vs 16-24)	OR (95%CI)	Indicator Group (vs Female)	OR (95%CI)	Indicator Group (vs Other)	OR (95%CI)	
Cook with Butter	Yes	Excluded	25-44	Excluded	Male	0.5 (0.4-0.8)	Maori	3.3 (2-5.5)	0.73
			45-64	Excluded			Pacific	3.5 (2.2-5.6)	
			65+	Excluded			Asian	2.6 (1.6-4.3)	
Cook trimming fat	Never	Excluded	25-44	1.8 (1.2-2.9)	Male	Excluded	Maori	1.9 (1.3-2.8)	0.52
			45-64	2.4 (1.6-3.8)			Pacific	1.4 (0.9-2.1)	
			65+	2.4 (1.4-4.2)			Asian	1.3 (0.9-2)	
Cook with skin on	Usually	1.1 (1.1-1.2)	25-44	2 (1.5-2.7)	Male	0.4 (0.4-0.6)	Maori	2.1 (1.5-2.8)	0.00
			45-64	2.1 (1.5-2.9)			Pacific	1.3 (0.9-1.8)	
			65+	1.8 (1.2-2.7)			Asian	0.6 (0.4-0.8)	
Drinking fizzy drinks	Yes	1.1 (1-1.2)	25-44	0.4 (0.3-0.5)	Male	3.1 (2.6-3.7)	Maori	1.1 (0.9-1.5)	0.10
			45-64	0.2 (0.1-0.2)			Pacific	1.9 (1.4-2.6)	
			65+	0.1 (0-0.1)			Asian	0.7 (0.6-0.9)	
Eat more than needed	Yes	Excluded	25-44	1.1 (0.9-1.4)	Male	Excluded	Maori	1.3 (1-1.7)	0.74
			45-64	0.7 (0.6-0.9)			Pacific	1.8 (1.4-2.3)	
			65+	0.5 (0.3-0.6)			Asian	0.7 (0.5-0.8)	
Skipping breakfast	Yes	1.2 (1.1-1.2)	25-44	0.6 (0.5-0.8)	Male	1.6 (1.3-1.9)	Maori	1.4 (1-1.8)	0.17
			45-64	0.4 (0.3-0.5)			Pacific	1.8 (1.4-2.4)	
			65+	0.1 (0.1-0.2)			Asian	0.9 (0.7-1.1)	
How you feel about yr diet	Doing enough	0.9 (0.8-1)	25-44	2.1 (1.4-3.1)	Male	Excluded	Maori	Excluded	0.14
			45-64	2.6 (1.7-3.8)			Pacific	Excluded	
			65+	5.5 (3.4-9)			Asian	Excluded	
How difficult it is to eat healthier diet	Difficult	1.1 (1-1.2)	25-44	1.3 (1-1.7)	Male	Excluded	Maori	1.7 (1.2-2.3)	0.15
			45-64	0.9 (0.7-1.2)			Pacific	1.3 (1-1.9)	
			65+	0.4 (0.3-0.7)			Asian	1.2 (0.9-1.7)	
Can't afford the cost of healthier food	Agree	1.1 (1-1.2)	25-44	1.2 (0.9-1.5)	Male	Excluded	Maori	1.4 (1-1.9)	0.43
			45-64	0.8 (0.6-1.1)			Pacific	1.3 (1-1.9)	
			65+	0.3 (0.1-0.5)			Asian	0.7 (0.5-1)	
No Knowledge about healthy food	Agree	Excluded	25-44	Excluded	Male	Excluded	Maori	2.6 (1.7-3.9)	1.00
			45-64	Excluded			Pacific	3.6 (2.5-5.1)	

Item	Indicator Response (vs Other Responses)	NZ Dep	Age		Gender		Ethnicity		Model Fit (p)*
		OR (95%CI)	Indicator Group (vs 16-24)	OR (95%CI)	Indicator Group (vs Female)	OR (95%CI)	Indicator Group (vs Other)	OR (95%CI)	
No healthy food where I shop	Agree	Excluded	65+	Excluded			Asian	2.4 (1.7-3.6)	1.00
			25-44	Excluded	Male	Excluded	Maori	1.8 (1.1-2.9)	
			45-64	Excluded			Pacific	3.1 (2-4.6)	
Not interested in eating healthily	Yes	Excluded	65+	Excluded			Asian	2.9 (1.9-4.4)	0.05
			25-44	0.7 (0.6-0.9)	Male	Excluded	Maori	0.7 (0.6-1)	
			45-64	1.3 (1-1.7)			Pacific	0.3 (0.3-0.5)	
Support for kids to eat healthy	A little or none	Excluded	65+	2.6 (1.9-3.5)			Asian	0.5 (0.4-0.6)	0.00
			25-44	0.2 (0.1-0.3)	Male	Excluded	Maori	3.8 (2.1-6.9)	
			45-64	0.2 (0.1-0.3)			Pacific	4.7 (2.7-8.2)	
How you feel about kids food	Could be Healthier	1.1 (1-1.3)	65+	*			Asian	2.8 (1.5-5.2)	0.34
			25-44	2.2 (1.5-3.2)	Male	Excluded	Maori	2.8 (1.8-4.5)	
			45-64	1.1 (0.7-1.8)			Pacific	5.5 (3.5-8.5)	
RISK: INACTIVITY									
Vigorous activity	<1.75hrs / week	Excluded	65+	0.2 (0.1-0.3)			Asian	Excluded	0.26
			25-44	1 (0.8-1.3)	Male	0.8 (0.6-0.9)	Maori	Excluded	
			45-64	0.6 (0.5-0.8)			Pacific	Excluded	
Physical Inactivity	<3.5hrs / week	Excluded	65+	0.8 (0.6-1.2)			Asian	1.7 (1.3-2.1)	0.26
			25-44	1.2 (1-1.6)	Male	0.7 (0.6-0.8)	Maori	0.7 (0.5-0.9)	
			45-64	0.9 (0.7-1.2)			Pacific	1.1 (0.8-1.4)	
Overall inactivity	<2.5hrs/week	Excluded	65+	0 (0-0.2)			Asian	Excluded	1.00
			25-44	0.8 (0.6-1.2)	Male	Excluded	Maori	Excluded	
			45-64	0.5 (0.3-0.8)			Pacific	Excluded	
How you feel about your level of physical activity	Doing enough	0.9 (0.8-1)	65+	Excluded			Asian	Excluded	0.21
			25-44	Excluded	Male	Excluded	Maori	Excluded	
			45-64	Excluded			Pacific	Excluded	
Not interested in getting more active	Yes	Excluded	65+	3.5 (2.5-4.7)			Asian	0.6 (0.5-0.8)	
			25-44	0.9 (0.7-1.1)	Male	1.3 (1.1-1.6)	Maori	0.8 (0.6-1)	
			45-64	1.4 (1.1-1.8)			Pacific	0.5 (0.4-0.6)	

		NZ Dep	Age		Gender		Ethnicity		
Item	Indicator Response (vs Other Responses)	OR (95%CI)	Indicator Group (vs 16-24)	OR (95%CI)	Indicator Group (vs Female)	OR (95%CI)	Indicator Group (vs Other)	OR (95%CI)	Model Fit (p)*
How difficult to be more active	Difficult	Excluded	25-44	Excluded	Male	0.8 (0.7-0.9)	Maori	2.2 (1.7-2.9)	0.74
			45-64	Excluded			Pacific	1.5 (1.1-1.9)	
			65+	Excluded			Asian	0.8 (0.5-1.1)	
Difficulty to be active due to costs	Difficult	1.2 (1.1-1.3)	25-44	1.4 (1-1.8)	Male	0.5 (0.4-0.7)	Maori	1.3 (0.9-1.8)	0.72
			45-64	0.8 (0.6-1)			Pacific	1.5 (1.1-2)	
			65+	0.4 (0.2-0.6)			Asian	1.6 (1.2-2.2)	
Difficulty to be active due to lack of parks and spaces	Difficult	Excluded	25-44	0.6 (0.4-0.8)	Male	0.6 (0.5-0.8)	Maori	1.9 (1.3-2.7)	0.49
			45-64	0.7 (0.5-0.9)			Pacific	2.1 (1.4-2.9)	
			65+	0.6 (0.4-1.1)			Asian	2.8 (2-4)	
Support to kids to be active	A little/none	Excluded	25-44	0.8 (0.5-1.1)	Male	Excluded	Maori	1.8 (1-3.4)	0.28
			45-64	0.3 (0.2-0.5)			Pacific	3.8 (2.3-6.2)	
			65+	0.2 (0.1-0.6)			Asian	2.8 (1.6-4.6)	
How do you feel about the kids level of activity	Need to do more	Excluded	25-44	1.6 (1-2.4)	Male	Excluded	Maori	4.4 (2.5-7.5)	0.12
			45-64	1.2 (0.7-1.9)			Pacific	10.7 (6.7-17)	
			65+	0.5 (0.2-1.3)			Asian	4.4 (2.6-7.3)	
RISK: OTHER									
Smoking tobacco	Yes	1.3 (1.2-1.4)	25-44	1.1 (0.8-1.4)	Male	1.4 (1.1-1.7)	Maori	2.3 (1.7-3.1)	0.15
			45-64	0.9 (0.7-1.2)			Pacific	1.2 (0.9-1.6)	
			65+	0.5 (0.3-0.7)			Asian	0.5 (0.4-0.7)	

*Significance of the Hosmer & Lemeshow Chi-square statistic. If p is less than .05 then the model is not a good fit to the data.

4. References

Wyllie, A. and MacKinlay, C. (2007). Let's Beat Diabetes Benchmark Survey: Research Report. Phoenix Research. pp.1-97.