



# Youth'07

The Health  
and Wellbeing of  
Secondary School  
Students in New Zealand

Young People in Neighbourhoods  
of High and Low Deprivation



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## YOUTH'07

# The Health and Wellbeing of Secondary School Students in New Zealand

# Differences for Young People in Neighbourhoods of High and Low Deprivation

### Table of contents

Executive summary.....	2
Introduction.....	3
How we did the survey .....	3
Ethical procedures.....	3
Using internet tablets in health surveys .....	3
Measures .....	4
Deprivation.....	4
Participation in the neighbourhood.....	4
Relationships in the neighbourhood.....	4
Recreational facilities in the neighbourhood .....	5
Negative things about neighbourhood.....	5
Results.....	7
Participation in the neighbourhood.....	7
Relationships in the neighbourhood.....	7
Recreational facilities in the neighbourhood .....	8
Negative things about neighbourhood.....	8
Conclusion .....	9
References .....	10





## Executive summary

Living in socio-economically deprived areas is associated with poorer health and wellbeing outcomes for young people in New Zealand. Numerous features and aspects of communities can impact on population health, including both the physical and social contexts of neighbourhoods.

This report describes the social and physical environments of neighbourhoods for young people living in New Zealand. Taken in total, the data presented in this report suggest that young people living in more deprived areas participate in their communities as much as those in less deprived areas and actually have better access to recreational facilities. However, young people in more deprived areas report poorer social relationships with their neighbours and lower levels of safety than those in more affluent areas.

It remains to explore how these differing social contexts may contribute to the poor health outcomes experienced by young people and their families living in deprived areas.



## Introduction

In New Zealand, living in socio-economically deprived areas is associated with poorer nutrition, physical inactivity, overweight, and poorer health and wellbeing outcomes generally among children, young people, and adults<sup>1-3</sup>. Young people living in high deprivation areas are less likely to report good health and life satisfaction and more likely to report psychological distress than those living in more affluent areas<sup>1</sup>. Furthermore, as many studies have demonstrated, the socio-economic gradient in health indicators still hold even after numerous individual characteristics are taken into account<sup>4-6</sup>.

One of the necessary steps toward achieving health equality is in the development of healthy and sustainable communities, which includes improving both the physical environment to integrate transport, housing, environmental and health system initiatives and also the social environment to encourage community participation and minimize social isolation<sup>7</sup>. Research examining the role of neighbourhoods and communities on health outcomes suggests that both physical environment factors (e.g. availability and maintenance of facilities) and social environment factors (e.g. interpersonal relationships, social inequalities, and social cohesion) impact on health outcomes, even among young people<sup>8,9</sup>.

This report aims to describe the social and physical environments of the neighbourhoods where young people live in New Zealand, and to compare those of high, medium and low deprivation as a first step towards understanding what neighbourhood factors might explain the poor outcomes for young people living in high deprivation areas. The data for these comparisons are drawn from Youth'07, a nationally representative survey of the health and wellbeing of secondary school students in New Zealand undertaken by our group in 2007.

## How we did the survey

The Youth'07 survey aimed to provide information that is representative of most young people growing up in New Zealand. To do this, we randomly picked 115 schools in New Zealand (from those with 50 or more students in Years 9 to 14) and then randomly selected students from these schools to take part. The survey therefore did not include young people who are no longer in school.

In total, 96 (83.5%) of the 115 schools selected took part in the survey. A total of 12,549 students from these schools were invited to participate in the survey; 9,107 (72.6%) agreed to take part. This represents about 3% of the total 2007 New Zealand secondary school roll. The reasons that students did not take part in the survey included not being at school on the day of the survey, being unavailable during the time the survey was conducted, or not wanting to take part in the survey.

### Ethical procedures

Before we started the Youth'07 project its design was checked by the University of Auckland Human Subject Ethics Committee. We then obtained consent to carry out the survey from the principal of each participating school. A few weeks before the survey was conducted at each school, information materials about the survey were sent to each school for distribution to parents and students. They were assured that participation in the survey was voluntary and that all information collected would be anonymous and confidential. All participating students gave their own consent to being surveyed.

### Using internet tablets in health surveys

The survey was carried out using internet tablets – essentially hand-held computers. At the start of the survey students were given an anonymous code that enabled them to log-in to the questionnaire. The survey questions were displayed on the internet tablet's screen and also read out through headphones. Response options were also read out when the corresponding text on the screen was selected.



This 'voiceover' was available in both English and Māori languages, with students able to toggle between these two languages. Students answered the questions by using a small stylus to touch the appropriate response on the screen. Students could choose not to answer any question or section of the survey. The branching program meant that students were not asked detailed questions about issues that were not part of their life experiences.

During the survey, students were asked to provide the address of their usual place of residence, from which we ascertained its census Meshblock number. This was used to derive New Zealand Deprivation Index scores for the neighbourhood where the student lived, and to identify whether it was urban or rural.

Before sensitive sections of the questionnaire, reminders were given that involvement in the survey was voluntary and that answers would remain confidential and anonymous. For questions thought to be potentially upsetting for students, 'safety' messages were added providing advice and contact details of people to talk to.

## Measures

Students self-reported their age, gender and ethnicity. Most students (97%) were aged between 13 and 17 years and 65% were aged 15 years or less. Students who selected more than one ethnicity (40% of students) were assigned to one ethnic group using prioritised ethnic groupings<sup>10</sup>. The main ethnic groups students identified with were: European (53%), Maori (19%), Pacific (10%) and Asian (12%). Apart from a slightly higher percentage of male students (54%), the participating students were similar demographically to the national population of secondary school students in New Zealand<sup>11</sup>.

## Deprivation

Neighbourhood deprivation was assessed using the New Zealand Deprivation Score 2006 (NZDep). NZDep is an area-based socio-economic deprivation index that assesses eight dimensions using 2006 New Zealand census data<sup>12</sup>. Each participating student's NZDep score was determined by linking their residential meshblock number to their respective neighbourhood NZDep score<sup>11</sup>. Data are presented across five categories of NZDep, from low deprivation (deciles 1-2) to high deprivation (deciles 9-10).

## Participation in the neighbourhood

Young people who participate in their neighbourhoods and communities contribute to the social capital shared by all members. The Youth'07 survey included several questions assessing how young people participated in their neighbourhoods and communities (outside of school). Students were asked about their volunteer work with the question, "Do you choose to give your time to help others in your community (e.g. help out on the Marae, belong to a volunteer organization such as Greenpeace)?" Students who reported that they had done volunteer work in the past 12 months are described below.

Students were also asked about their participation in church groups and sports groups with the question, "Do you belong to a group, club or team which is not run by your school?" Students could select from a list of options; church group and sports group participation are described below as they were the most commonly selected. The items of the neighbourhood measures are listed in Table 1.

## Relationships in the neighbourhood

Young people who have strong relationships with friends and people in their communities have greater support for health-related behaviours. Students were asked a number of items about their friendships and relationships with people in their neighbourhoods (Table 1). The items were aggregated into two scales measuring neighbourhood connections and friendship connections. The neighbourhood



connection scale was created by averaging the responses to its six items and the friendship connection scale was created by averaging the standardized responses to 7 items. The connection scales were dichotomized at the top tertile of the distribution for analyses.

## Recreational facilities in the neighbourhood

Youth-friendly recreational facilities provide space and opportunities for young people to meet, socialize and be physically active. Young people were asked in the survey to report what types of recreational facilities they had within walking distance to their homes (Table 1). Students were able to select from a list of facilities (as many as applied) or select “there is nothing to do where I live.”

## Negative things about neighbourhood

Neighbourhood disintegration and perceptions of safety can have a major influence on how young people engage with and get around their neighbourhoods. Students were asked, “What are the bad things about the area where you live?” and could choose from a list of options (Table 1). Students were also asked about if they felt safe in their neighbourhood; those reporting that they only felt safe “sometimes” or “mostly not” are described below as feeling unsafe.



**Table 1: Description of neighbourhood measures**

Measure	Description of items
Neighbourhood participation	Do you choose to give your time to help others in your community (e.g. help out on the Marae, belong to a volunteer organization such as Greenpeace)? Do you belong to a group, club or team which is not run by your school? (Church or sports group)
Neighbourhood connection	Do you trust the people in your neighbourhood? Do you feel you really belong to your neighbourhood? Do the people in your neighbourhood help each other? Are people in your neighbourhood friendly? Do you like your neighbourhood? Do you like the people in your neighbourhood?
Friendship connection	How many friends do you have? How good are you at keeping friends? Do you have a friend that you feel close to? How much do your friends care about you? Do you have fun with your friends? Do your friends like doing the same things as you do? Do your friends help you and look out for you?
Recreational facilities in the neighbourhood	What things are there to do in the area where you live that you can walk to from home? A park A youth centre A skateboard ramp A basketball court or hoop A swimming pool or place to go swimming A bike track There is nothing to do around where I live
Negative things about neighbourhood	What are the bad things about the area where you live? There are not enough footpaths Footpaths are rough and broken There is too much traffic There is not enough street lighting There are not enough bike lanes There are too many dogs
Neighbourhood safety	Do you feel safe in your neighbourhood?



# Results

## Participation in the neighbourhood

There were no differences between high deprivation and low deprivation areas in the proportion of students who did volunteer work or participated in church, after controlling for differences in age, sex, ethnicity and urban or rural locality (Table 2). Approximately 15% of students living in high deprivation areas did volunteer work in the previous year and more than 25% participated with a church group. In contrast, participation in sports groups was markedly lower in high deprivation areas than low deprivation areas and this was statistically significant after controlling for differences in age, sex, ethnicity, and urban or rural locality. Approximately 40% of students living in low deprivation participated in a sports group compared with 30% of students in high deprivation areas.

## Relationships in the neighbourhood

Students living in high deprivation areas were less likely to report positive relationships with others in their neighbourhoods (Table 3). Only 20% of students in high deprivation areas reported positive relationships with their neighbours compared with 30% of students living in low deprivation areas. These differences were statistically significant when differences in age, sex, ethnicity and urban or rural locality were controlled for.

**Table 2: Student participation in neighbourhoods and deprivation**

	n	NZDep1 (low deprivation)		NZDep2		NZDep3		NZDep4		NZDep5 (high deprivation)		p-value <sup>1</sup>
		%	CI	%	CI	%	CI	%	CI	%	CI	
Volunteer, past year	8227	11.9	10.2-13.5	13.8	11.8-15.7	14.7	12.9-16.5	15.4	13.6-17.2	16.4	14.3-18.4	0.101
Church group participation	8200	15.8	12.5-19.1	17.8	14.9-20.6	18.7	15.8-21.6	20.7	17.5-24.0	26.9	21.3-32.4	0.675
Sports group participation	8200	41.5	39.1-44.0	37.8	35.3-40.3	36.1	32.9-39.3	33.5	30.7-36.3	29.7	26.5-32.9	<.001

<sup>1</sup>Controlling for age, sex, ethnicity and urban locality

**Table 3: Student relationships in their neighbourhoods**

	n	NZDep1 (low deprivation)		NZDep2		NZDep3		NZDep4		NZDep5 (high deprivation)		p-value <sup>1</sup>
		%	CI	%	CI	%	CI	%	CI	%	CI	
Positive neighbourhood connections	8205	30.3	27.6-32.9	27.1	24.3-29.9	23.7	21.1-26.3	21.4	19.0-23.8	19.2	16.7-21.6	<.001
Positive friendship connections	8865	38.2	35.7-40.7	37.7	35.0-40.4	34.2	31.2-37.2	36.6	33.7-39.5	36.9	34.0-39.9	0.009

<sup>1</sup>Controlling for age, sex, ethnicity and urban locality



## Recreational facilities in the neighbourhood

Student reports indicated that the availability of recreational facilities within walking distance from their home was actually better in high deprivation areas than in low deprivation areas (Table 4). Greater proportions of students living in high deprivation areas than in low deprivation areas reported the availability of a park, a youth centre, a skateboard ramp, or a basketball court. Only in the availability of swimming places was there no difference between high deprivation and low deprivation areas. Not surprisingly then, only 5% of students in high deprivation areas reported that there was nothing to do where they lived, compared with 15% of students in low deprivation areas.

## Negative things about neighbourhood

Students were asked to report on a number of negative things about their neighbourhoods (Table 5). There were no differences in the proportions of students in high deprivation and low deprivation areas who reported that there were not enough footpaths in their neighbourhoods, but students living in high deprivation areas (13%) were more likely to report that the footpaths were rough and broken compared to students in low deprivation areas (6%). Likewise, students living in high deprivation areas were more likely to report that there were too many dogs and that they didn't feel safe in their neighbourhoods compared to students living in low deprivation areas. There were no differences in the proportions of students in high deprivation and low deprivation areas who reported that there was too much traffic, inadequate street lighting, or not enough bike lanes in their neighbourhood.

**Table 4: Availability of recreational facilities**

	n	NZDep1 (low deprivation)		NZDep2		NZDep3		NZDep4		NZDep5 (high deprivation)		p-value <sup>1</sup>
		%	CI	%	CI	%	CI	%	CI	%	CI	
Park	8147	67.9	63.2-72.5	66.7	61.1-72.3	73.8	69.2-78.3	76.6	72.4-80.8	80.6	77.7-83.6	0.001
Youth centre	8147	6.3	5.0-7.5	9.0	7.3-10.8	10.3	8.7-11.8	12.5	9.9-15.0	16.1	13.2-18.9	<.001
Skateboard ramp	8147	20.2	16.9-23.4	21.4	17.9-24.9	24.1	21.1-27.2	28.6	24.1-33.2	27.7	23.3-32.2	0.013
Basketball court	8147	34.4	30.4-38.4	35.5	31.5-39.4	40.4	36.3-44.4	42.2	38.7-45.7	46.1	42.5-49.6	0.027
Swimming place	8147	39.4	36.3-42.5	40.7	37.5-43.9	44.9	40.9-48.8	43.0	38.8-47.2	41.4	37.0-45.7	0.100
Bike track	8147	22.8	19.6-26.0	24.9	21.0-28.8	27.1	23.5-30.7	25.9	22.3-29.4	19.1	16.4-21.8	0.001
There is nothing to do	8147	14.9	11.7-18.0	13.8	10.8-16.8	10.3	7.6-13.1	7.6	5.6-9.6	5.5	3.9-7.1	<.001

<sup>1</sup>Controlling for age, sex, ethnicity and urban locality

**Table 5: Negative things about where students live**

	n	NZDep1 (low deprivation)		NZDep2		NZDep3		NZDep4		NZDep5 (high deprivation)		p-value <sup>1</sup>
		%	CI	%	CI	%	CI	%	CI	%	CI	
Not enough footpaths	7967	9.1	6.9-11.3	8.0	5.6-10.3	7.9	6.1-9.7	6.5	4.7-8.3	6.4	4.9-7.9	0.238
Footpaths rough and broken	7967	6.0	4.9-7.1	5.9	4.5-7.3	6.9	5.3-8.6	10.9	9.2-12.5	13.4	11.8-15.1	<.001
Too much traffic	7967	9.2	6.7-11.6	11.0	8.6-13.3	11.0	7.7-14.3	12.7	10.3-15.1	12.0	9.9-14.0	0.239
Not enough street lighting	7967	11.9	9.4-14.4	11.3	9.7-12.9	13.2	11.1-15.4	13.8	11.8-15.7	15.0	13.0-17.1	0.287
Not enough bike lanes	7967	7.4	6.0-8.8	7.2	5.9-8.4	7.0	5.6-8.4	7.3	5.9-8.7	6.2	4.9-7.6	0.765
Too many dogs	7967	3.8	3.0-4.6	4.7	3.7-5.6	6.3	5.0-7.5	9.8	8.0-11.5	19.7	17.6-21.8	<.001
Don't feel safe	8230	10.7	8.9-12.5	13.4	11.7-15.1	17.7	15.4-20.0	25.5	22.5-28.4	33.9	30.5-37.2	<.001

<sup>1</sup>Controlling for age, sex, ethnicity and urban locality



## Conclusion

The comparison of the social and physical environments of high deprivation and low deprivation neighbourhoods reveals a mixed pattern of differences and similarities. Students living in high deprivation areas were just as likely to have done volunteer work in the past year or to belong to a church group as students living in less deprived areas. However, students living in high deprivation areas were less likely to report belonging to a sports group than students living in more affluent areas.

On the other hand, students living in high deprivation areas reported better access to recreational facilities in their neighbourhoods than students in more affluent areas, who were more likely to report that there was nothing to do where they lived. Though these findings are based on student perceptions, they are generally consistent with previous studies in New Zealand using more objective measures of neighbourhood facilities which found, for instance, that the mean travel time to sports and leisure centres were shorter in more deprived areas<sup>13, 14</sup>. Altogether, recreational facilities were better (or at least closer) in high deprivation areas, but participation in sports groups was less than in low deprivation areas. It appears that there are other barriers to young people participating in sports clubs that disproportionately affect young people living with more deprivation (e.g. membership fees, equipment costs, transportation).

It is of interest that there were no differences between high deprivation and low deprivation areas in student reports of too much traffic, poor street lighting, inadequate bike lanes, or inadequate foot paths. However, students in the most deprived areas were more likely to report that the footpaths were rough and broken, that there were too many dogs, and that they felt unsafe in their neighbourhoods than those in less deprived areas.

Students living in more deprived areas were less likely to report strong connections with people in their neighbourhoods. This is an important finding as social relationships are necessary for positive youth development, and a key feature of healthy neighbourhoods<sup>15, 16</sup>. While there has been little research examining the impact of neighbourhood relationships and youth health in New Zealand, international research suggests that strong neighbourhood connections can act as a buffer against poor outcomes for young people and adults living in impoverished areas<sup>17-19</sup>.

Taken in total, the data presented in this report suggest that young people living in more deprived areas participate in their communities as much as those in less deprived areas and actually have better access to recreational facilities. However, young people in more deprived areas report poorer social relationships with their neighbours and lower levels of safety than those in more affluent areas. It remains to explore how these differing social contexts may contribute to the poor health outcomes experienced by young people and their families living in deprived areas.



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