



Research and Evaluation Unit

2008 HSC

Year 10 In-depth Survey Report

July 2009

**new zealand
youth tobacco
monitor**

Executive Summary

The cost of tobacco use to the health system and New Zealand society has resulted in the Minister of Health naming smoking reduction as a health priority in recent years. Most adults who smoke started using tobacco during adolescence. Young people, therefore, are a key target group for tobacco control strategies and health promotion in New Zealand.

This report presents the key findings from the 2008 Year 10 In-depth Survey (YIS). The YIS is part of the New Zealand Youth Tobacco Monitor (NZYTM), a national survey of 14 and 15 year-olds' behaviours, and risk and protective factors associated with smoking uptake.

This report presents the key findings from the 2008 YIS, covering the following topics:

- Part 1: Current tobacco smoking behaviour
- Part 2: Attitudes and beliefs related to smoking
- Part 3: Smoking cessation experience ('current smokers' only)
- Part 4: Exposure to others' smoking
- Part 5: Smoking-related health promotion messages
- Part 6: Youth culture
- Part 7: Connectedness – parents, family, school and peers
- Part 8: Awareness of, and attitudes towards, the tobacco industry
- Part 9: Key comparisons between the 2006 and 2008 YIS
- Part 10: Summary of findings

Key findings are:

- Over two in five of participating students had 'ever smoked' a cigarette, even just on one or two puffs (44.0%)
- A smaller proportion of students in 2008 than in 2006 reported they had 'ever smoked' a cigarette, not even just a few puffs (44.0% and 49.7%, respectively)
- 'Current smokers' usually got their cigarettes from friends, from someone else who brought them or brought the cigarettes themselves (59.8%, 45.7% and 29.8%, respectively)
- Close to half of the 'current smokers' (47.0%) reported they wanted to stop smoking at the time of the survey
- Students reported their exposure to others' smoking behaviour:
 - 44.7% had other close friends who smoked, and 26.0% of their mother and 26.3% of their fathers smoked

- Around a third of the students (33.8%) reported at least one day a week when someone had smoked around them in their home. It was most likely to be their mother or father (46.1% and 36.6%, respectively)
- Just over a quarter (26.8%) reported that someone had smoked in their presence while travelling in a car or van in the seven days prior to the survey and almost two-thirds (63.0%) reported that people had smoked around them in places other than in their home.
- The majority of students believe cigarettes are harmful to their health and believe that smoking from other people's cigarettes is also harmful to their health (93.7% and 93.2%, respectively)
- There was an increase in the proportions of students between 2006 and 2008 who showed an intention to *definitely not* smoke:
 - a cigarette if offered one by their best friend (from 55.9% in 2006 to 62.9% in 2008)
 - in the year following the survey (from 52.8% in 2006 to 60.8% in 2008)
 - five years from the time of the survey (from 55.7% in 2006 to 64.5% in 2008).

Public policy in New Zealand has an important role in reinforcing the message that smoking is unacceptable. Surveys that capture detailed information about individuals can guide public health and policy direction, as well as measure the success of existing interventions. The YIS will be repeated as part of the NZYTM in 2010 to collect information on successes and areas for improvement in increasing cessation and reducing smoking initiation among youth in New Zealand. With understanding and adequate resources, the tobacco control community will be better equipped to achieve a primary prevention approach to smoking among youth.

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- Dr Edwards Richard (Senior Lecturer in Epidemiology, Department of Public Health, Wellington School of Medicine and Health Science, University of Otago).
- Sharon Ponniah (Former Advisor, Tobacco Research, QUIT Group and Ministry of Health Public Health Intelligence, New Zealand).
- Janine Paynter (Researcher/Policy Analyst, Action on Smoking and Health NZ).
- Dr Sue Walker, Chair from July 2007 to current (Manager, Research and Evaluation Unit, Health Sponsorship Council)
- Ingrid McDuff, from September 2006 to February 2009 (Intermediate Researcher, Research and Evaluation Unit, Health Sponsorship Council).
- Kay Haughey, from January 2008 to current (Project Manager, NZYTM, Health Sponsorship Council).

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- Dr Anthony Reeder (Director, Social and Behavioural Research in Cancer Group, Department of Preventive and Social Medicine, Dunedin School of Medicine, University of Otago).
- Dr Robert Scragg (Associate Professor in Epidemiology, Epidemiology and Biostatistics, School of Population Health, Faculty of Medical and Health Sciences, University of Auckland).
- Kate Garland, Chair from November 2006 to July 2007 (Project Manager, NZYTM, Health Sponsorship Council).
- Jehan Eltigi, from August to December 2007 (Project Manager, NZYTM, Health Sponsorship Council).

The 2008 YIS analyses and report writing were completed by Ingrid McDuff, with assistance from fellow HSC Research and Evaluation Unit team members, Bryony Cornforth-Camden and Ingrid van Aalst. The report was peer reviewed by Kay Haughey (Project Manager NZYTM, Research and Evaluation Unit, HSC).

Thanks to all school staff and students who participated in the YIS and the NZYTM. While we cannot name respondents, we are indebted to them for their time and contribution to this research, and building our understanding of New Zealand young people's attitudes towards, and experiences of, smoking behaviour, and lifestyles in general.

Survey fieldwork and dataset preparation for the 2008 YIS were carried out by ConsumerLink and Synovate Limited. The sampling framework for the YIS followed a two-stage cluster design used by the Global Youth Tobacco Survey (GYTS), and school selection was conducted with input from the Centers for Disease Control and Prevention (CDC) Global Tobacco Surveillance System team.

Contents

List of abbreviations

ASH (NZ)	Action on Smoking and Health (New Zealand)
CDC	Centers for Disease Control and Prevention
GYTS	Global Youth Tobacco Survey
HSC	Health Sponsorship Council
NZYTm	New Zealand Youth Tobacco Monitor (combines three national youth smoking surveys and includes the Year 10 In-depth Survey)
RCG	Research Coordinating Group
SES	Socioeconomic status
SHS	Second-hand smoke
WHO	World Health Organization
YIS	Year 10 In-depth Survey

Introduction and aims

This report presents the key findings from the 2008 YIS and includes information about youth smoking behaviour, and some of the risk and protective factors associated with smoking uptake.

The report describes the aims and methods of the research, and key findings (with analysis by young people's gender, ethnicity, socioeconomic status (SES), and smoking status where applicable), and briefly discusses the findings in the context of previous research and tobacco control in New Zealand.

The burden of tobacco use and youth uptake in New Zealand

Tobacco use is the leading preventable cause of premature death in New Zealand. Around five thousand deaths a year are attributable to tobacco-related illness, in a population of just over four million (Minister of Health, 2005b). The cost of tobacco use to the health system and New Zealand society has resulted in the Minister of Health naming smoking reduction as a national health priority (Minister of Health, 2005a; 2007).

Most adults who smoke take up the behaviour in their youth, before reaching the age of 18 years (Centers for Disease Control and Prevention, 1994). Young people, therefore, are a focus of tobacco control strategies and health promotion in New Zealand. The New Zealand Reducing Smoking Initiation framework has identified a range of interventions requiring action from the health, education and social sectors (Health Sponsorship Council, 2005).

Monitoring youth tobacco use

National adult smoking prevalence data are routinely collected in New Zealand through the Tobacco Use Survey (Ministry of Health, 2006c) and the Census of Population and Dwellings, with in-depth information about tobacco-related attitudes and exposure contributed by the Smokefree/Auahi Kore Adult Monitor (Health Sponsorship Council, 2006b).

Understanding how and why some young people start smoking is a key driver for research and evaluation in New Zealand and abroad. Youth tobacco use in New Zealand has been monitored for over a decade, both regionally (Reeder, Williams, McGee et al., 1999) and nationwide (Scragg, 2007). The ASH Year 10 cross-sectional survey achieves high student participation nationwide, and latest figures show that 14% of 14 and 15-year-old school students reported that they smoke at least daily, weekly or monthly (Scragg, 2007). Female students reported higher prevalence of smoking at least monthly than males (18% and 11%, respectively).

New Zealand Youth Tobacco Monitor

Information on youth smoking and tobacco control has traditionally been collected and managed by a range of agencies in New Zealand. In 2006, the NZYTM was established to bring three youth surveys together under one partnership: the Ministry of Health's contribution to the GYTS, the Action on Smoking and Health (ASH) Year 10 Snapshot, and HSC's In-depth Survey. The HSC's In-depth Survey (formerly known as the Youth Lifestyle Survey) has been conducted with students from a range of age groups for several years. The 2008 YIS uses many of the same questions, collecting data on a wider range of youth culture, lifestyle, and risk and protective factors related to smoking uptake. The YIS informs the HSC's Smokefree programme, and commitment to encouraging New Zealanders to adopt and maintain healthy lifestyles.

Research aims

The YIS was developed to improve the understanding of students' behaviour and circumstances, such as prevalent attitudes and beliefs related to smoking, exposure to role models who smoke, and second-hand smoke. Students were asked about their own experience with smoking behaviour, and this report includes detailed information on smoking frequency, along with access to tobacco and settings for smoking behaviour. The survey also aims to build understanding of the social environment of young people in New Zealand, particularly youth 'culture', sport and extra-curricular activities, media use and different levels of social connectedness.

The YIS collects prevalence data on the following topics:

- current tobacco smoking behaviour
- attitudes and beliefs related to smoking
- smoking cessation experience ('current smokers' only)
- exposure to others' smoking
- smoking-related health promotion messages
- youth culture and daily life
- connectedness – with peers, parents, family/whānau, and school
- awareness of, and attitudes towards, the tobacco industry.

This report provides an overview of the key results from the extensive data collected by the YIS. Additional analysis and reporting for a range of audiences will follow this report. Data tables and the 2008 YIS questionnaire are available for review on the HSC website.

Methodology

Questionnaire development

The YIS questionnaire was developed to collect high-quality, in-depth information using validated questions. It was also important to maintain comparability with previous surveys, such as the Youth Lifestyle Survey, and the GYTS. Participants select responses using a self-administered paper questionnaire booklet. No identifying information was collected from participants to ensure anonymity, however each questionnaire had a unique serial number for tracking during survey administration and data preparation.

Sample size and selection

Year 10 students (14 to 15-year-olds) represent a critical age group when smoking behaviour increases rapidly, and this group has been treated as the standard population to monitor youth smoking in New Zealand (Reeder et. al., 2000). All schools (state and private) with Year 10 students are eligible to participate in the YIS. Correspondence schools were excluded from the sample list, primarily to maintain student anonymity. Previous Youth Lifestyle Survey sampling involved a two-stage cluster procedure to select classes. The 2008 YIS also employed a two-stage cluster sample design, with random selection of participating classes. This method was consistent with the GYTS sample selection procedure, and produced a nationally representative sample of Year 10 students:

Stage One – School sample selection with probability proportional to school enrolment size

A list of all eligible schools with Year 10 students and their total Year 10 enrolments was sent to the CDC in the United States. The CDC selected a sample of schools with probability of selection proportional to roll size, using software developed to work with school-based samples.

Stage Two – Class selection as a systematic equal probability sample with a random start

The YIS surveys one Year 10 class from every sampled school that has consented to participate in the survey. All Year 10 classes from the sampled school are included in a list, from which one class is selected to participate using a random start. Classes were required to be mutually exclusive, so each eligible student has only one chance to participate and an equal opportunity of selection. All students in a selected Year 10 class were eligible to participate.

Recruiting schools

All 515 eligible schools in New Zealand were informed of the upcoming NZYTM through a letter sent to school principals. Those schools selected for the YIS sample list were sent a second letter and principals, or a nominated member of staff, were contacted by phone to explain the survey, its purpose and objectives. Consent forms were sent to schools to be completed and returned by facsimile. Schools that participated were given 'Smokefree Schools' classroom resources as a small token of appreciation.

Survey administration

The 2008 YIS was administered in schools during the third term of the school year (between 18 August and 26 September 2008) by experienced research fieldworkers from ConsumerLink.

Several regional training sessions were held for fieldworkers, using discussion and role-plays to build understanding of the survey administration guidelines. Fieldworkers managed the distribution and collection of questionnaires at their allocated schools. Responsibilities when administering the survey included:

- Ensuring adequate student attendance for the survey.
- Explaining the purpose, anonymity and voluntary nature of the survey to students.
- Establishing 'test' conditions in the classroom, and asking students to refrain from talking or interacting while completing the survey (including interaction with the teacher).
- Collecting completed surveys from students, and returning surveys to the research company.

Data analysis

Completed questionnaires for the YIS were sent to a research company (Synovate Limited) for collation, data entry and dataset production. Electronic datasets were submitted to a series of range and consistency checks, and 10% of the data entered by each operator were checked for accuracy.

Data were weighted to adjust for sample selection (school and class-level), non-response (school, class and student-level), and post-stratification of the sample population relative to the gender and ethnicity distribution of Year 10 students in New Zealand (Ministry of Education Information Officer, 2008). Students who had not given a response to two critical demographic questions (gender and ethnicity) were excluded from the analysis.

The YIS weighting factor (W) uses the following formula:

$$W = W1 * W2 * f1 * f2 * f3 * f4$$

Where:

- W1 = the inverse of the probability of selection for each school
W2 = the inverse of the probability of selection of each classroom within each selected school
f1 = a school-level, non-response adjustment calculated by school enrolment size category (small, medium, large); school non-response is calculated with each tertile
f2 = a class-level, non-response adjustment factor calculated by each school
f3 = a student-level, non-response adjustment factor calculated by each class
f4 = a post-stratification factor to adjust sample gender and ethnicity distribution to national Year 10 student population.

Analysis for the 2008 YIS was performed using the Intercooled STATA 9.2 statistical analysis package (StataCorp LP, 2006). Weighted proportion estimates, standard error and 95% confidence intervals were produced for each survey question and response category.

The following demographic variables were used to create sample sub-groups:

Gender Female, Male. Self-identified by students in the questionnaire.

Ethnicity Self-identified by students using a list from which they could select more than one ethnic group. Selections were then categorised using two methods:

1. Prioritisation: Classifying students into one of five ethnic groups: Māori; Pacific; Asian; Other; New Zealand European/Pākehā.
2. Māori and non-Māori: Comparison using the Ministry of Health method. (Ministry of Health, 2006b).

Socioeconomic Status (SES) The age of respondents meant it was not appropriate to ask about household income to establish SES. School decile was used as a proxy measure of each student's SES, with the decile scale reclassified as follows:

School decile 1 to 4	= 'low' SES
School decile 5 to 7	= 'mid' SES
School decile 8 to 10, 99 (private)	= 'high' SES

Smoking status Where applicable, analyses were performed by reported smoking status, using two categories:

'Never'	Students who had never smoked a cigarette, even just a few puffs.
'Current'	Students who smoke at least daily, weekly or monthly.

Results

Response rate

Of the 185 schools in the sample list, 149 participated in the 2008 YIS. One Year 10 class at each school participated in the survey, and 84.9% of students in the sample completed questionnaires for the survey (Table A). The YIS uses a response rate formula that estimates and accounts for non-response due to student absenteeism, and students who refuse to participate. Overall, the 2008 YIS achieved a 68.3% response rate.

Table A: Response rate - school, student and overall, YIS 2008

	School		Student		Overall response rate (%)
	Participation Sample (n)	Response rate (%)	Participation Sample (n)	Response rate (%)	
2008 YIS response rate	149 185	80.5	3036 3574	84.9	68.3

Sample characteristics

The survey collected information from 3,036 students. As shown in Table B below, the sample characteristics closely resemble those of the Year 10 student population in New Zealand.

Table B: Characteristics of 2008 YIS sample population

Demographic group	2008 YIS sample population		2008 National Year 10 population*
	Number (n)	Prevalence (%)	Prevalence (%)
Total	3036		
Sex			
Female	1494	49.2	48.4
Male	1542	50.8	51.6
Age			
13 years	23	0.8	
14 years	1860	61.3	
15 years	1115	36.7	
16 years or older	34	1.1	
No response	4	0.1	
Ethnicity (prioritised)			
Māori	763	25.1	22.0
Pacific	360	11.9	8.9
Asian	275	9.0	8.4
Other	194	6.4	7.8
NZ European/Pākehā	1444	47.6	52.9

* Source: Information Officer, Data Management Unit, New Zealand Ministry of Education, December 2008.

Reporting

The remainder of this section describes the YIS results in eight parts:

- Part 1: Current tobacco smoking behaviour
- Part 2: Attitudes and beliefs related to smoking
- Part 3: Smoking cessation experience ('current smokers' only)
- Part 4: Exposure to others' smoking
- Part 5: Smoking-related health promotion messages
- Part 6: Youth culture
- Part 7: Connectedness – parents, family, school and peers
- Part 8: Awareness of, and attitudes towards, the tobacco industry

An additional chapter has been included in this report to describe key changes between results from the 2008 YIS, and the YIS conducted in 2006. The top-line report for the earlier 2006 YIS can be found on the HSC website. The report concludes with a summary of key findings for the 2008 YIS survey and overall conclusions.

This report describes the results for all respondents, and where there is a significant difference compares responses by gender, ethnicity (at both an individual ethnic group level and at an aggregated level, Māori and non-Māori) and socioeconomic group to further understand priority and high-risk groups for smoking uptake.

The prevalence of responses for each survey question is reported using weighted proportions, with charts to visually depict results and key comparisons. The sample denominator for each sub-group is included in charts, along with 95% confidence interval bars. Differences between groups are deemed statistically significant when the 95% confidence intervals do not overlap, and only significant differences are described in the text.