Methods

Introduction

In 2008, the NSW Department of Health conducted the third New South Wales Secondary Schools Health Behaviours (SSHB) Survey. Previous SSHB surveys were conducted in 2002 and 2005, as part of the triennial Australian School Students Alcohol and Drugs (ASSAD) Survey, which began in 1984. This section describes the methods of data collection and analysis.

Sample selection

The target population was all students in Years 7-12 in New South Wales. Schools with fewer than 100 students were not included in the survey.

The survey used a 2-stage probability sampling procedure: schools were selected first; students within schools were selected second. Schools were stratified by the 3 sectors (Government, Catholic, and Independent) and randomly selected within each sector. The sampling procedure ensured the distribution of schools among the 3 sectors was reflected in the sample. Two samples were drawn: junior secondary (to Year 10); senior secondary (Years 11 and 12).

The target school sample was 126 secondary schools. To achieve this target, 190 schools were approached and 118 schools participated, giving an overall response rate of 62.1 per cent. This was similar to the overall response rate in 2005 of 62.3 per cent. The survey was conducted in the 2008 academic year.

Table 1: Acceptances by sample type, school type, and student year, New South Wales 2008

Acceptances School Type & Student Year	Total number of acceptances	Total number of schools approached	Accepted %
Government			
7-10	55	78	71%
11-12	22	34	65%
Total Goverment Schools	77	112	69%
Catholic			
7-10	13	24	54%
11-12	6	11	55%
Total Catholic Schools	19	35	54%
Independent			
7-10	13	28	46%
11-12	9	15	60%
Total Independent Schools	22	43	51%
Total			
Total Secondary Schools	118	190	62%

Survey procedure

The questionnaire and survey procedures were approved by the ethics committees of the Cancer Council Victoria, the NSW Department of Health and Cancer Institute NSW, and the NSW Department of Education. Letters of support were also obtained from the Catholic Education Office and the Association of Independent Schools of New South Wales.

Principals of selected schools were contacted by the Centre for Epidemiology and Research to obtain permission to conduct the survey at their schools. If a school refused, they were replaced by the school nearest to them within the same sector. The aim was to survey 80 students from each participating school. For junior secondary, 1 class of 20 students (and 20 replacements) were randomly selected from each of Years 7-10; for senior secondary, 2 classes of 20 students (or 40 students and 40 replacements) were randomly selected from each of Years 11-12. A brochure and consent form was sent to the parents of each selected student and replacement. Consent forms were returned to the school and the school held the list of students who had parental consent.

McNair Ingenuity Research Pty Ltd was contracted to administer the pencil-and-paper questionnaire on the school premises. If a student from the sample list was not present at the time of the survey, a student from the replacement list for that year was surveyed. Students from different years were surveyed together. Students answered the questionnaire anonymously.

Survey instrument

The survey instrument was a self-administered questionnaire, which included questions on alcohol, demographics, height and weight (including perception of body mass), injury, nutrition, physical activity, psychological distress, sedentary behaviour, substance use, sun protection (including sunburn experience and solarium use), and tobacco. The questionnaire is shown at the end of this report.

Coding and data entry

Questionnaires were coded and entered by the Centre for Behavioural Research in Cancer at The Cancer Council Victoria. After data entry, the data were cleaned and prepared for data analysis. Students with a large amount of missing data or whose responses were wildly exaggerated were removed from the data set before analyses started.

During analysis, respondents were not included for particular questions if they gave contradictory or multiple responses or did not answer the question. However, these respondents were included in the analysis of other questions if these had been validly completed. Cleaning of data relating to questions about the use of alcohol, tobacco, or other substances involved checking for inconsistencies in reported use across time periods (lifetime, year, month, and week). This cleaning procedure ensured maximum use of data and operated on the principle that the student's response about personal use in the most recent time period was accurate.

Data analyses and reporting

Analyses covered school students aged 12-17 years. To ensure that disproportionate sampling of any school type, age level, and gender grouping, did not bias the prevalence estimates, data were weighted to bring the achieved sample into line with the population distribution. In this report, prevalence estimates were based on these weighted data. Information about the enrolment details of male and female students in each age group at Government, Catholic and Independent schools was obtained from the Australian Bureau of Statistics.[1]

Data were analysed using SAS version 8.02.[2] The SURVEYFREQ procedure in SAS was used to analyse the data and calculate point estimates and 95 per cent confidence intervals for the estimates. The SURVEYFREQ procedure calculates standard errors adjusted for the design effect factor or DEFF (the variance for a non-random sample divided by the variance for a simple random sample). It uses the Taylor expansion method to estimate sampling errors of estimators based on the stratified random sample.[2]

In this report, analysis of change over time is compared in two ways, between base year and current year, and between previous year and current year. The base year for particular indicators may vary, as the survey instrument changes over time.

The 95 per cent confidence interval provides a range of values that should contain the actual value 95 per cent of the time. In general, a wider confidence interval reflects less certainty in the estimate for that indicator. The width of the confidence interval relates to the differing sample size for each indicator. A wider confidence interval reflects less certainty in the estimate. If confidence intervals do not overlap then the observed estimates are significantly different. If confidence intervals overlap slightly the observed estimates may be significantly different but further testing needs to be done to establish that significance.[2]

The Socio-Economic Indexes for Areas (SEIFA) describe the socioeconomic aspects of geographical areas in Australia, using a number of underlying demographic variables.[3,4] The SEIFA used for SSHB Survey data is the Index of Relative Socio-Economic Disadvantage, which groups values into 5 quintiles with quintile one being the least disadvantaged and quintile 5 being the most disadvantaged. The SEIFA was assigned using the student's postcode of residence.

The area health service was derived from the postcode of the student's residence.

Characteristics of final sample

A total of 7,874 students in Years 7-12 were surveyed during the academic year, of which 7,553 were aged 12-17 years; 65.4 per cent were from Government schools, 16.7 per cent were from Catholic schools, and 17.8 per cent were from Independent schools. The sex distribution of the final sample was 43.7 per cent male and 56.3 per cent female, which when weighted corresponds with the actual distribution of secondary school students in 2008 of 50.7 per cent male and 49.3 per cent female. Sixty-four per cent of respondents

were aged 12-15 years and 46.0 per cent were aged 16-17 years, which when weighted corresponds with an actual distribution of secondary school students in 2008 of 71.9 per cent aged 12-15 years and 28.1 per cent aged 16-17 years. Four per cent of respondents reported they were Aboriginal or Torres Strait Islander, which is similar to the actual national distribution of Aboriginal or Torres Strait Islander students in 2008 of 3.8 per cent.[5]

The main language spoken at home in the final sample was English (76.8 per cent), followed by English and another language (19.3 per cent), and another language only (3.9 per cent). Among respondents who spoke a language other than English at home, the most common languages were: Arabic languages (22.0 per cent), Chinese languages (16.0 per cent), Vietnamese (8.3 per cent), Indian languages (7.4 per cent), and Polynesian or other Oceanic languages (6.5 per cent).

References

1. Australian Bureau of Statistics. *Schools Australia 2008*. Catalogue no. 4221.0. Canberra: ABS, 2006.
2. SAS Institute. The SAS System for Windows version 8.02. Cary, NC: SAS Institute, 2003.
3. Australian Bureau of Statistics. Census of Population and Housing: Socio-Economic Indexes for Areas, Australia 2001. Catalogue no. 2039.0. Canberra: ABS, 2003.
4. Australian Bureau of Statistics. *2001 Census of Population and Housing: Socio-Economic Indexes for Areas*, Information Paper, Catalogue no. 2039.0. Canberra: Australian Bureau of Statistics, 2003.
5. Australian Bureau of Statistics. *Schools, Australia, Data Cubes, 2008*, Information Paper, Catalogue no. 2039.0. Canberra: Australian Bureau of Statistics, 2003. Catalogue no. 4221.0. Available online at www.abs.gov.au (accessed 29 Sept 2009).