CHAPTER 1

Introduction

In 1982, a small group of researchers from three countries, England, Finland and Norway, administered the first Health Behaviours in School-Aged Children (HBSC) survey. By 1985-86, 11 countries were involved in the survey and the World Health Organization, Regional Office for Europe had taken on a coordinating role. During the same time, Health Canada had also undertaken similar research regarding the health knowledge, attitudes and behaviours of young Canadians. Under the auspices of Health Canada, the European HBSC research team invited Canada to participate in the 1989-90 survey as an associate member. Since then, Canada has participated as a full member in two subsequent HBSC surveys conducted in 1993-94 and 1997-98. The HBSC surveys are now administered every four years to a representative sample of 11, 13 and 15 year olds in the participating countries. Three countries participated in the first survey and 28 in the 1997-98 survey. Since the core questions on the HBSC survey have remained essentially the same, this seemed to be an opportune time to examine trends in the health of Canadian youth over three surveys conducted between 1990 and 1998. The next HBSC survey is planned for the 2001-02 school year.

The HBSC survey effectively represents "the population health" approach taken by Health Canada in its efforts to integrate all factors and resources associated with health. The "determinants of health" incorporated in "the population health" and the HBSC research group's perspective include factors outside the health care system that affect the health of youth. These include the home, the school, the social environment, individual health practices and gender. A full range of individual, social and environmental factors are considered both in defining population health status and in developing programming and policies to improve health (Health Canada, 1994, 1996).

Another important dimension of both Health Canada's "population health" approach and the theoretical framework that guides the design of the HBSC questionnaires is that both view adolescence as a developmental process. Ideally then, the research should follow a sample of young adolescents as they mature through their teen years; however, for both financial and logistical reasons, this was impossible. In order to simulate this developmental process a quasi-longitudinal study was implemented. Three age groups were identified (11, 13 and 15 year olds) as representative of critical periods of adolescent development and samples of these age groups were surveyed every four years.

There have been numerous initiatives undertaken in Canada over the past few years designed to promote the health and well-being of young people, for example, anti-smoking, active lifestyle and healthy eating programs. The findings in this report provide a very general indication of the success of some of these initiatives.

The main purpose of this report is to examine change and stability in the health of Canadian youth between 1990 and 1998. Our social fabric continues to shift as gender roles evolve and the makeup and structure of the family changes. More women have become full participants in the labour market with increasing responsibility and careers, creating both role models and expectations for young women. Single-parent and blended families have become more common with complications for parent-child relationships.

Unemployment has been particularly high for youth during this decade creating uncertainty and confusion around school and career choices. The gap between the well-off and the poor has grown and poverty and homelessness have become increasingly urgent social problems. Challenges associated with the assimilation of immigrant families have increased: over one quarter of youth aged 15 to 24 in Toronto and Vancouver were born outside Canada. All these factors produce strains on our youth as they go through the critical teen years. These findings are not designed to assess the impact of specific social changes on the health of youth but only to note whether changes in the outcomes and determinants of their health have taken place.

One of the great strengths of the HBSC cross-country collaboration is the opportunity it provides to compare and contrast youth responses to the same questions from country to country. To take advantage of this opportunity, we have compared Canadian findings to the findings of ten countries on selected items. The countries compared have similar political or social systems and comparable data files. They were also selected based on the presence or absence of certain health and social policies. Poland was selected to represent those Eastern European countries that are undergoing rapid social and political changes. Selected age/grade findings from the following countries have been incorporated into the report: the United States, England, France, Germany, Sweden, Denmark, Norway, Greece, Poland and Switzerland.

The Canadian findings for the first two surveys have been released in two reports; both compare Canadian results with those obtained from other countries. The first of these reports—*The Health of Canada's Youth* (King & Coles, 1992)—was published by Health Canada and focussed on Canadian findings compared with those from ten other countries and their relevance for Canadian policies and programs. The second report, *The Health of Youth* (King et al., 1996), was published by WHO-Europe. This report took a much more general orientation to the findings from 23 countries. Subsequent to the release of this report the Canadian findings for the third survey will be included in a comparative format with those from more than 25 countries. The report will be coordinated through the University of Bielefeld and published by WHO-Europe.

The Questionnaire

The HBSC basic questionnaire is administered to students aged 11, 13 and 15 in school classrooms. In Canada most of these students are in Grades 6, 8 and 10 and their equivalents in Quebec. The basic questionnaire may be augmented to include groups of questions focussed on particular issues (used by some but not all countries) and country-specific questions. The questionnaire is developed in a collaborative fashion by HBSC researchers and then ratified at biannual meetings. A strong effort has been made to retain a core of items on each survey from 1990 to 1998 to facilitate the monitoring of trends. The HBSC researchers come from a variety of disciplines and theoretical perspectives, but they have developed a consensus around the two main components of the research orientation. The first is to incorporate a developmental perspective in order to examine the changes in health attitudes and behaviours from the onset of puberty to the middle years of adolescence.

The second is to identify health indicators and the factors that may influence them. Indicators include behaviours such as smoking, alcohol use, and level of physical activity; psychosocial states such as happiness and loneliness; and physical problems such as headaches and backaches. Influencing factors or determinants include the school, parents, peers and individual characteristics. Indicators and determinants may interact and therefore be interchangeable in analyses.

For each of the three Canadian surveys, additional items were added to the survey. Items related to self-esteem and relationships with parents were added to the Grade 6, 8 and 10 surveys, and items on drug use were added to the Grade 10 survey. Additional items on bullying behaviour were added to the 1998 survey.

The surveys were administered to school classes identified through systematic sampling procedures and were designed to be administered during one 40-minute class. While there were one or two open-ended questions, almost all of the questions could be answered by checking off a response alternative. The respondents were guaranteed anonymity and the teacher administrators were asked to closely follow a specific set of instructions regarding administration.

It must be remembered that there are fundamental differences among HBSC countries both with regard to language and other aspects of culture. While this is most obviously manifested in dietary practices, it also has implications for concepts such as bullying, where it is difficult to find equivalent terminology. Therefore, compromises were required that influenced the appropriateness of some items for all countries. There were also compromises required to balance the importance of using the same items in each survey to enable the monitoring of change, and the need to improve the quality of certain core items. Wording has been changed on certain core items to improve their validity and reliability. Such instances are noted in the text.

The Sample

The sampling procedure employed for the first two Canadian surveys was based on a systematic single cluster procedure with the cluster being the school class. The number of Grade 6, 8 and 10 classes was estimated for Canadian schools and a list was prepared. The list was systematically sampled assuming 25 students per class. Approximately 80 classes per grade were selected to reach the targeted sample size of 2000 students per grade level.

There were differences in the sampling procedures employed across countries reflecting differences in school structure and financial resources. However, the basic purpose was essentially the same: that is, to target an age group that could be compared within and across countries. For some countries, where age at first entry into school and grade promotion were

standardized, almost all the targeted age groups could be found in the same grades; for others, where substantial numbers of students were held back for academic reasons, the targeted age groups could be spread over two or even three grades. The Canadian samples for the first two surveys were drawn from Grades 6, 8 and 10 (6e année, 2e secondaire and 4e secondaire in Quebec) to approximate the age requirements. The older and younger subjects were removed from each grade sample to produce approximate mean ages of 11.5, 13.5 and 15.5 with a range of six months for 90 percent of the sample (the other 10%, ± 9 mos). The optimum time of the year to obtain the appropriate mean age to sample in most Canadian schools was December/January. For the 1990 and 1994 surveys this approach to the sampling meant that students who were age eligible but not in the appropriate grade were not included in the sampling framework.

For the 1998 Canadian survey the same systematic cluster sampling procedure was used, but five grades were surveyed to more accurately represent the three age groups. Only those students born between January 1 and December 31 in 1982, 1984 and 1986 were selected to be part of the HBSC database. In order to standardize the sampling procedure used for the three surveys, a special sub-sample was drawn from the 1998 data file employing the same criteria used for the 1990 and 1994 samples.

Ideally the surveys should have been conducted at the same time in the school year for maximum comparability, but unfortunately, the 1990 survey was conducted later in the school year than the other two. Therefore, although the students in the 1990 survey were in the equivalent grade to those from the other two surveys, they were two to three months older at the time the survey was administered. This difference in administration time influences certain behaviours such as smoking and drug use, and leisure time activities (i.e., in winter versus spring) and must be acknowledged when interpreting the findings.

In 1998 the sample was drawn to represent students from Grades 6, 7, 8, 9 and 10 (and the Quebec equivalents). Students who had been held back could then be represented in the basic HBSC data file (except for the Grade 5 students, of course). The 1998 sampling procedures were agreed upon by all the participating countries (but not necessarily implemented) in order to make the data files age specific. In this report this grade-based data file is employed to simulate longitudinal patterns through Grades 6, 7, 8, 9 and 10 on selected measures.

In summary then, the 1998 data file has been adjusted to make it age-grade compatible with the 1990 and 1994 survey data files. Therefore, Canadian figures from the 1998 file in this trends analysis report may differ from figures from the 1998 Canadian files used in international comparisons. The 1998 Grade 6, 8 and 10 numbers for the three survey comparisons may differ slightly from the 1998 Grade 6, 8 and 10 figures used in the Grade 6, 7, 8, 9 and 10 1998 comparisons. Tables and figures containing only Canadian data compare students by grade and use grade designations (Grades 6, 8 and 10). International comparisons from the 1998 survey compare students by age and use age designations (11, 13 and 15). Table 1.1 presents the numbers of students on which each of the three sets of analyses is based.

Table 1.1

Sample sizes (Canadian data files)

Grade/Age	Canadian Trends Data 1990 (by grade)	1994 (by grade)	1998	Five-Grade Analysis (by grade)	International Data Set (by age)
Grade 6/ 11 year olds	1939	2289	1963	2109	1856
Grade 7				2057	
Grade 8 / 13 year olds	1743	2250	2041	2227	2308
Grade 9				2363	
Grade 10/ 15 year olds	1883	2219	2255	2524	2403

Ten countries were selected from the 28 that were involved in the 1998 HBSC survey to compare with Canada. Countries were selected because they had a number of structural factors in common with Canada or had policies and programs in place that are of interest. It is difficult to make the samples of students comparable from country to country. Not only are there structural differences in the school systems, but the age and time of entry into school can differ. For example, in some countries the age and time of entry into school is based on an age definition of January to December, while in other countries it may be from August to July. This means that it is impossible to pick one point in the school year when surveys could be administered to insure that the mean age of students from each country is essentially the same. Details on the sampling procedures employed in each of the ten countries we have selected for comparative purposes follows. Table 1.2 indicates the sample size for each of these countries and Figure 1.2 outlines the general systems and indicates the grades from which their samples were drawn.

Denmark: The sample was selected from those grades where students born in 1982, 1984 and 1986 were present. Since the survey was conducted in the Spring, the average age of the respondents was slightly higher than the optimum.

England: Since there is very little repeating of grades in the English school system, it was decided to draw the 11-year-old sample from those in year 7 of school, the 13-year-old sample from those in year 9, and the 15-year-old sample from year 11. The survey was administered early in the school year to produce the optimum average of ages.

France: The French sample was drawn from the regions of Toulouse Midi-Pyrénées (in the South-west) and Nancy-Lorraine (in the Northeast). The sample was selected from those grades where students born in 1982, 1984 and 1986 were present. Since the survey was administered just prior to and after January 1st, the average age of the sample was optimum, that is, 11.5, 13.5 and 15.5.

Germany: The German sample was drawn from one large region of Germany, Nordrhein-Westfalen. The sample was drawn from the three appropriate grades; the first, third and fifth years of secondary stage one. The survey was conducted just before and after January 1st and should have produced the optimum average ages. However, because the age at school entry differs from the norm, the average age of the German sample is slightly less than optimum. The combination of age of entry, that is, students were a little older at entry to school in comparison with equivalent grades in most other countries, and the time of administration of the instruments required that the German sample be drawn from a grade earlier than those drawn from the other selected countries.

Greece: The students for the Greek sample were drawn from three distinct grades, primary 2,

Table 1.2

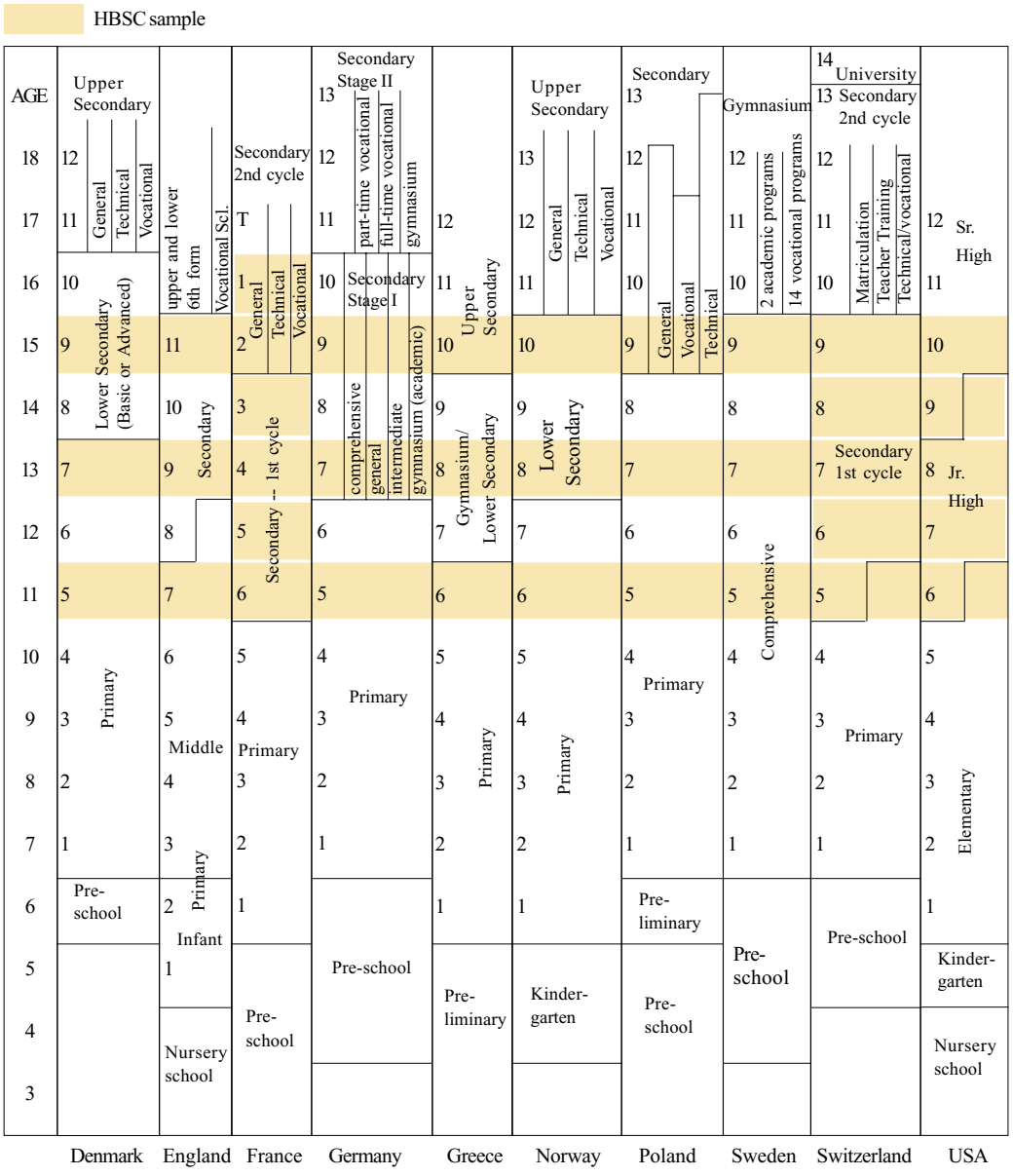
Number of respondents by grade and country, 1998

	CAN	DEN	ENG	FRA	GER	GRE	NOR	POL	SWE	SWI	USA
Grade 6*	1856	1713	2279	1467	1580	1662	1733	1627	1294	1668	1558
Grade 8*	2308	1807	2222	1421	1613	1315	1623	1598	1357	2020	1803
Grade 10*	2403	1546	1872	1245	1599	1322	1670	1636	1151	1832	1808

* These grade categories will vary across countries. See Figure 1.1 for details.

Figure 1.1

Characteristics of education systems in comparison countries and grades/forms from which samples were drawn



junior 2 and the first year of high school. The survey was conducted in the early Spring and, therefore, the students are slightly older than average.

Poland: The sample was selected from those grades where students born in 1982, 1984 and 1986 were present. Since the survey was conducted in the Spring, the average age of the respondents was slightly higher than the optimum.

The *Swedish* and *Norwegian* samples were drawn from the three grades where the appropriate age groups were present. There is virtually no grade repetition in Sweden and Norway and school entry is based on the January to December year and, therefore, the December administration of the surveys produced optimum mean ages.

Switzerland: The sample was selected from those grades where students born in 1982, 1984 and 1986 were present. The survey was conducted in Spring and, therefore, the students are a little older than average.

The United States of America: The sample was selected from those grades where students born in 1982, 1984 and 1986 were present. Since the study was conducted in the Spring the students were a little older than average.

Presentation of Findings

Most of the findings are presented in bar graphs according to grade group, gender and survey year. It was not possible to present all the survey findings in this report; therefore, it was necessary to select only one response alternative or combination of response alternatives to represent a theme. The response alternative could be the proportion of respondents who agreed with a particular statement, such as "Have you ever tasted an alcoholic drink such as beer, wine, or liquor?" or who stated, "often" or "always" to a question such as "How often do you feel left out of things?" or "most" or "all" to a question such as "My friends smoke cigarettes". As a result a great deal of important data has had to be excluded. Where appropriate these missing data are noted; however, the tables including all the responses are available from the Health Canada website: *http://www.hc-sc.gc.ca/hppb/childhood-youth/spsc.html.*

The findings are typically introduced with a brief review of relevant literature. Since it is possible to confirm findings from previous research with further analysis of findings from this study, additional information is provided regarding the relationship between the variable in question, for example, marijuana use, and other factors. This information is provided in the form of Spearman Coefficient Correlations. The actual correlation is usually presented if it is above 0.15 in magnitude. The correlations are based on the 1998 survey data file.

Composite Measures

Five composite measures or scales have been developed to facilitate examination of relationships between broad concepts such as students' relationship with their parents and variables such as depression, drug use and bullying behaviour. Each of the measures and the items that make them up are presented below.

1) *Relationship with Parents*: My parent(s) understand me; I have a happy home life; My parent(s) expect too much of me; My parent(s) trust me; I have a lot of arguments with my parent(s); There are times I would like to leave home; What my parent(s) think of me is important.
2) *Adjustment to School*: In our school the students take part in making rules; The rules in this school are fair; Our school is a nice place to be; I feel I belong in this school; I am encouraged to express my views in my class(es); Our teachers treat us fairly; When I need extra help, I can get it; My teachers are interested in me as a person; The students in my class(es) enjoy being together; Most of the students in my classes are kind and helpful; Other students accept me as I am.
3) *Self-Esteem*: I like myself; I have trouble making decisions; I am often sorry for the things I do; I have confidence in myself (am sure of myself); I often wish I were someone else; I would change how I look if I could.
4) *Social Integration*: How easy is it for you to talk about things that really bother you with friend(s) of the same sex?; How easy is it for you to talk about things that really bother you with friend(s) of the opposite sex?; At present, how many close friends do you have?; Is it easy or difficult for you to make new friends?; How often do you spend time with friends right after school?
5) *Diet:* frequency of eating fruit, raw vegetables, cooked vegetables, whole wheat or rye bread, low

fat milk, soft drinks, candy/ chocolate bars, potato chips and french fries.

The scales are designed to be relative measures and not tools to definitively measure all aspects of the concept. For example, an individual who has a low score on the diet measure has a generally poorer diet compared with an individual who has a higher score. A low score does not necessarily indicate that the individual has a poor diet.

As previously stated, it was not possible to present the vast array of findings from all the countries that participated in the three HBSC surveys and ten countries were selected to compare with Canada on the 1998 survey findings. Seventeen comparative figures have been produced for this report, in which one of the three grade groups was selected for each cross-country comparison. In doing this an effort was made to represent the three age groups as well as significant themes.

Although an attempt was made to select items that deal with concepts equivalent across countries, it was also necessary to incorporate concepts that may not have the same cultural and linguistic interpretation. Concepts such as bullying, depression and loneliness were selected because they are important health issues and it is possible to learn much from how these issues are manifested in other cultures. Some items, such as those about eating patterns, of necessity had to be modified across countries to reflect fundamental cultural differences.

The reader must be cautious when comparing data across countries and across time periods. The sampling procedure was designed to produce confidence limits of plus or minus three at a 95 percent probability level; that is to say, when the sample size was 1536 students 19 out of 20 times the percent presented in a figure or table will fall plus or minus 3 percentage points around the number presented. However, several design factors including the cluster sampling procedure, difference in school systems, and cultural and language differences must also be considered in any comparative analysis. Since the school class was the cluster employed in the sampling procedure, it is possible that those who make up a cluster may have a similar set of behaviours or attitudes; for example, they may have access to the same cafeteria food or share a view about a teacher or their school. This is called the design effect (DE). On the other hand, smoking behaviour or patterns of headaches or medication use are less likely to be shared by classmates. Therefore, one can give greater weight to smaller differences on certain measures that are not likely to be influenced by students being drawn from the same class. The confidence limits were based on a maximum DE of 1.44 and almost all the Canadian survey items had a DE of less than 1.44. School-related and time-spent-with-friends items were the most likely to exceed this DE figure. When comparing countries across age groups and gender, not much weight should be attached to differences of 5 percentage points or less. Since the Canadian sample was relatively large, a difference of 4 percent is probably a safe basis for comparisons over time and between genders. However, small differences that are clearly part of a trend are noted. While a five-point differential is a useful guideline when considering cross-country comparisons, the same caution regarding the influence of the cluster must be maintained.

Tables 1.3 and 1.4 are designed to help the reader interpret the correlations that appear in the text. The correlations (Spearman rank-order correlations) are represented by symbols (○ = .15 to .24; ◌ = .25 to .34; ◌ = .35 to .44, and ● = .45 or greater). Table 1.3 indicates the actual responses that produced the correlation of .53 (●) that is shown in Figure 10.10. It can be seen that 82 percent of the daily smokers had used marijuana three or more times compared with only 18 percent of the non-smokers. This correlation can be viewed as moderately strong. A perfect correlation (+1.00) on this item would have all the daily smokers using marijuana three or more

times and none of the non-smokers using marijuana. The numbers in the other cells would be in proportion. None of the correlations presented in the report is over 0.7.

Table 1.4 indicates the actual responses that produced the correlation of .22 (○) that is shown in Figure 10.10. It can be seen that 57 percent of those who did not like school had smoked marijuana three or more times compared with only 22 percent of those who liked school a lot. This can be viewed as a moderate correlation. The age differences of the samples and the time of the year at which the surveys were administered also should have some bearing on how the findings are interpreted. In the section on sampling, some important differences across countries that cannot be satisfactorily adjusted for were noted. In the case of the Canadian surveys, the first survey was conducted a little later in the year than the other two. It is expected that this would influence seasonal activity and behaviour such as smoking and drug use that proportionately increase through the school year.

Table 1.3

Relationship between smoking and marijuana use, Grade 10 boys

		Smoking			
		Do not smoke	Less than weekly	Every week	Daily
Marijuana use	Never	526 71%	24 33%	8 20%	11 7%
	Once or twice	85 11%	14 19%	12 30%	17 11%
	Three or more times	133 18%	35 48%	20 50%	129 82%

Table 1.4

Relationship between attitude toward school and marijuana use, Grade 10 boys

		How do you feel about school			
		Like a lot	Like a bit	Don't like very much	Don't like at all
Marijuana use	Never	113 68%	319 61%	9 7%	38 37%
	Once or twice	17 10%	69 13%	36 27%	6 6%
	Three or more times	37 22%	132 25%	90 67%	59 57%

Organization of the Report

The report is organized around the broad themes that are part of the population health perspective. The first three chapters deal with the social determinants of youth health—the school, the home and the peer group—and are designed to illustrate the importance of positive relationships to both physical and mental health. Chapter 5 introduces factors that enable young people to cope with the strains of adolescence, such as high self-esteem, as well as noting the problems that arise when effective coping skills are not present. Chapter 6 deals with general health concerns and it is followed by four chapters that present findings on behavioural risks—eating patterns and dental care, physical and leisure activity, injuries and substance use. The report concludes with a brief chapter on the implications of the findings.

CHAPTER 2

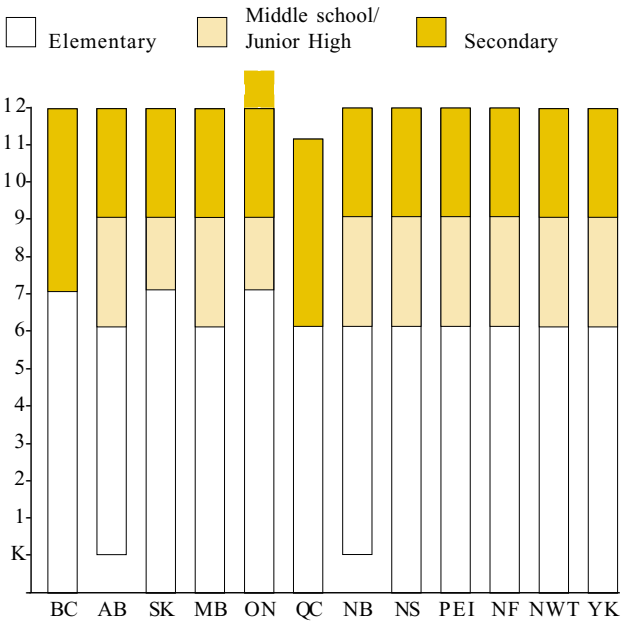
The School Experience

Adolescents spend much of their daily life in school settings. An increasing body of research reinforces the contention that experiences at school have a profound influence on the social and emotional development of young people. In particular, their health behaviours and their view of themselves have been shown to be related to their life in school (Rudd and Walsh, 1993; Resnick et al., 1993). For many young people school is a richly satisfying experience. Their positive attitude toward school is constantly reinforced by teachers' recognition of their achievement and by their involvement in the social life that centres around the school. Others see school as a threatening place where unreasonably high expectations create an environment of criticism and exclusion. Some gradually disengage from school life. Recent research has demonstrated that a process of disengagement from school typically leads to involvement with other youth who share similar feelings and values and ultimately share health-risk behaviours (Connop and King, 1999).

Canada does not have a single education system; each province and territory is entitled to establish its own formal curriculum and school organization (see Figure 2.1). It is useful to note that Grade 6 and Grade 10 each tend to be similar in structure across the country, and students in these grades are exposed to similar content from province to province. Students in Grade 6 classes remain together most of the time with the same teacher. Grade 10 students select their courses and have individual timetables; teachers and class composition vary according to subjects taken. Usually there are two or three types of courses offered, one type which leads to post-secondary education and the other directly to work. Across the country, school organization varies most at the Grade 8 level. Many provinces have a junior high system covering Grades 7 to 9. Junior high schools are often in the same facility, with senior

Figure 2.1

The organizational structure of Canadian schools, by province/territory



highs covering Grades 10 to 12. Provincial/territorial systems extend to Grade 12 except in Quebec where there is a Grade 1 to 6 elementary panel and a 7 to 11 secondary panel. In Ontario, where secondary school may be 4 or 5 years, there are middle schools and junior schools and mixtures in between. In summary then, Canadian Grades 6s and 10s are very similar in organizational structure, but the organization for instruction of Grade 8 across the country differs.

In the last few years, the Council of Ministers of Education, Canada (CMEC) has taken a pro-active role in developing common curricula across the country. CMEC has also introduced a Student Achievement Indicators Program (SAIP) which incorporates national testing of students in English, Math and Science at Grades 3, 6 and 9. Canada has also participated in international testing programs in Math and Science. The emphasis on standardized testing and common curricula in a comparative context both across countries and provinces has been the impetus for curriculum development initiatives that emphasize measurable outcomes. Destination-based courses (work, college, university) are also a natural outgrowth of this movement.

There are not only fundamental differences in structure across countries but also differences in the nature of student and teacher interaction and the use of failing grades (King et al., 1996). In countries such as France, Belgium and Hungary substantial numbers of students are held back a year if their work is judged to be below grade level. In countries such as Norway, Sweden and Denmark virtually every student moves forward from grade to grade with his/her peers until at least the end of Grade 10. Very few differences in student satisfaction and adjustment to school corresponding to these structural and teaching/learning differences were found, but there were differences worth noting. For example, in systems using more authoritarian, teacher-directed instruction methods, students were more likely to be dissatisfied with school.

In this chapter, changes since 1990 in student perceptions of their achievement, their school aspirations, their satisfaction with school including relationships with teachers and other students, the extent to which their parents are involved with their school, the amount of pressure to achieve the students feel, and bullying behaviour are examined. Findings from the 1998 survey related to skipping classes, patterns of bullying behaviour and safety at school are also included.

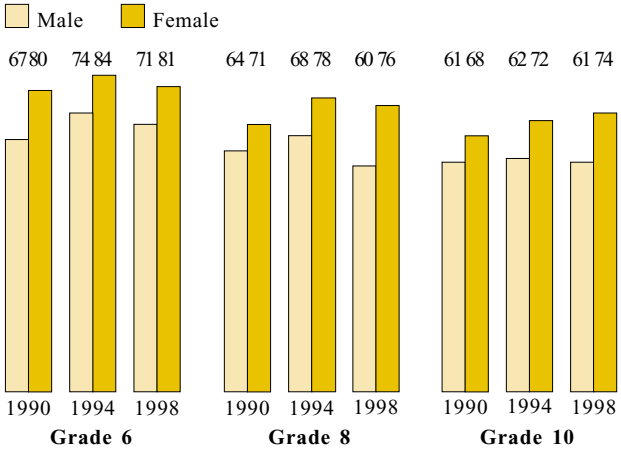
Achievement

When students' perceptions of their school achievement across countries on the 1994 survey were compared, dramatic differences from country to country were found (King et al., 1996). The students were given four response choices to the question "In your opinion what do your teachers think about your work in school compared to your classmates' work?" The alternatives were "very good", "good", "average" and "below average". It was assumed that students would respond inapproximately equal proportions in each of the four categories, but this happened in very few countries. Canadian students were conspicuous in the high proportions of respondents who placed themselves in the "good" and "very good" categories (85% of girls and 74% of boys in Grade 6). Countries such as Germany and Austria where streaming of students begins early and leads to specialized programs in secondary schools tend to have much smaller proportions of students who categorize their achievement as "good" and "very good" than countries, such as Canada and Denmark, that delay streaming .

Figure 2.2 illustrates that very little change has occurred over the last ten years in students' responses to this question. Gender differences are quite pronounced with substantially more girls than boys at each grade level placing themselves in the "good" and "very good" categories. Do these findings correspond with actual gender differences in achievement as evidenced by school marks and performance on standardized tests? The answer to this question is a qualified yes. Certainly, on school marks girls score consistently higher than boys in almost all subjects (King and Peart, 1994). Gender differences on standardized tests are far less than those on actual school marks and are somewhat inconsistent with student perceptions of their achievement. On the Third International Mathematics and Science Study Grade 8 Mathematics Test, girls

Figure 2.2

Students who indicated their teachers thought their school work compared to that of others was "good" or "very good" (%)



scored higher on average than boys on three of the six subtests and the same on one of them (Robitaille et al., 1996). On the Grade 8 Science Test boys scored higher than girls on 5 of the 7 subtests (Robitaille et al., 1996). On the CMEC School Achievement Indicators Writing and Reading Test Program in 1998 both 13- and 16-year-old girls demonstrated considerably better achievement than did boys (Council of Ministers of Education, 1998).

Unfortunately, schools do not reward students equally. Marks are used to differentiate among them and ultimately determine who will be eligible to attend post-secondary education and reap the status and economic rewards that typically result. The loss of opportunity that success in school can provide is reflected in a distancing from both school and home. Figure 2.3 shows the relationship between school achievement as perceived by the students and other factors drawn from the survey. There were very few variables that correlated over 0.15 with perceptions of their achievement for Grade 6 students, but the correlations were more numerous and stronger for students proceeding from Grade 8 to Grade 10. At all grade levels there was a substantial correlation between perceived achievement and satisfaction with school. This was also the case for students' relationship with their parents; that is to say, the higher students' perceived their achievement the better the relationship with their parents and satisfaction with school. Health-risk behaviour was also moderately correlated with perceived achievement in Grades 8 and 10; that is, marijuana use, smoking and having been drunk as well as associating with friends who did these things tended to be linked to low achievement. Living with both parents seemed to relate positively to perceived school achievement but only for respondents in Grade 8. Students with lower self-esteem were more likely to perceive their school achievement as being low.

Figure 2.3

Factors associated with students' perceptions of their school achievement

Satisfaction with School

Adjustment to school and school life became a priority for the HBSC research team for the 1994 and 1998 surveys. The 1990 survey did not treat the relationship between school and health in any depth.

Figure 2.4 shows that at each grade level far more girls than boys indicated that they liked school a lot. Inexplicably more students were satisfied with school in 1994 than in the other two surveys. The proportion of students who indicated they liked school a lot was greatest in Grade 6 and leveled off through Grades 8, 9 and 10. This is consistent with the shift from a more student-oriented (one teacher, one class) focus in Grade 6 to a more subject-oriented focus in junior high and high school, where students have different teachers for each subject.

Figure 2.4

Students who liked school "a lot" (%)

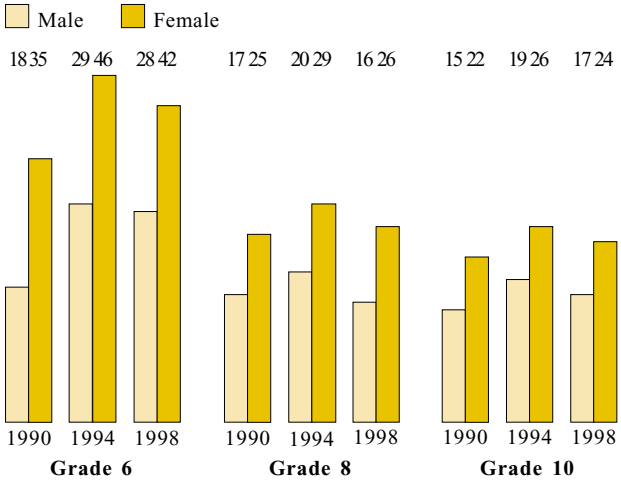
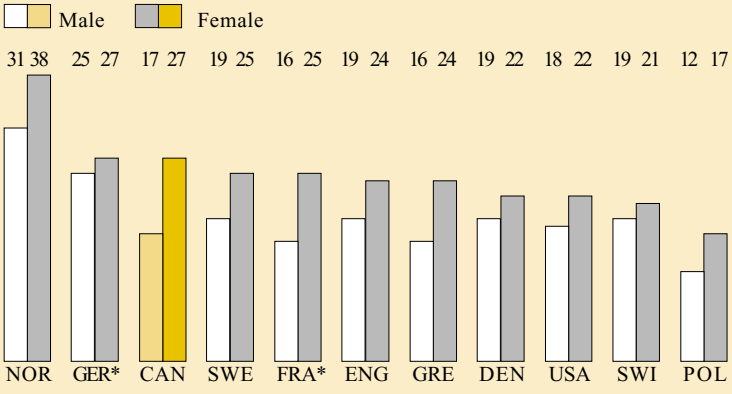


Figure 2.5

Thirteen year olds who liked school "a lot" by country, 1998 (%)



**France and Germany are represented by regions: see Chapter 1 for details.*

In all these countries girls were more likely to enjoy school. Most of the countries had similar proportions of students who liked school a lot, although Norwegian students were more likely to feel this way and Polish students less so. There appears to be little difference in this measure across countries that is related to school organization or teaching/ learning approaches (King et al., 1996).

Figure 2.6

Students who agreed with the statement "I feel I belong in this school" (%)

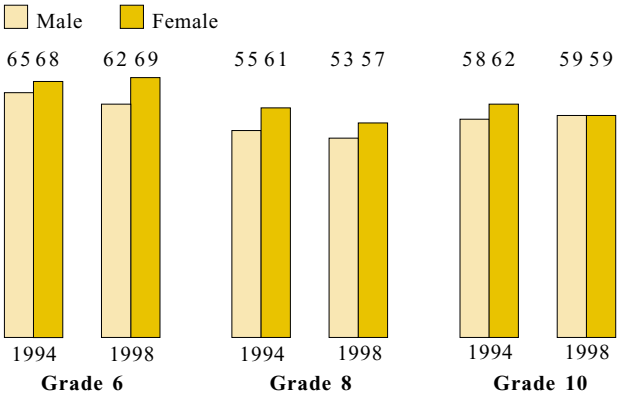
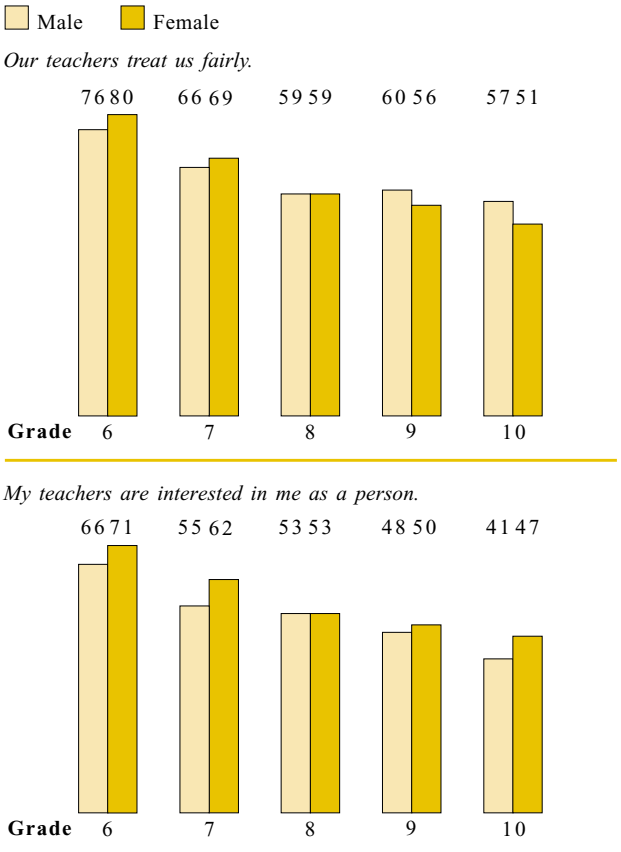


Figure 2.7

Students who agreed with statements about their teachers, 1998 (%)



For the 1994 and 1998 surveys additional items were included about general satisfaction with school, including "Our school is a nice place to be", "The rules in this school are fair", and the one that is summarized in Figure 2.6, "I feel I belong in this school". These items deal with different aspects of school life but tend to be highly correlated with each other. Well over half the students agreed with the statement "I feel I belong in this school", with slightly more girls than boys taking this point of view, except for Grade 10 students on the 1998 survey. There was little change over the two surveys in student responses to this item.

Relationship with Teachers

It is a difficult challenge for teachers to contribute to differentiating among students for university entrance and still make all students feel accepted and valued as individuals. Nevertheless, the degree to which teachers are able to create a supportive classroom atmosphere is fundamental to student satisfaction with school (Samdal et al., 1998). Four questions were asked of students regarding their relationship with their teachers. The wording differs slightly between the 1994 and the 1998 survey items; therefore we have presented only the 1998 findings for two of the questions (Figure 2.7).

The vast majority of students said that when they needed extra help they could get it from their teachers. There is little difference in gender response and across grades. This set of responses is somewhat surprising because for the two teacher-related statements, "My teachers treat me fairly" and "My teacher is interested in me as a person", the proportion of positive responses declined as the students advanced through the grades.

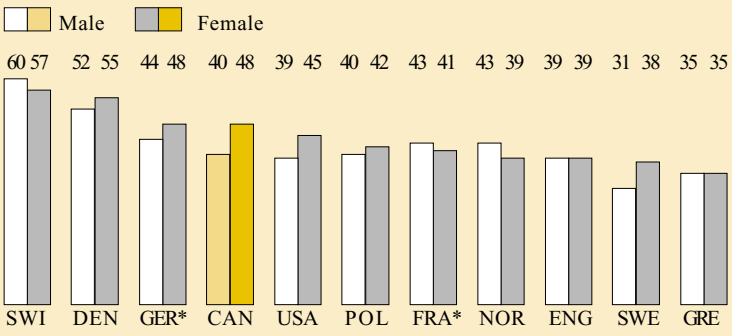
Clearly students feel that their elementary school teachers demonstrate a greater interest in them as individuals than their secondary school teachers. As teachers become more concerned with particular subjects and their students' achievement in them, and, of course, teach more students per day, they seem to be less able to provide the time and attention students need to feel that their particular needs are being met. Girls are slightly more likely than boys to feel their teachers are interested in them as a person.

Relationships with Other Students

In the previous report presenting HBSC findings we noted that there were substantial differences across countries in the degree of rapport students had with their class peers (King et al., 1996). In some countries the process of socialization was encouraged by providing regular opportunities for dialogue on current issues as well as keeping students together in the same class as they proceed through the grades. Canada, with its emphasis on subject promotion and classes organized by student course selection producing classes that change from class period to class period, did not seem to produce the optimum climate for social development.

Figure 2.8

Fifteen year olds who agreed with the statement, "My teachers are interested in me as a person" by country, 1998 (%)

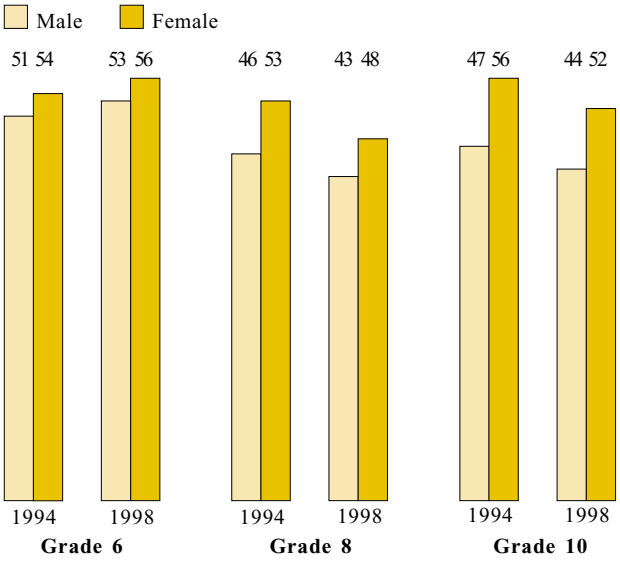


**France and Germany are represented by regions: see Chapter 1 for details.*

It is difficult for teachers to provide students with a sense of caring when they see them only in the competitive subject-focused Grade 10 classrooms. Even in Denmark where classes remain together for the school day, many students do not feel that teachers are interested in them as a person. Teachers in Switzerland have been particularly successful in making their students feel they care about them as individuals.

Figure 2.9

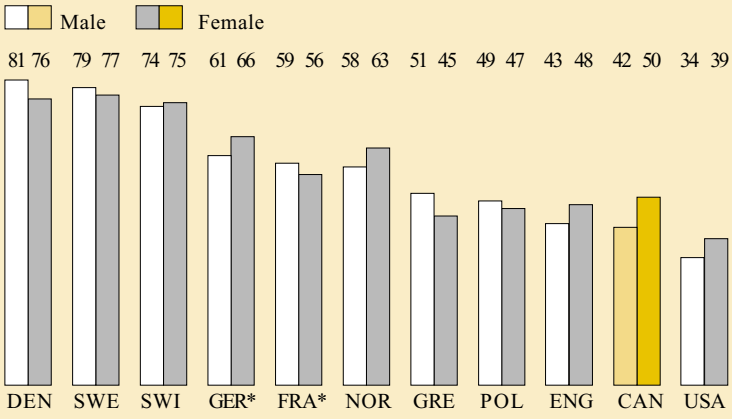
Students who felt the other students in their classes are "often" or "always" kind and helpful (%)



Compared to other countries, significant numbers of students saw themselves as loners and distanced from their colleagues (King et al., 1996). Figure 2.9 illustrates both the changes that occurred between the 1994 and 1998 surveys and the shifts that occur from Grade 6 to Grade 10 on this measure. Girls are more likely than boys to indicate that other students are "often" or "always" kind and helpful. Differences were relatively small across the two surveys. It was interesting to note that from a high in Grade 6 on this item, the proportion who stated "often" or "always" was lowest in Grade 8 and then began to rise again in Grade 10. This suggests that a gradual shift from one teacher to a teacher for each subject weakens the class support system, but then it is rebuilt through secondary school as more common paths of course selection contribute to greater continuity in the makeup of subject classes.

Figure 2.10

Thirteen year olds who felt the other students in their classes were "often" or "always" kind and helpful by country, 1998 (%)



**France and Germany are represented by regions: see Chapter 1 for details.*

There were pronounced differences across countries on this measure. The English-speaking countries were comparatively low on students' perception of the kindness and helpfulness of their peers. Denmark's high scores and, to a lesser extent, those of Sweden and Switzerland are consistent with their emphasis on social development.

One of the fundamental needs of young people is for acceptance and support from parents, teachers and peers. The adolescent years are a particularly difficult period and the relatively small number of students who indicate that their classmates always accept them as they are is a disturbing finding (Figure 2.11). The figures differ little from survey to survey.

Skipping Classes

An item designed to obtain a picture of the extent students in Canadian schools skip classes was added in the 1998 survey. The assumption was that skipping behaviour is potentially unhealthy because it provides opportunities during the school day for students to meet with other skippers in settings that facilitate cigarette, drug and alcohol use. A surprisingly high proportion of students of both genders had skipped classes (Figure 2.12). Gender differences were relatively small and there was a steady increase in the proportion of skippers from Grade 6 to Grade 10. Twenty percent of Grade 10 female respondents and 22 percent of the males had skipped three or more days of the current term.

Figure 2.11

Students who felt other students in their classes "always" accept them as they are (%)

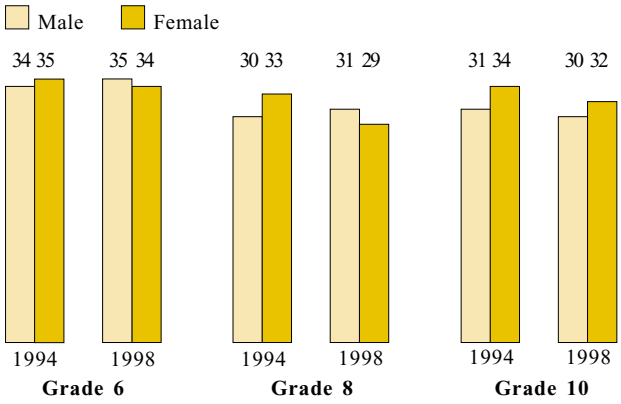


Figure 2.12

Proportions of students who skipped classes this school term by grade and gender, 1998 (%)

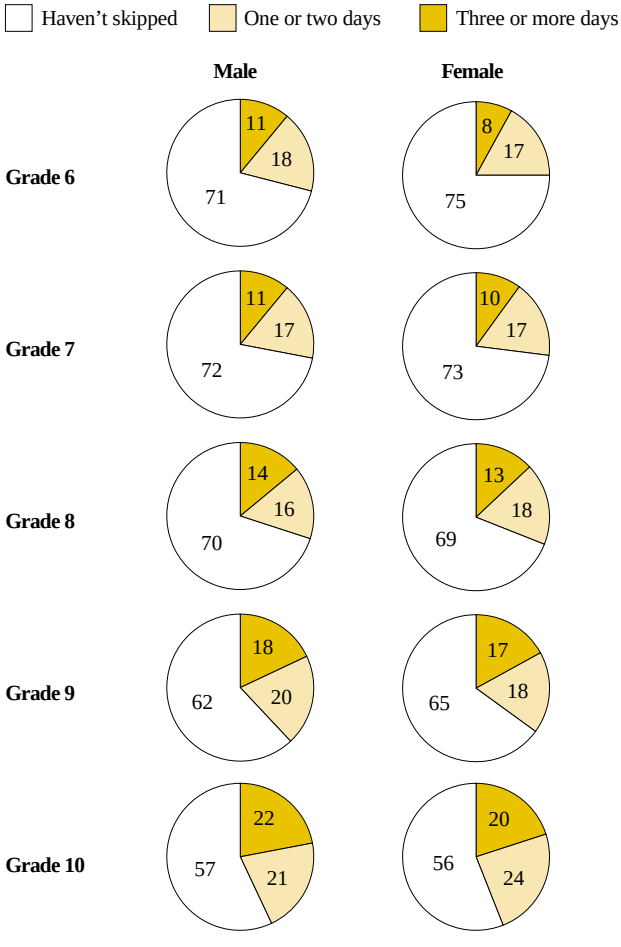


Figure 2.13 presents correlations between skipping and other measures. None of the Grade 6 correlations was 0.15 or greater, but a substantial number fit into this category for Grades 8 and 10 respondents. It is quite clear that the more students skip, the greater the likelihood that they will be involved with students who were smokers and/or alcohol and drug users, and of course the greater the likelihood that they themselves smoked, and/or used drugs and alcohol. Skippers were also more likely to spend time in the evening with their friends, in many instances engaging in these health risk behaviours. They were more likely to be experiencing strains in their relationship with their parents and at school, and by Grade 10 they were achieving at a lower than average level at school. Skipping appears to be just one manifestation of youth alienation and disengagement from school and home.

Figure 2.13

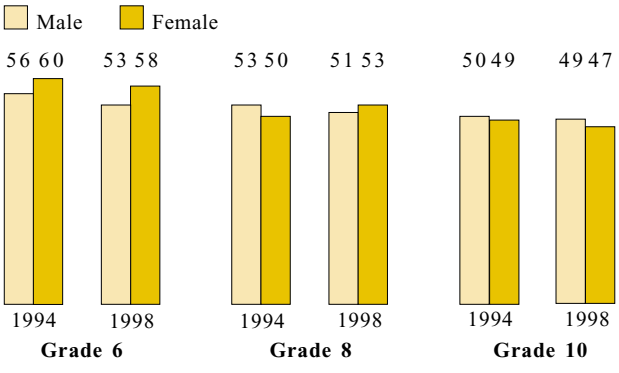
Factors associated with skipping classes

Students who skip classes are more likely to	*Grade 8* M	*Grade 8* F	*Grade 10* M	*Grade 10* F
Have been drunk	.35 to .44	.25 to .34	.35 to .44	.35 to .44
Use marijuana	.45+	.25 to .34	.35 to .44	.35 to .44
Smoke	.35 to .44	.25 to .34	.45+	.35 to .44
Have friends who smoke	.25 to .34	.25 to .34	.35 to .44	.35 to .44
Have friends who use drugs	.25 to .34	.25 to .34	.35 to .44	.35 to .44
Have friends who have been drunk	.25 to .34	.15 to .24	.25 to .34	.25 to .34
Spend time in the evenings with friends	.25 to .34	.15 to .24	.25 to .34	.25 to .34
Have a negative relationship with their parents	.25 to .34	.25 to .34	.15 to .24	.15 to .24
Not be well adjusted at school	.15 to .24	.25 to .34	.15 to .24	.25 to .34
Have bullied others	.25 to .34	.15 to .24	.25 to .34	.15 to .24
Feel tired when they go to school	.15 to .24	.25 to .34	.15 to .24	.15 to .24
Have lower school marks	.15 to .24	—	.15 to .24	.25 to .34

Correlation coefficient: .15 to .24 .25 to .34 .35 to .44 .45+

Figure 2.14

Students who felt their parents are "always" willing to come to school to talk to their teachers (%)



Parents and Schools

Students' adjustment to and achievement in school is strongly related to the support provided to them by their parents (Steinberg et al., 1992). However, it is especially important that parents develop effective communication with their children's school so that they feel comfortable talking to teachers and vice versa. In some countries parents are strongly encouraged to be part of the decision-making process at schools while in other countries they are discouraged from becoming involved with teachers and schools. There are clear advantages to the former approach in terms of student satisfaction with their school experience (King et al., 1996; Resnick et al., 1998). In Canada, parents are encouraged to come to talk to their children's teachers at regular points during the school year. Figure 2.14 indicates the proportion of students who felt their parents were always willing to come to school to talk to their teachers. There was a slight decline from grade to grade in the proportions but overall about one-half of the students indicated that their parents were always willing to come to talk to teachers. There were small gender differences on this measure except for Grade 6. Since there are clear advantages for students if their parents regularly talk to their teachers, this is an area where improvement is required from both schools and parents.

Pressure to Achieve at School

It is difficult for parents and teachers to strike a balance when they set expectations for their children and students. Too much pressure and unrealistic expectations create stress that can contribute to headaches, sleeplessness and even withdrawal. Not unexpectedly, students who say they are experiencing too much pressure related to school are typically achieving at a below-average level or at a level lower than teachers and parents expect. Figures 2.15 and 2.16 present the proportions of students who were experiencing considerable pressure. It can be clearly seen from Figure 2.15 that the number of students feeling pressure because of school work steadily increased from Grade 6 to Grade 10. Interestingly, boys were more likely to say they felt pressure in Grades 6 and 8, but by Grade 10 there were more girls in this category. There was a slight increase between the 1994 to 1998 surveys in the proportions of students who said they felt pressure because of school work.

Although gender differences regarding parent expectations were not significant (see Figure 3.11), there were notable gender differences in the proportions of students who felt their teachers expected too much of them (Figure 2.16). More boys than girls agreed with this statement at all grade levels.

Figure 2.15

Students who felt a lot of pressure because of their school work (%)

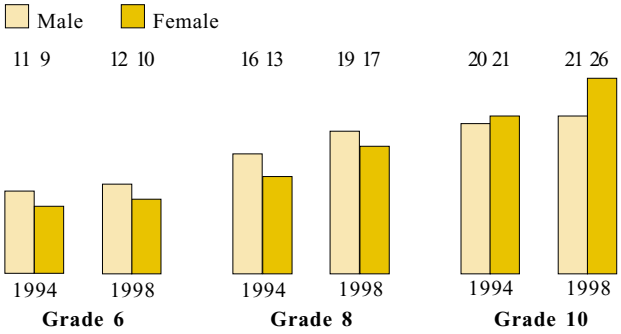


Figure 2.16

Students who agreed with the statement "My teachers expect too much of me at school" (%)

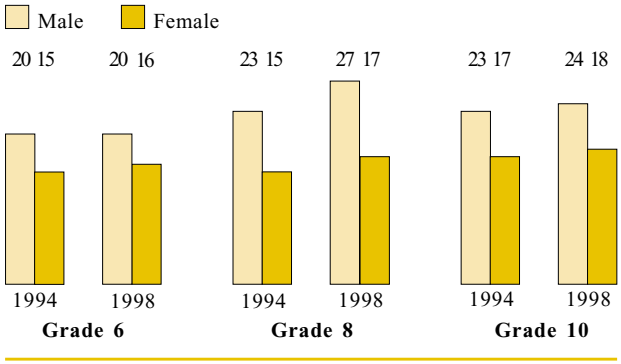
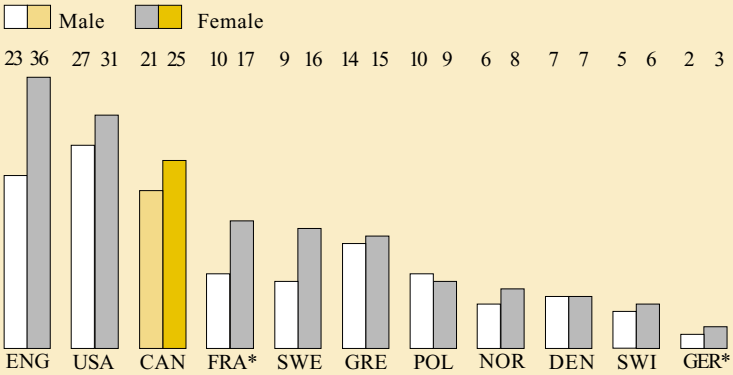


Figure 2.17

Fifteen year olds who felt a lot of pressure because of their school work by country, 1998 (%)



**France and Germany are represented by regions: see Chapter 1 for details.*

Students from the English-speaking countries, England, the United States and Canada, appeared to experience greater pressure from school-work expectations. Students from the Scandinavian countries and Germany were notably lower on this indicator. There is little evidence that the amount of school-related pressure felt by students contributes to higher achievement on international tests of science and mathematics.

Figure 2.18

Students who "rarely" or "never" felt safe at school, 1998 (%)

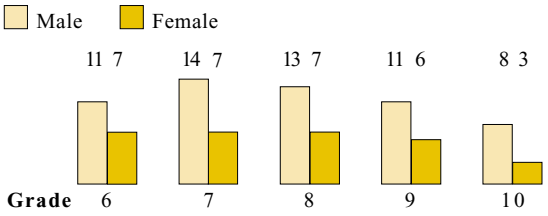


Figure 2.19

Students who indicated most or all of their friends carry weapons, 1998 (%)

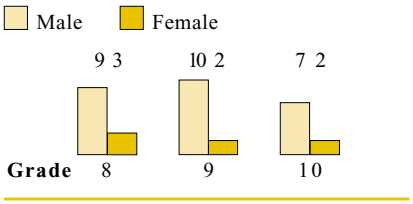


Figure 2.20

Factors associated with being bullied

Students who have been bullied are more likely to	*Grade 6* M	F	*Grade 8* M	F	*Grade 10* M	F
Feel left out	●	●	●	●	●	○
Feel helpless	●	●	●	○	○	○
Feel lonely	○	●	●	●	○	○
Feel depressed	○	●	●	●	○	○
Not be well adjusted at school	○	●	○	○	○	○
Have bullied others	○	●	○	○	○	○
Have low self-esteem	○	●	●	○	○	—
Feel irritable	—	○	○	○	○	○
Feel unhappy	—	●	○	○	—	○
Feel pressured by school work	○	●	○	○	—	—
Have a negative relationship with their parents	○	●	○	○	—	—
Not be well integrated socially	○	○	○	—	○	—

Correlation coefficient: ○ .15 to .24 ● .25 to .34 ● .35 to .44 ● .45+

Safety at School

In the last few years increasing attention has been given to school violence and bullying behaviour (Pepler, Craig and Roberts, 1998). Under the leadership of a Norwegian researcher, Dan Olweus, programs have been developed and implemented designed to reduce bullying behaviour in schools (Olweus, 1994). There is also concern that many young people are bringing weapons to school. To what extent have these trends affected student perceptions of their safety at school? Figure 2.18 presents the proportions of students who stated that they rarely or never felt safe at school based on a question only asked on the 1998 survey. Boys were more likely than girls to feel unsafe with the peak point for them being in Grade 7. Girls were less likely to feel this way and by Grade 10 only 3 percent were concerned about their safety at school. Nevertheless, such a substantial number of young people feeling at risk suggests a real urgency for remediation.

Students were asked, not the sensitive question of whether they carry weapons, but if their friends do. Figure 2.19 indirectly indicates that a small but

significant number of students, mainly boys, carry weapons. Most argue that this is done for protection from others.

Bullying behaviour became a major thrust of the HBSC research team for the 1994 survey. Although there is no universally agreed upon definition of bullying, there is generally agreement that bullying includes the following elements: physical, verbal or psychological intimidation that is intended to cause fear, distress or harm; an imbalance of power; and no provocation by the victim (Farrington, 1993). Bullying victims are more likely to feel alone at school, and unaccepted (Figure 2.20). They are also more likely to be lonely, unhappy, and have lower self-esteem. Ironically, they are also more likely to be bullies themselves.

Boys were more likely to be bullied at all grade levels except Grade 10. Interestingly, in spite of inconsistent efforts across schools to reduce bullying behaviour, greater proportions of respondents in the 1998 survey than in the 1994 survey reported having been bullied (Figure 2.21). Bullies tend to be a little older than their peers and to have had trouble with school; they are also more likely to engage in health-risk behaviours; but, perhaps more important, they tend to have been bullied themselves. Substantially more boys than girls at all grade levels indicated that they had bullied others (Figure 2.22). There were increases in the number of students in Grades 8 and 10 across the two surveys who said they had bullied others but a decrease in the number of Grade 6 boys who agreed with this statement.

Figure 2.21

Students who were bullied in school this school term (%)

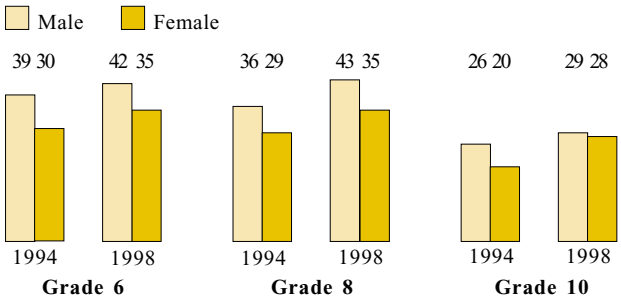


Figure 2.22

Students who bullied others in school this school term (%)

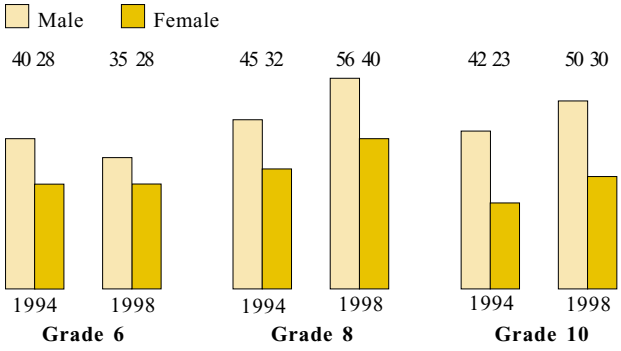
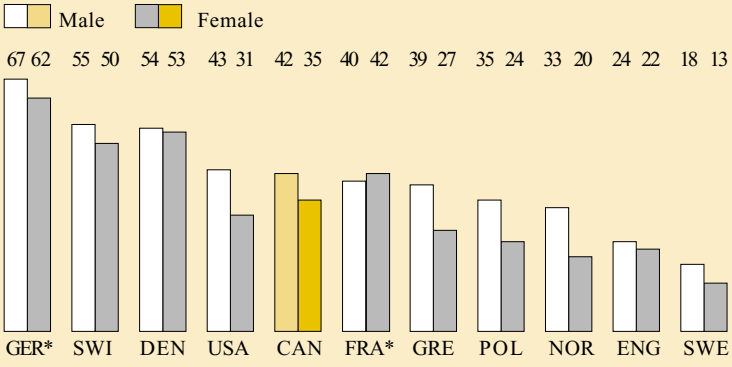


Figure 2.23

Thirteen year olds who were bullied in school this school term by country, 1998 (%)



**France and Germany are represented by regions: see Chapter 1 for details.*

Bullying is not a universal concept and so comparisons across countries must be cautiously undertaken. Ironically, countries where more students are viewed as kind and helpful also seem to have more problems with bullying, for example, Germany, Switzerland and Denmark. Although Canada ranks in the middle on this indicator, the proportion of students who have been bullied is still high enough to view this behaviour as a social problem.

The 1998 survey included two items designed to determine the forms bullying takes. Figure 2.24 presents findings, for Grades 6, 8 and 10, for the question, "How often has someone bullied you in school this term in the ways listed below"? There were some gender differences; for example, boys were more likely to use physical violence—but on most of the categories differences were small. The number of bullying references to religion or race was relatively small. Higher proportions reported that others made fun of their appearance and/or spread rumours and lies about them. Sexual jokes and comments appeared to be as common at the Grade 6 level as at the Grade 10 level.

The second new question asked who did the bullying. Figure 2.25 indicates that almost half the boys at all grade levels who said they had been bullied were bullied by one boy and over a third were bullied by a group of boys. About 10 percent were bullied by a group of boys and girls. By Grade 10, interestingly, 6 percent of the bullies of boys were girls. The pattern was quite different for girls although a single boy was the most common tormenter. One girl or a group of boys both represented about 20 percent of those who bullied girls, closely followed by a group of boys and girls. About 15 percent of the girls said they were bullied by a group of girls. The gender makeup of individuals or groups who did the bullying did not differ substantially from grade to grade.

Figure 2.24

How students were bullied, 1998 (%)

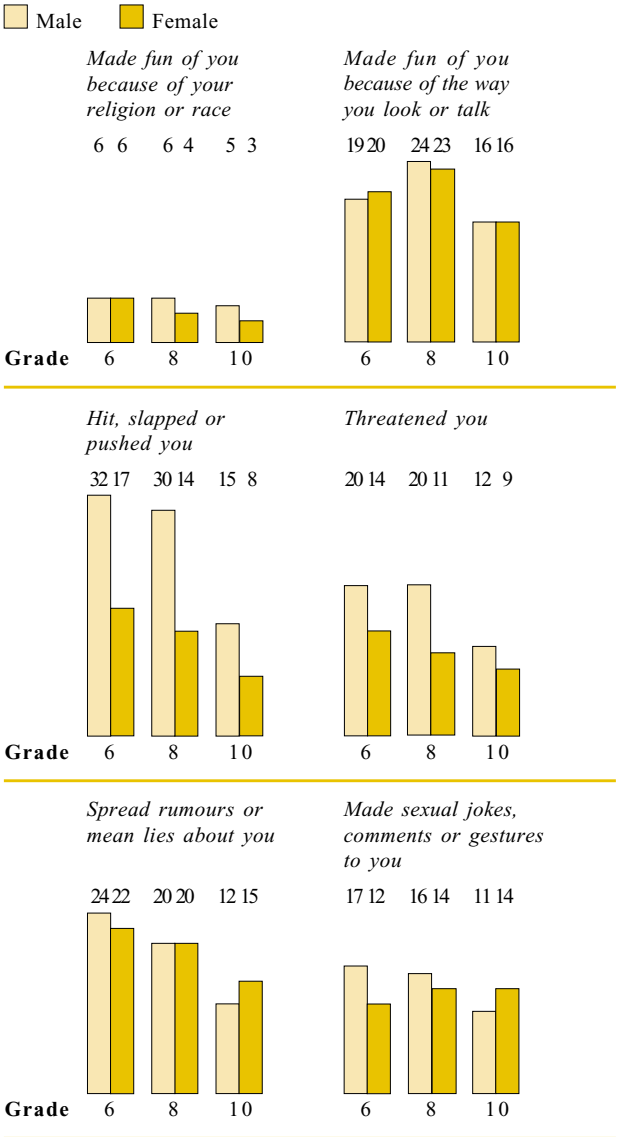
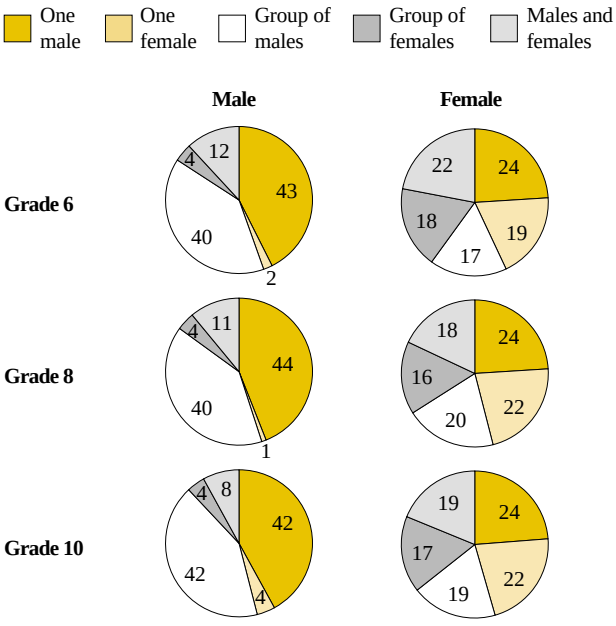


Figure 2.25

Students who bullied others, 1998 (%)



Summary

In general, Canadian students were relatively satisfied with their school experience, although the proportion who said they like school a lot declined as the students moved through the grades. Positive attitudes towards school were found to be linked to good relationships with parents, general health and happiness and the avoidance of health-risk behaviours. As the students progressed through the grades, they found that the teachers seem to be less interested in them as a person. This appears to correspond to increasing emphasis on academic achievement and subject specialization in the senior grades of school. Girls were more likely than boys to find their classmates kind and helpful, but this was an area where there was clear room for improvement. Students in many European countries were more supportive of their classmates.

Surprisingly large numbers of students skip classes, even in the lower grades. Girls were as likely as boys to skip classes. Skipping was found to be related to health-risk behaviours, such as drug use, cigarette smoking and having been drunk, as well as association with friends who also took risks with their health.

Just over half the students felt their parents were always willing to come to the school to talk to their teachers. Since this is an important reinforcement for student achievement and motivation, this proportion should be higher. Students increasingly felt pressure associated with school work as they advanced through the grades with one-quarter of the Grade 10 girls expressing this concern. Parent expectations were found to be higher than those of teachers for our respondents. It is probably safe to say that parents play a bigger role in creating unrealistic expectations for students than does the school.

Although a relatively small number of respondents indicated they felt unsafe at school, safety at school is becoming a real concern. More males than females felt unsafe. As students moved through the grades, the proportion of both boys and girls who felt unsafe declined.

The surveys show bullying behaviour to be very common with boys more likely to have been bullied than girls and slight increases in the number who were bullied from the 1994 to the 1998 survey. Bullying is a particularly harmful behaviour because it has negative implications both for those being bullied and for the bullies. There is little evidence that efforts to reduce bullying in Canadian schools have been effective.

CHAPTER 3

The Home Experience

A mounting body of evidence indicates a strong relationship between the way parents interact with their children and their children's social and physical health (Morrison et al., 1994). Adolescence is often a period of uncertainty when youth are expected to become more responsible and more autonomous in their lifestyle as they prepare for adulthood, but this does not necessarily lead to estrangement from parents. The vast majority of adolescents still tend to respect their parents, feel part of the family and share many of the same values as their parents. However, in some families parent-child conflict does increase during adolescence, and is exacerbated by marriage strains and parent substance abuse (deGoede and Spruijt, 1996).

Parenting style appears to be related to adolescent risk behaviour. When parents take a more democratic approach to expectations and relationships and provide emotional support, healthy adolescent development is encouraged (Congress of the U.S., 1991). Clearly stated expectations and reasonable rules regarding behaviour are considered to be the fundamental components of effective parenting. When parents are indifferent, exhibit inappropriate role modelling, or are inconsistent in setting standards of behaviour for their children, there is a much greater likelihood of problem behaviour and psychological problems (Dougherty, 1993). Adolescents who do not feel close to their parents or who are living in single-parent families are more likely to suffer from problems with self-esteem, depression and engage in risk behaviours such as smoking and drug use (Resnick et al., 1998). It is difficult to provide youth with models of satisfying adult relationships, meaningful work experiences and good marriages when tensions at home make parent-child relationships stressful.

The findings presented in this chapter are designed to examine trends in family structure and parent relationships with their children, and to illustrate the importance of positive family relationships to the health of youth.

Family Structure and Socioeconomic Status

Over the past thirty years, significant social changes have dramatically affected family life in Canada. Greater reproductive freedom and changes in the workplace have increased women's opportunities and, simultaneously, the complexity of family life.

Figure 3.1 illustrates that family structure has changed very little over the past four years. A small reduction in the number of young people living with both natural parents between the 1994 and 1998 surveys is associated with slight increases in all the other categories except "living with father and stepmother". Nevertheless, it must be noted that nearly three-quarters of our sample of students did live with both natural parents. In the following discussion of students' relationship with parents, it must be remembered that the respondents are not all talking about the same family structure.

The study was not designed to determine directly the impact of poverty on the health of youth; however, it was possible to consider the relationships between the respondents' answers to the question "How well off do you think your family is?" and the measures of health and social adjustment. Some low to moderate correlations were found. Figure 3.2 illustrates some of these relationships by comparing the responses of those who said they were "well off" or "very well off" with those who said they were "not well off" on four factors. Those who indicated that their families were not well off were less likely to feel "very happy", agree that their parents understood them and feel they belonged at school and they were more likely to have used marijuana.

Figure 3.1

Family structure, all grades and male/female combined (%)

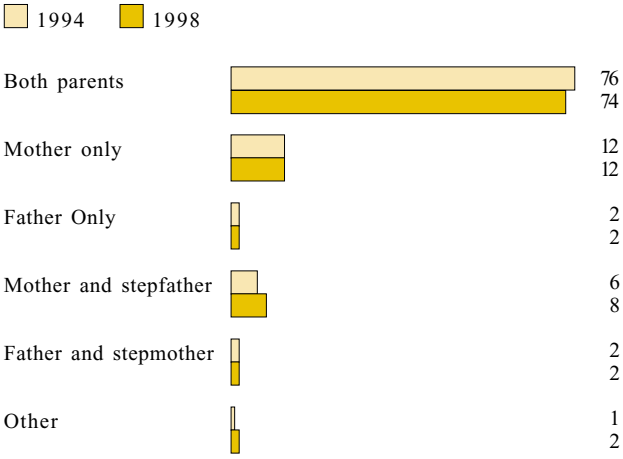
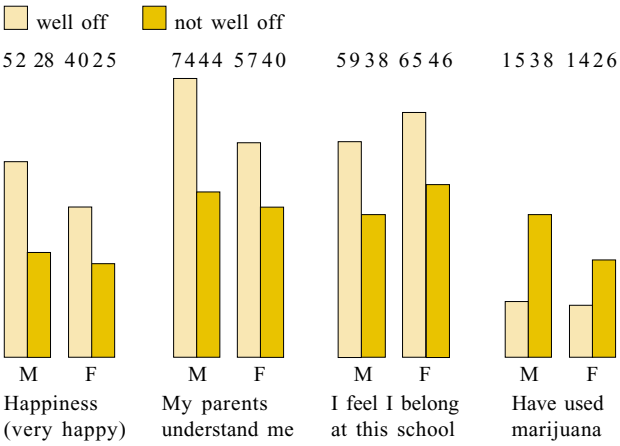


Figure 3.2

Responses of Grade 8 students to selected items by whether they believe their family is or is not well off, 1998 (%)



Parent Relationships and Health

A scale designed to incorporate the key elements in parents' relationships with their children was developed. The scale scores are used to examine the association between parent-child relationships and other variables: each of the items that makes up the scale is discussed in the next few pages. Figure 3.3 illustrates the strong relationship between the nature of the relationship between parents and their children and the majority of other health-related variables. Those who have good relationships with their parents are also more likely to be well-adjusted at school, to feel healthy, to have high self-esteem, and to avoid health-risk behaviours.

Communication with Parents

Parents are the most significant source of social support through the early years of adolescence. There are important regulatory effects on biological and psychological health related to the quality of communication and degree of understanding of adolescent issues maintained by parents. Figure 3.4 deals with the students' ease with talking to their father about things that really bother them, and clearly illustrates the steady decline on this measure from Grade 6 to 10. Of particular concern is the relatively low proportion of girls who find it easy to talk to their father. This is particularly important because girls tend to value their father's views highly and need their support through the stressful adolescent period (Shulman and Seiffige-Krenke, 1997). Furthermore, serious psychosocial problems appear to be associated with poor communication with the father for both boys and girls. There was little change over the three surveys on this measure for the Grades 8 and 10 respondents, but on the positive side there were increases for both boys and girls at the Grade 6 level.

Figure 3.3

Factors associated with students' relationships with their parents

Students who have good relationships with their parents are more likely to	*Grade 6* M	*Grade 6* F	*Grade 8* M	*Grade 8* F	*Grade 10* M	*Grade 10* F
Feel happy	○	○	○	○	○	○
Have high self-esteem	○	○	○	○	○	○
Not feel their parents expect too much	○	○	○	○	○	○
Be well adjusted at school	○	○	○	○	○	○
Not feel depressed	○	○	○	○	○	○
Not have bad moods	○	○	○	○	○	○
Not feel lonely	○	○	○	○	○	○
Not feel pressured by school work	○	○	○	○	○	○
Not feel helpless	○	○	○	○	○	○
Not feel tired when they go to school	○	○	○	○	○	○
Not want to change their body	○	○	○	○	○	○
Achieve higher marks at school	○	○	○	○	○	○
Not bully others	○	○	○	○	○	○
Not feel left out	○	○	○	○	○	○
Think their family is well off	○	○	○	○	○	○
Feel healthy	○	○	○	○	○	○
Not smoke	—	○	○	○	○	○
Not have been drunk	—	○	○	○	○	○
Not have friends who use drugs	—	—	○	○	○	○
Not use marijuana	—	—	○	○	○	○
Not skip classes	—	—	○	○	○	○
Not have friends who smoke	—	—	○	○	○	○
Not have friends who drink	—	—	○	○	○	○

Correlation coefficient: ○ .15 to .24 ○ .25 to .34 ○ .35 to .44 ○ .45+

Figure 3.4

Students who found it "easy" or "very easy" to talk to their father about things that really bother them (%)

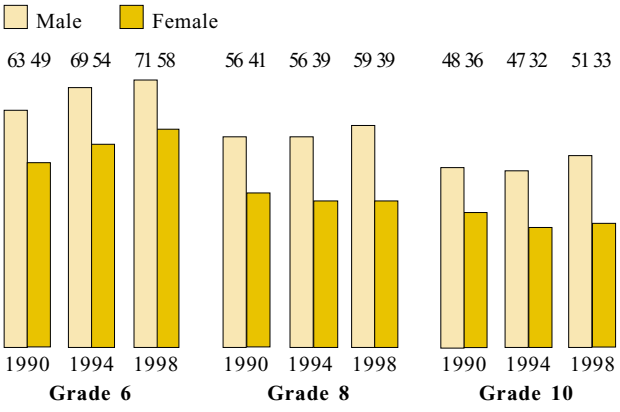


Figure 3.5

Students who found it "easy" or "very easy" to talk to their mother about things that really bother them (%)

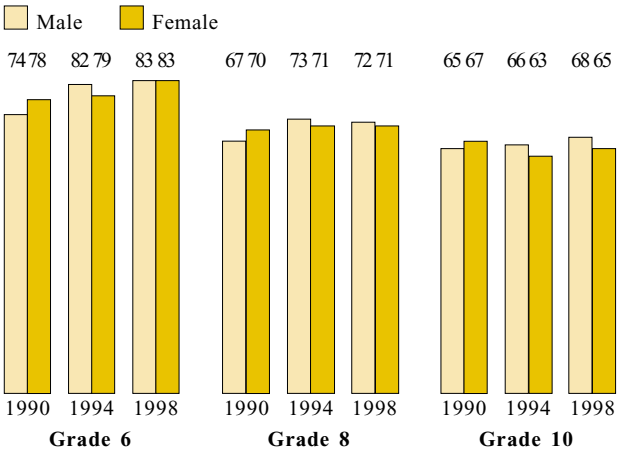
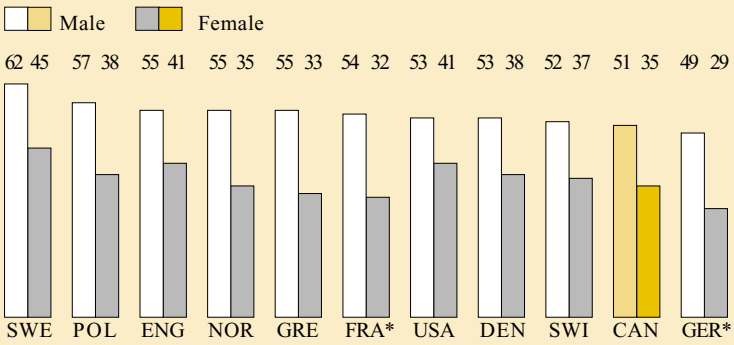


Figure 3.5 presents the students' responses to the question "Do you find it 'easy' or 'very easy' to talk to your mother about things that really bother you". In general, the respondents found it easier to talk to their mother than to their father. There was a drop between Grade 6 and Grade 10 in the proportion who found it easy to talk to their mother about things that really bother them, from over four-fifths to about two-thirds of the respondents. Unlike the question related to the father, there were very small gender differences. It is clear that in Canada mothers are seen by their children as more approachable than fathers and very likely play a more substantial role in helping them with their problems.

Figure 3.6

Fifteen year olds who found it "easy" or "very easy" to talk to their father about things that really bother them by country, 1998 (%)



**France and Germany are represented by regions: see Chapter 1 for details.*

The father is an important role model for young people and there is a strong relationship between the extent that fathers interact with their children and their children's social adjustment. Swedish youth had more success engaging their fathers regarding problem issues and German youth less success. Canada was no exception to the general pattern of poor communication between fathers and their daughters.

Parent-Child Relationships

Although a general view of parents' relationships with their children has been presented, it is useful to examine student responses to specific aspects of the parent-student relationship scale such as trust, understanding and expectations.

Figure 3.7 indicates the proportion of students who agreed with the statement "My parents understand me". By the time they are in Grade 10 almost half the respondents thought that their parents did not understand them. Perhaps surprisingly, more boys than girls in all three surveys and all three grade groups indicated that their parents understood them. The decline with age is perhaps consistent with youth seeking more autonomy and their feeling that their parents do not fully understand this transition. There was little change over the three surveys except for slightly more positive responses from Grade 6 respondents during focus-group interview sessions, in the later surveys.

During design of the questionnaire, survey items are tested with students in focus groups to determine how they understand the questions. In responding to the question on parents trusting them, students in the focus group interpreted trust to mean responsibility in completing tasks, handling money, and parental acceptance of their general behaviour. Figure 3.8 suggests that the vast majority of Canadian youth view their parents as trusting them. Gender differences tend to favour boys except for 11 year olds in the first survey, and there was little change over the three surveys. The general level of respondents' views of their parents' trust in them dropped 10 percent for boys and 12 percent for girls between Grades 6 and 10, although for both genders the main decrease occurred at Grade 8.

Figure 3.7

Students who felt their parents understand them (%)

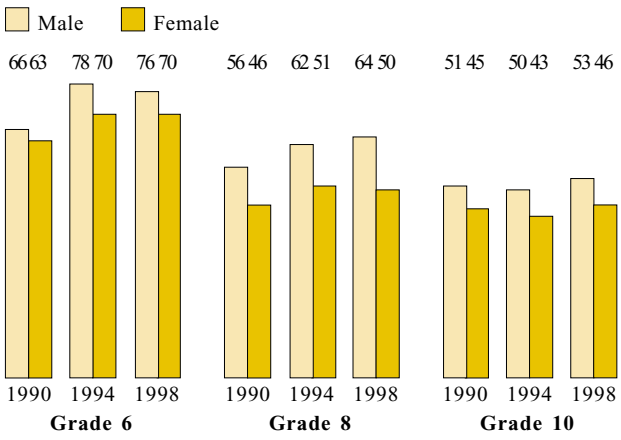
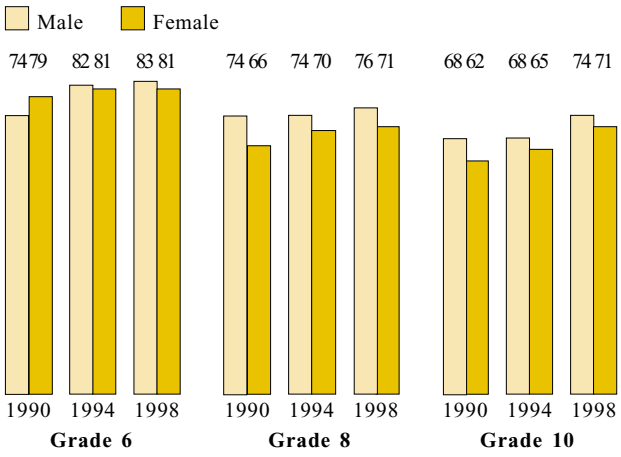


Figure 3.8

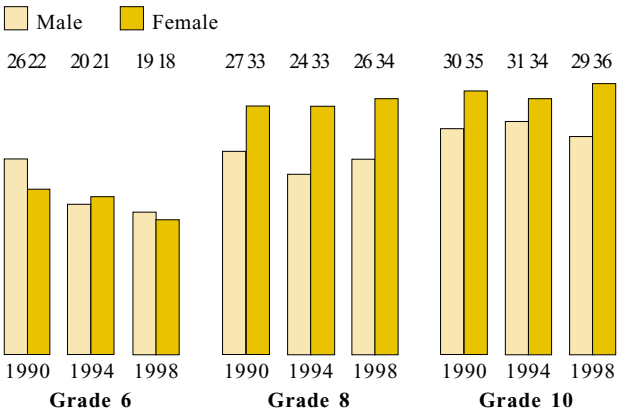
Students who felt their parents trust them (%)



Conflict with parents tends to result in a disengagement from the home and a greater likelihood for young people to become involved in health-risk behaviour. One aspect of parent-child conflict concerns the extent to which there are arguments between them. Figure 3.9 presents the proportion of students who agreed with the statement "I have a lot of arguments with my parents". Nearly one-third of the Grade 8 and 10 students indicated that they had a lot of arguments with their parents with significantly more girls than boys agreeing with the statement. Gender differences were small for the Grade 6 students as were differences between Grade 8 and 10 students. Over the three surveys there was very little evidence of significant changes except for a slight decrease for the Grade 6 groups.

Figure 3.9

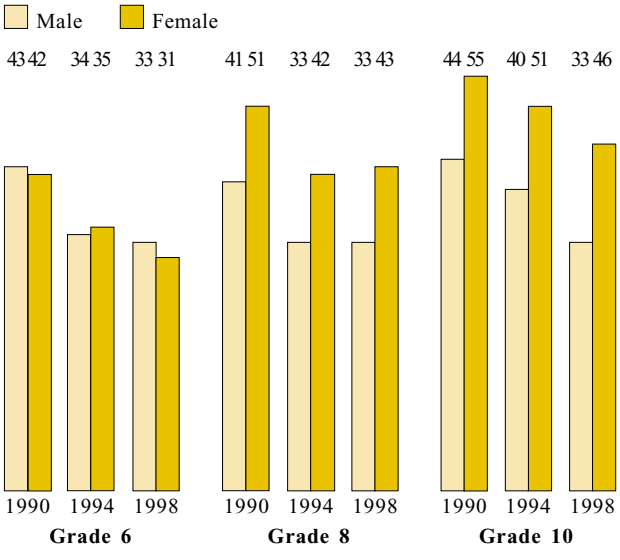
Students who felt they had a lot of arguments with their parents (%)



The respondents were asked if there were times when they would like to leave home and their answers are summarized in Figure 3.10. This question lacks precision because it is difficult to know how seriously or how many times they had this feeling. Nevertheless, surprisingly large numbers of girls agreed with the statement, approaching one-half in the case of the Grade 10 girls. There were pronounced gender differences for the Grade 8 and Grade 10 respondents with significantly more girls agreeing with the statement. The steady increase in the proportion of girls who indicated that there were times when they would like to leave home was notable from Grade 6 to Grade 10 suggesting a difficult transition through puberty for some. There was no evidence of a similar pattern for boys. Over the three surveys, there was a slight decline in the proportion of respondents who agreed with this statement except for the Grade 8 respondents in the second and third surveys.

Figure 3.10

Students who indicated there were times they would like to leave home (%)



One of the great challenges for parents is to establish realistic expectations for their children particularly with regard to school achievement and effort. It is not surprising that most parents want their children to be successful as measured by marks and, ultimately, attendance at university. Of course, this level of attainment is not realistic for all children, and yet, many parents, through either word or deed, establish an atmosphere of unrealistically high expectations that can lead to stress and even conflict. There was a steady increase in the proportion of respondents who felt their parents expected too much of them as they progressed through the grades. Approximately one-third of the respondents from Grades 8 and 10 felt their parents expected too much of them (Figure 3.11). Numbers were lower for the Grade 6 respondents and declined slightly over the three surveys. Gender differences were small, which suggests that parents hold equally high expectations for their male and female children.

Figure 3.11

Students who felt their parents expect too much of them (%)

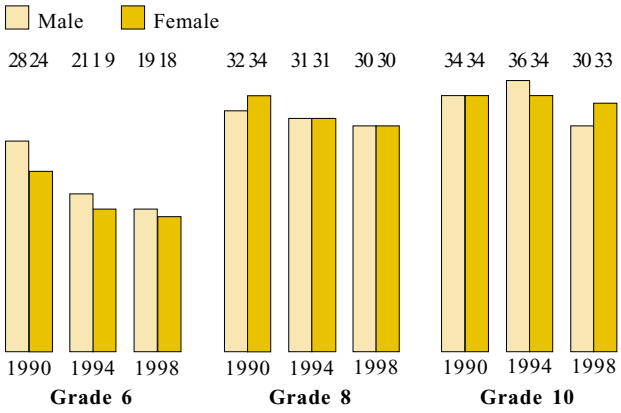
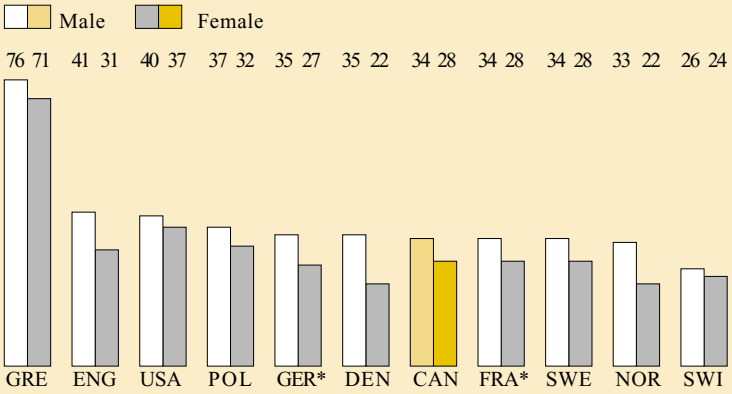


Figure 3.12

Thirteen year olds who felt their parents expect too much of them at school by country, 1998 (%)

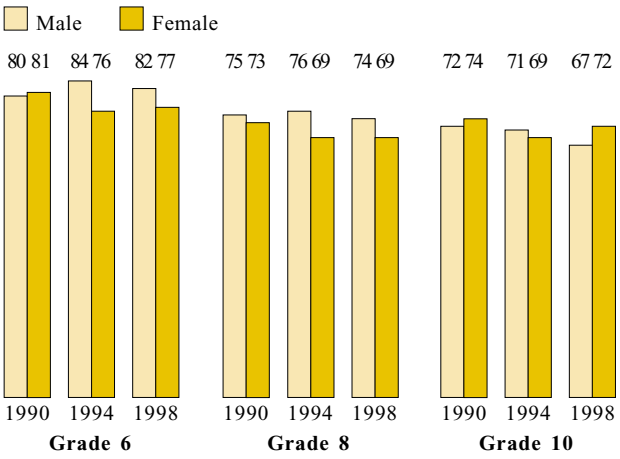


**France and Germany are represented by regions: see Chapter 1 for details.*

Parent expectations of students' school performance were particularly high in Greece. Differences across the other countries were not substantial. In all the countries, proportionately more boys than girls felt that their parents expected too much of them at school.

Figure 3.13

Students who felt what their parents think of them is important (%)



A review of relevant research revealed that the vast majority of youth continued to value their parents opinion of them as they proceeded through adolescence. Findings from this study are consistent with this research. Even though there was a slight decline across the three age groups, the vast majority of our respondents indicated they valued their parents' opinion of them (Figure 3.13). This is true in spite of stress and conflict evident in their responses to the questions discussed here. Gender differences were relatively small. In previous analyses of HBSC findings it was noted that Canadian youth tended to find it more difficult to talk to their parents than did youth from most European countries. It was also noted that young people who find it easy to talk to their parents are less likely to have emotional problems. It is extremely important for their general health that adolescents have free and easy communication with their parents about all issues related to their lives.

Summary

There have been major shifts in the structure of the family over the last few years. Increasing numbers of young people do not live with both their biological parents. However, three-quarters of our sample did live with both natural parents.

Parents' relationships with their children appeared to decline as the respondents grew older, particularly in the areas of trust and expectations. The number of young people in Grade 10 who indicated there were times they would like to leave home approached nearly one-half for girls and one-third for boys. Although the children valued highly what their parents think of them, in many cases relationships were strained. This was especially true with regard to parent expectations of school performance where nearly one-third of the respondents indicated that expectations were too high.

The proportion of children who communicated with their fathers about their problems decreased sharply from Grade 6 to Grade 10, especially for girls. Young people found it much easier to talk to their mother. It would appear that fathers are highly valued by their children and, by spending more time and communicating more effectively with them, can play a much more important role in their life than they now do. Canadian parents appear to be slightly more distanced from their children than is the case in a number of European countries.

CHAPTER 4

Peer Relationships

Young people value involvement with a group of friends who share common values. Those young people who are not well integrated socially are far more likely to manifest physical and mental health problems (Page et al., 1994). The HBSC survey is designed to cover the critical developmental period when young people begin to seek greater independence, explore their sexuality, plan for their future and give increasing importance to friendship groups. During this extended period of adolescence they find themselves in limbo, perched precariously between childhood and the expectations of adulthood. It is a time of life when the need to have friends may become more important than the activities they engage in with their friends. Young people who see themselves as outsiders, not accepted by their peers, are more likely to withdraw, become depressed and be easy targets for bullying. A core of strong friendships can provide a protective framework from the pressures of the outside world (Rook, 1987).

Peers are a major source of health information for adolescents, especially information related to health-risk behaviours and sexuality (Millstein, 1995). More than just a source of information, peers are also interpreters: in this role they may "explain" smoking and drug use in acceptable ways that effectively legitimate the behaviours. It is a difficult challenge for health educators to penetrate peer groups with programs to reduce health-risk behaviour.

In this chapter, the nature of adolescent friendships, the time adolescents spend in each others' company and the activities that they share are examined. The implications of associating with groups of friends who are involved with health-risk behaviours are also considered. In order to examine the relationship between students' behaviour and attitudes and those of their friends, a series of items were added to the 1998 Canadian survey introduced by the phrase "Most of my friends...." followed by completion phrases such as "take drugs" and "smoke cigarettes".

Social Integration

Social integration refers to the extent to which young people have friends with whom they can comfortably talk about important issues. A social integration scale incorporating five items was developed in order to determine the factors associated with positive peer relationships (see Figure 4.1). The scale incorporated the following concepts: number of close friends, time spent with friends, same sex communication, opposite sex communication and ease of making friends.

The moderate to strong correlations indicate that social integration is a fundamental component of good health and happiness. Those with high scores on the scale are less likely to feel depressed, helpless, or be vulnerable to bullying. They are more likely to have high self-esteem and enjoy school.

It must be remembered that social integration is a two-sided coin. While it is valuable in itself to have friends to provide support and acceptance, some friends spend a great deal of time with each other in the evenings, their friendship reinforced by a general dissatisfaction with school and involvement with health-risk behaviours such as smoking, alcohol and drug use.

Figure 4.1

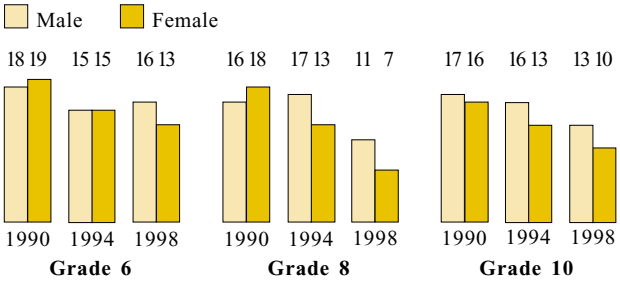
Factors associated with social integration

Students who are well-integrated socially are more likely to	*Grade 6* M	F	*Grade 8* M	F	*Grade 10* M	F
Spend time in the evening with friends	○	○	○	●	○	●
Not feel helpless	○	◌	○	◌	◌	○
Have high self-esteem	○	◌	○	○	◌	○
Exercise regularly	○	○	○	○	○	○
Feel happy	—	◌	○	○	○	—
Not have been bullied	○	○	○	—	○	—
Be well adjusted at school	○	○	—	—	○	—
Have a positive relationship with their parents	○	○	—	—	—	—

Correlation coefficient: ○ .15 to .24 ◌ .25 to .34 ○ .35 to .44 ● .45+

Figure 4.2

Students who had fewer than two close friends (%)



Close Friends

Figure 4.2 presents the percentages of students who indicated they had fewer than two close friends. Gender differences were relatively small on this measure and there was a slight decline over the three surveys in the proportion of respondents who indicated this response.

About three-quarters stated they had two or more close friends, with Grade 10 girls slightly more likely than Grade 10 boys to have close friends. The Grade 9 figures dip slightly suggesting that students making the transition from one school to another for Grade 9 may have difficulty establishing relationships with fellow students.

The pattern in the figure presenting the percentages of students who said they found it difficult to make new friends is quite similar to that in the figure showing those who had fewer than two friends (see Figure 4.3). For these students the transition to a new school can be particularly difficult. Students in Grades 8 and 10 found it easier to make new friends than those in Grade 6. There was little change over the three surveys on this indicator.

Rejection by other students can adversely affect the health of youth. This is especially true when it is accompanied by bullying behaviour (Farrington, 1993). Figure 4.4 indicates the percentages of students in the 1994 and 1998 surveys who indicated that once a week or more other students did not want to spend time with them and they ended up being alone. The proportions are quite low, especially for Grade 10 students. Grades 8 and 10 girls were the least likely to feel this way. These figures are lower than those obtained on the loneliness question suggesting that "being lonely" does not necessarily involve being rejected by peers.

Figure 4.3

Students who found it "difficult" or "very difficult" to make new friends (%)

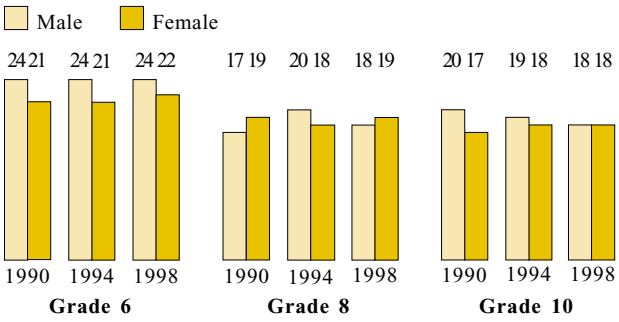


Figure 4.4

Students who indicated other students did not want to spend time with them and they ended up being alone once a week or more in the last term (%)

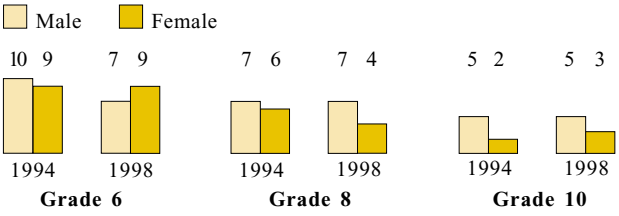
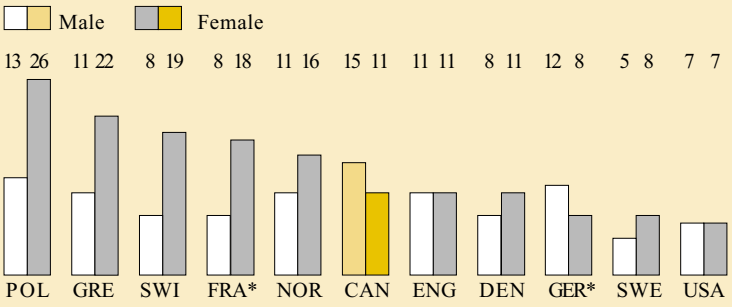


Figure 4.5

Eleven year olds who had fewer than two close friends by country, 1998 (%)



**France and Germany are represented by regions: see Chapter 1 for details.*

Girls were far more likely to have fewer than two friends in Poland, Greece, Switzerland and France. To a lesser extent the reverse is true in Canada and Germany. There must be fundamental cultural differences in how this younger group of female respondents relate to each other that explain such pronounced differences.

Figure 4.6

Students who found it "easy" or "very easy" to talk to same-sex friends about things that really bother them (%)

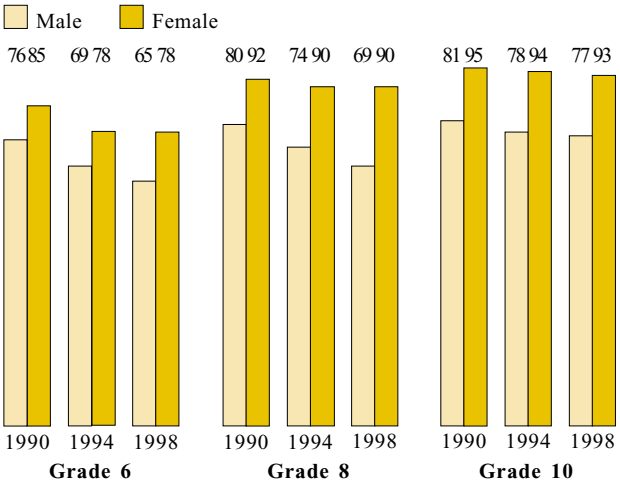
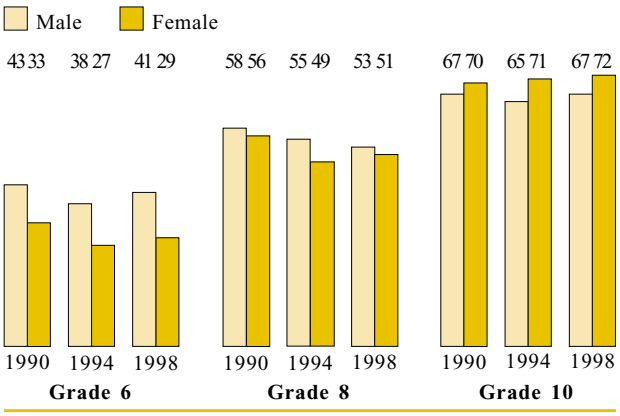


Figure 4.7

Students who found it "easy" or "very easy" to talk to opposite-sex friends about things that really bother them (%)



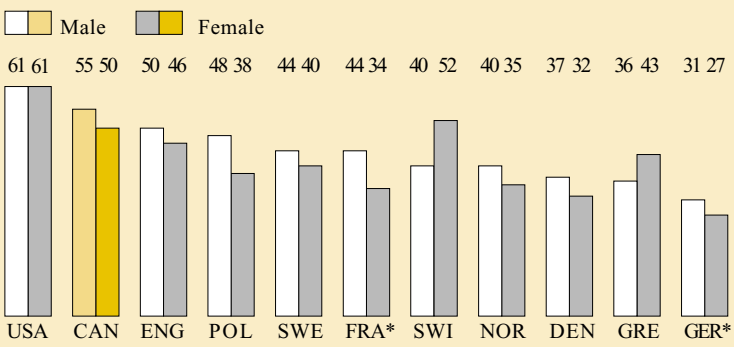
Communicating with Peers

One of the most important aspects of becoming socially integrated is the capacity to communicate with peers. The vast majority of respondents found it relatively easy to talk to same-sex friends about things that really bother them (see Figure 4.6). The older students were more likely to find it easy to talk to same-sex friends. However, over the three surveys and for both sexes there was a slight decline in positive responses on this item. Gender differences were significant with substantially more girls at all ages finding it easier to talk to same-sex friends.

It is clear that as young people move through early adolescence to the middle years of adolescence, their comfort level in talking to opposite-sex friends about things that bother them increases (see Figure 4.7). This pattern corresponds to the strengthening of ties that occurs in peer groups. Of the Grade 6 respondents, boys were far more likely than girls to find it easier to talk to opposite-sex friends, but by Grade 10 girls were slightly more likely to find communication with opposite-sex friends relatively easy. There was little change over the three surveys.

Figure 4.8

Thirteen year olds who found it "easy" or "very easy" to talk to opposite-sex friends by country, 1998 (%)



**France and Germany are represented by regions: see Chapter 1 for details.*

Generally speaking, North American youth found it easier to talk to opposite-sex friends than their European counterparts. Interestingly, in countries, such as Denmark, Norway and Germany, where schools make a real effort to develop social skills, the proportions are lower.

Time Spent with Friends

In order for students to develop social skills and maintain friendships they must have opportunities to interact. These opportunities should occur in settings where positive health behaviours and attitudes can be reinforced. During and shortly after the school day is an optimum time for friendships to develop and evolve. Spending time with friends can involve healthy activities such as playing games, listening to music, skateboarding and working on homework, but it can also involve social and health-risk behaviours such as smoking, drinking and using drugs.

Figure 4.9 summarizes the factors associated with the number of evenings students spend with their friends. Ironically, those who spend a great deal of time with their friends in the evening are more likely to be well integrated socially, but at the same time, to manifest health-risk behaviours, such as smoking and marijuana use. They are also more likely to have friends who smoke, drink and take drugs. It is important to note that those students who spend a lot of time in the evenings with their friends are more likely to be dissatisfied with their school experience and to skip classes.

Figure 4.10 indicates that boys are more likely than girls to spend a great deal of time right after school with their friends. This is in part related to the tendency for parents to be more protective of girls and partly related to the fact that girls spend more time on homework than boys (King and Peart, 1994). There was a decline in the proportion of respondents over the two surveys who indicated that for four or five days per week they spent time with friends right after school.

Figure 4.9

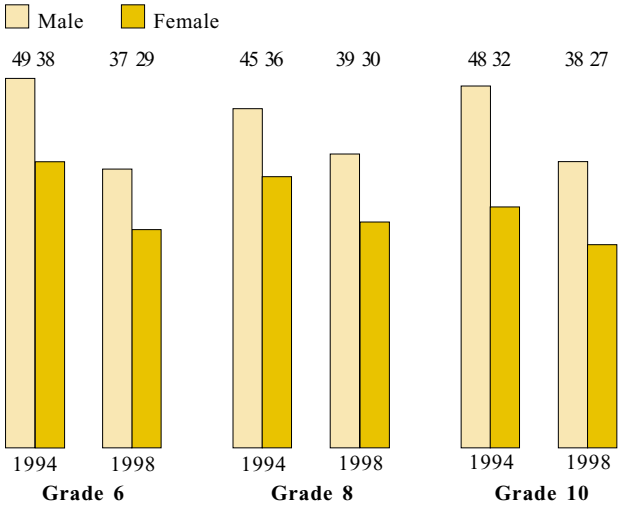
Factors associated with spending time in the evening with friends

Students who spend time in the evening with friends are more likely to	*Grade 6* M	*Grade 6* F	*Grade 8* M	*Grade 8* F	*Grade 10* M	*Grade 10* F
Be well integrated socially	○	○	○	○	○	○
Not feel left out	—	○	○	○	○	○
Have friends who have been drunk	—	—	○	○	○	○
Have friends who smoke	—	—	○	○	○	○
Have been drunk	—	—	○	○	○	○
Have friends who use drugs	—	—	○	○	○	○
Use marijuana	—	—	○	○	○	○
Smoke	—	—	○	○	○	○
Have skipped classes	—	—	○	○	○	○
Not like school	—	—	○	○	—	○
Have bullied others	—	—	○	○	○	—

Correlation coefficient: ○ .15 to .24 ○ .25 to .34 ○ .35 to .44 ○ .45+

Figure 4.10

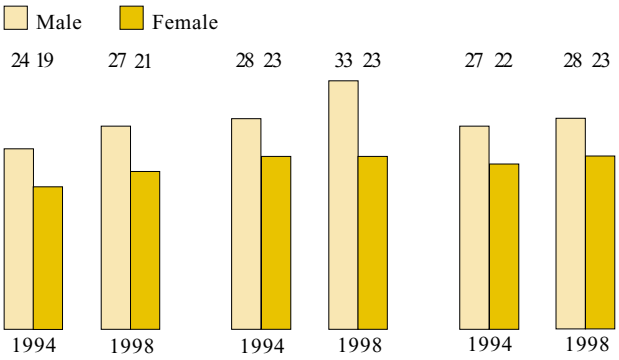
Students who spent time with friends right after school four or five days a week (%)



About one-quarter of our respondents indicated that they spend five or more evenings a week with their friends (see Figure 4.11). Although much of this activity involves organized teams and clubs, a great deal of it is unsupervised by adults. Boys were more likely than girls at all grade levels to spend five or more evenings per week out with friends, and there are relatively small differences between the Grade 6 and Grade 10 students. It is during time spent "hanging around" that health-risk behaviours tend to occur. Guiding their children's free time is an important role for parents. This time can be well spent doing homework and interest activities. For example, music is an important part of adolescent lifestyle, and opportunities to listen or to play music should be made available.

Figure 4.11

Students who spent five or more evenings a week out with friends (%)

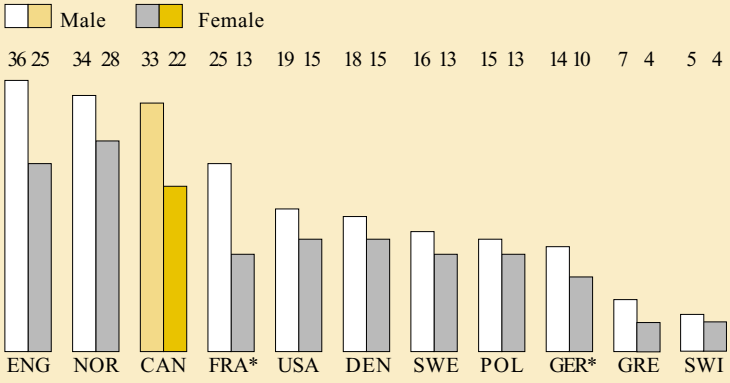


Friends and Health-Risk Behaviours

If a student indicates that most of his or her friends smoke cigarettes or take drugs is he or she also likely to fall into that category? We asked a series of questions about friends' behaviours and attitudes to shed some light on this issue. When smoking behaviour was correlated with perceptions of friends' smoking behaviour it was found that 85 percent who said that most of their friends smoke also smoked themselves and 88 percent of those who said most or all of their friends take drugs also took drugs. However, only 58 percent who said all or most of their friends had been drunk had themselves consumed alcohol to excess.

Figure 4.12

Thirteen year olds who spent five or more evenings a week out with friends by country, 1998 (%)



**France and Germany are represented by regions: see Chapter 1 for details.*

There are substantial differences from country to country on this measure. Spending time in the evening with friends is a more common practice among young people in England, Norway and Canada than in most of the other countries. Surprisingly, there are significant differences between Canada and the United States and between the neighbouring countries of Norway and Sweden.

When Figure 4.13 is compared with the findings on smoking patterns in Chapter 10 it can be seen that about the same proportion of respondents indicated that most of their friends smoke as are smokers themselves. Figure 4.14 illustrates essentially the same relationship between having been drunk and perceptions of friends who had been drunk.

Perhaps more important is the evidence that some students spend time in groups where most or all are involved in health risks. Relatively few students engage in health-risk behaviours when they are not associated with a group of health-risk takers. Health-risk behaviours do appear to take place with friends in settings without adult supervision.

Figure 4.13

Students who indicated most or all of their friends smoke, 1998 (%)

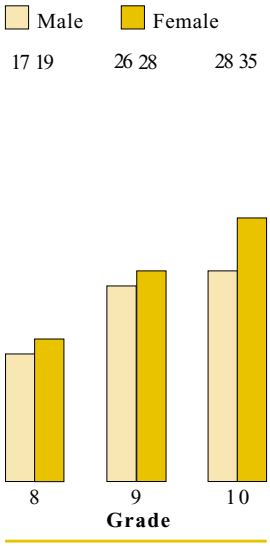
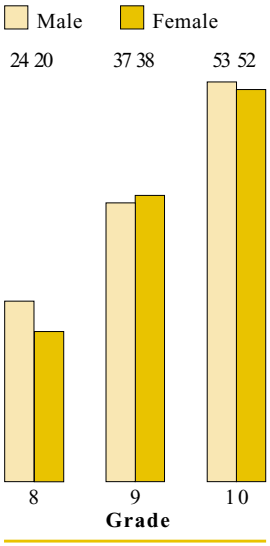


Figure 4.14

Students who indicated most or all of their friends have been drunk, 1998 (%)



Summary

Young people value highly having a group of friends in whom they can confide. When they have such friends they are more likely to have confidence, feel good about school, get along with their parents and, in general, feel healthy. When they do not they are vulnerable to bullying, depression and general unhappiness. The vast proportion of young people had two or more friends, but those who did not were more likely to have not only social adjustment problems, but also mental health problems, and in particular, depression. Most of the respondents found it easy to talk to their same-sex friends and the number who found it was easy to talk to friends of the opposite sex increased gradually from grade to grade.

Time spent with friends in the evenings was found to be associated with involvement in health-risk behaviours such as smoking, alcohol abuse and drug use. It was clear that there were groups of young people who not only shared friendship, but also shared health-risk behaviours. Perceptions of friends' risk behaviours, such as smoking and drug use, were found to be useful indicators of the respondents' risk behaviours.

CHAPTER 5

Coping with Life

During adolescence, young people disengage from their parents' care and assume more independence. In the process, they develop new methods of coping with life. In this chapter, some responses to survey items that indicate how young people cope with the physical and emotional demands of living more independently are examined. The items discussed are designed to assess students' emotional health, their body image and their sleeping patterns.

It can be argued that the mental health of our youth is as important as their physical health. In fact, the two are strongly related in that those who suffer from emotional problems are also more likely to manifest both physical and mental health problems. Mental health can be viewed as the capacity to interact in ways that promote subjective well-being, the use of mental abilities and the achievement of personal goals (Health and Welfare Canada, 1988). To measure the broad concept of emotional health, information is presented on the general happiness of youth, self-esteem and its related elements, and mental health problems indicated by depression, loneliness and sleeping difficulties. For this analysis, items about self-esteem, valuing or taking pride in oneself were combined with those designed to reveal dimensions of respondents' self-concept. The self-concept of adolescents—how they describe their abilities, personality characteristics and relationships—is an important determinant of many other aspects of their life.

Body image is a key concern of adolescents as they go through significant physical and social changes. In particular, rapid growth and hormonal changes may alter youths' perceptions of their bodies. Fitting in with perceived norms of height, weight, attractiveness, and sexual development can preoccupy many students. The majority of youth who do not attain their physical ideal often rely on coping mechanisms to help accept their body image.

Sleep is a restorative process which is necessary for continued health. Sleep disturbance is associated with depression and anxiety among young people, although not to the same extent as it is among adults. Patterns of under and oversleeping may indicate, or be a mechanism to cope with, other health problems.

Health and Happiness

Respondents were asked how they felt about their life with response alternatives "very happy", "quite happy", "not very happy", or "not happy at all". The term "happiness", for subjective well-being, was meant to incorporate a general positive attitude toward life and the absence of worry, anxiety and depression (Robinson et al., 1991). In order to understand more clearly the elements that combine to make young people feel happy, using the 1998 survey data, the items that were correlated with the measure of happiness were examined (see Figure 5.1). In general, happiness is related to young people's relationship with their parents and their adjustment at school, but it also includes the absence of helplessness, loneliness, depression, bad moods and health-risk behaviours. Happy young people tend to have higher self-esteem, including acceptance of body image. There is a relationship between parents' socio-economic status and the extent of youth happiness; that is to say, the better off the students think their parents are, the more likely they are to be happy.

Figure 5.1

Factors associated with feeling happy

Students who feel happy are more likely to	***Grade 6*** M	F	***Grade 8*** M	F	***Grade 10*** M	F
Have a positive relationship with their parents	○	○	○	○	○	○
Not feel depressed	○	○	○	○	○	○
Have high self-esteem	○	○	○	○	○	○
Not feel lonely	○	○	○	○	○	○
Be well adjusted at school	○	○	○	○	○	○
Not feel helpless	○	○	○	○	○	○
Feel healthy	○	○	○	○	○	○
Not have bad moods	○	○	○	○	○	○
Not feel left out	○	○	○	○	○	○
Not want to change their body	○	○	○	○	○	○
Not feel pressured by school work	○	○	○	○	○	○
Not feel their parents expect too much	○	○	○	○	○	○
Not feel tired when they go to school	○	○	○	○	○	○
Achieve higher marks in school	—	○	○	○	○	○
Think their family is well off	—	○	○	○	○	○
Not have been bullied	—	○	○	○	—	○

Correlation coefficient: ○ .15 to .24 ○ .25 to .34 ○ .35 to .44 ○ .45+

Figure 5.2 presents the proportions of students from Grades 6 through 10 who indicated they felt "very happy" about their life. Overall, boys tend to be happier than girls and as is noted throughout the report, are less subject to other stressors. There is a sharp decline from grade to grade in the proportions of young people who feel very happy with their life except for girls in Grades 9 and 10.

Figure 5.2

Students who were "very happy" about their life, 1998 (%)

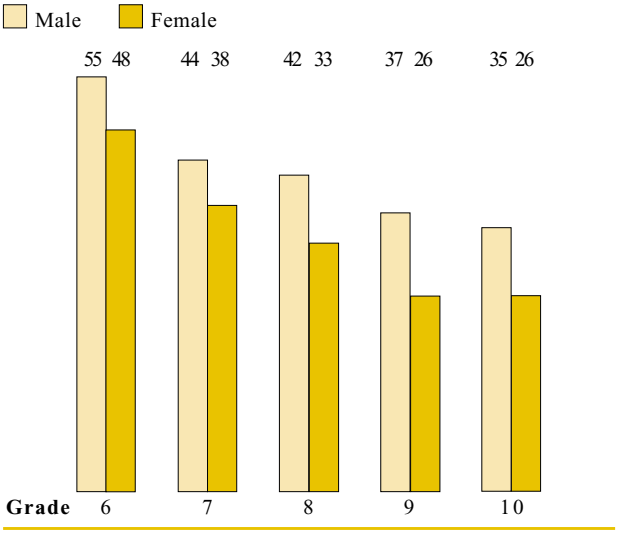
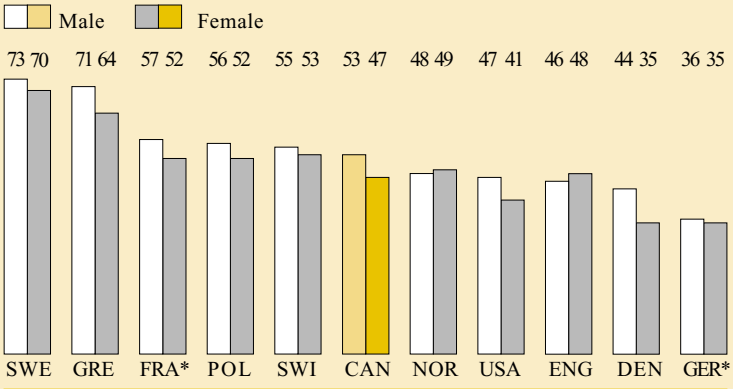


Figure 5.3

Eleven year olds who were "very happy" about their life by country, 1998 (%)



**France and Germany are represented by regions: see Chapter 1 for details.*

Canada was in the mid-range of countries on the happiness measure. Boys in most countries were slightly happier than girls. Interestingly, even though youth in Poland reported poorer health than Canadian youth they also reported being happier.

Self-Esteem

A self-esteem scale developed over a series of surveys included the following items: "I like myself", "I have trouble making decisions", "I'm often sorry for the things I do", "I have confidence in myself", "I often wish I were someone else", "I would change how I look if I could", and "I often have a hard time saying no". This scale has proven to be quite reliable for a scale involving a small number of items, with the reliability coefficients being somewhat higher for the Grade 8 and 10 respondents.

Figure 5.4 presents the relationship between the respondents' self-esteem score and other items on the survey. Those students with higher scores on self-esteem were more likely to have a good relationship with their parents, to be well-adjusted and successful at school and to feel happy and healthy. They were less likely to feel helpless, depressed, lonely, left out; to have bad moods and to be bullying victims.

It must be remembered that self-esteem is typically defined as the value given to aspects of abilities and personality characteristics that young people find most positive (Harter, 1990). Often relationships with peers are given particularly high value even though the peers might be involved in high-risk health behaviours. For example, many young people who are involved with peer groups that share risky behaviours feel quite comforted and supported by such individuals and can feel quite happy.

Confidence

Young people's confidence level has been found to be related to the extent to which they are integrated with their peers and how they feel about their appearance (Torres & Fernandez, 1995; Connolly & Konarski, 1994; Connor, 1994; Fox et al.,1994).

Figure 5.4

Factors associated with self-esteem

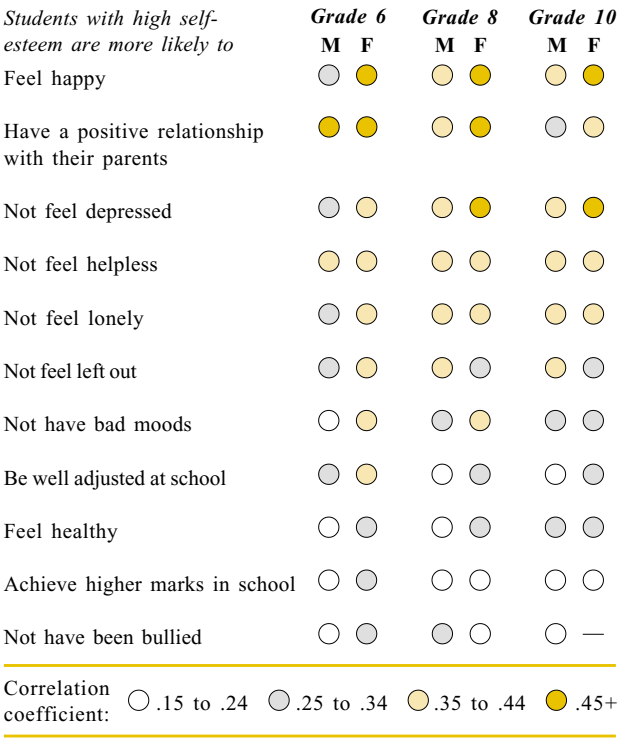
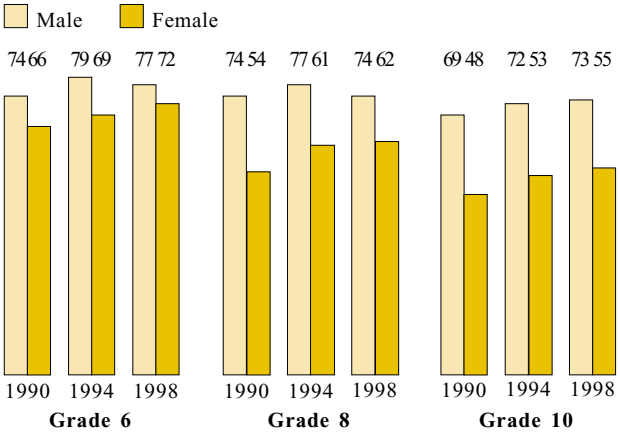


Figure 5.5

Students who had confidence in themselves (%)



For girls, feelings about their appearance strongly determine their level of confidence. Confidence tends to be linked to a capacity to handle stress, to have good relationships at home and at school as well as with peers, and to feel generally happy. Figure 5.5 indicates that, as is so often the case, students' positive feelings about themselves seem to decline with age and confidence is no exception. Boys tend to be more confident than girls. Girls' confidence declines more sharply than boys from Grade 6 to Grade 10.

I like myself.

In spite of concerns about relationships and personal characteristics, the vast majority of young people say they like themselves (see Figure 5.6). This is an important finding because it indicates an essential element in emotional and psychosocial development. Over time, we integrate our self-perceptions in such a way that we accept who we are. There is no significant shift from grade to grade in the proportion of students who say they like themselves, and when this process is followed into early adulthood, it has been shown that by the time they are 20 years old nearly all young people say they like themselves (King et al., 1988).

I often wish I were someone else.

Even though young people evidently learn to accept who they are, a substantial number agreed with the statement, "I often wish I were someone else" (Figure 5.7). Far more girls than boys felt this way, but interestingly, the proportions changed little from grade to grade. For girls in particular there was a decline over the three surveys in the proportion who wished they were someone else. This may indicate a recent general increase in girls' self-esteem, regardless of other health and social indicators.

Figure 5.6

Students who liked themselves (%)

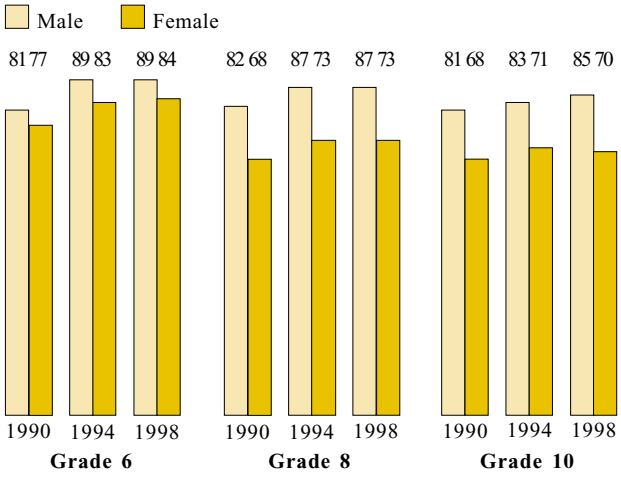
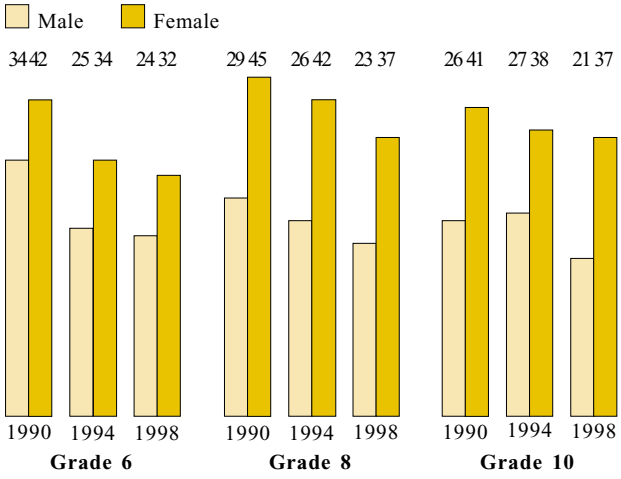


Figure 5.7

Students who often wished they were someone else (%)

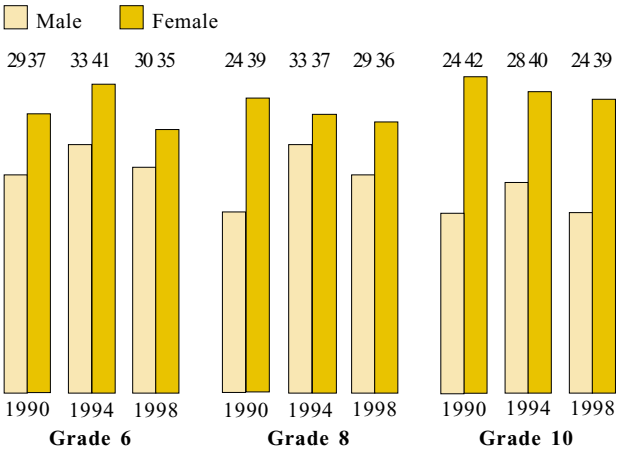


Making Decisions

The item "I have trouble making decisions" is an important component of the self-esteem scale and was designed to reflect uncertainty and feelings of helplessness in planning for the future or making decisions about roles and relationships. Figure 5.8 shows that the proportion of young people who agreed with the statement declined over the last two surveys. Girls were more likely than boys to agree with the statement and this difference increased distinctly in Grade 10. Similar to the previous item about wishing to be someone else, there has been a slight decrease in decision-making uncertainty for both boys and girls in recent years.

Figure 5.8

Students who had trouble making decisions (%)



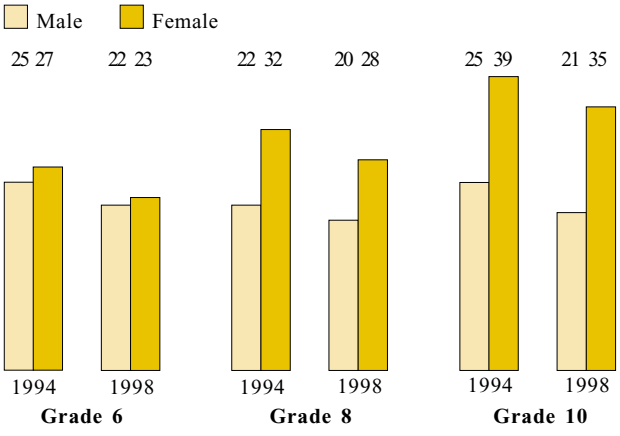
Mental Health

Depression

Depression can be highly variable in occurrence, ranging from a general feeling of sadness to thoughts of suicide (Dixon, 1987). There are gender differences in the way young people respond to depression. Girls tend to become uncomfortable about their physical characteristics; they lose their appetite and feel generally unhappy (Baron and Campbell, 1993). Boys are more likely to become irritable and easy to anger. They tend to withdraw from their friends and have sleeping problems. Bouts of depression seem to be associated with family problems and a lack of friends (Portegijs et al., 1996).

Figure 5.9

Students who felt depressed once a week or more during the last six months (%)



About a quarter of all respondents indicated they had felt depressed once a week or more during the past six months, consistent with other studies on depression in young teens (Figure 5.9). Girls are more likely than boys to have felt depressed with the differences becoming greater from grade to grade. In fact, there is very little difference in the proportion of boys who experienced depression from grade to grade, while girls show a steady and substantial increase from Grade 6 to Grade 10. There was a

slight decline in the proportion of young people with weekly bouts of depression from the 1994 to the 1998 survey.

Loneliness

Adolescence is a period of life when the peer group takes on great importance for self-validation and shared activity. However, for those young people who are not socially integrated, it is a particularly difficult time. One of the factors contributing to the relatively high proportions of Canadian youth who feel isolated by the time they are in secondary school is the way schools are organized and the manner in which classes are taught. The composition of classes changes from subject to subject and each subject is usually taught by a different teacher. There is little opportunity in these circumstances for stable social structures to form. Many students attend large composite secondary schools and are bussed in from nearby communities which makes becoming socially integrated especially difficult. To teachers, students may appear well adjusted, although they may have no close friends.

When the factors associated with loneliness are examined (Figure 5.10), it can be seen that there are groups of factors that seem to have precipitated or contributed to students' feeling lonely and factors that seem to be outcomes that flow from their isolation. Concerns about body image, poor relationships with parents, having been bullied, a sense of helplessness, and lack of confidence, seem to have contributed to their isolation. Ailments, such as headaches, depression and backaches, seem to be related to their being lonely. The vulnerable, isolated student is an easy target for bullies, and therefore, it is not surprising to find that lonely students were far more likely to have been bullied than those who were fully integrated with their peers.

Figure 5.10

Factors associated with feeling lonely

Students who are lonely are more likely to	*Grade 6* M	*Grade 6* F	*Grade 8* M	*Grade 8* F	*Grade 10* M	*Grade 10* F
Feel depressed	○	○	○	○	○	○
Feel unhappy	○	○	○	○	○	○
Feel helpless	○	○	○	○	○	○
Have a negative relationship with their parents	○	○	○	○	○	○
Lack confidence	○	○	○	○	○	○
Want to change their body	○	○	○	○	○	○
Have bad moods	○	○	○	○	○	○
Have been bullied	○	○	○	○	○	○
Not be well adjusted at school	○	○	○	○	—	○
Feel pressured by school work	○	○	○	○	○	—
Have backaches	○	○	—	○	—	○
Have stomachaches	—	○	○	○	—	○
Have headaches	—	○	—	○	—	○
Feel unhealthy	—	○	—	○	—	○

Correlation coefficient: ○ .15 to .24 ○ .25 to .34 ○ .35 to .44 ○ .45+

Girls are far more likely than boys to feel lonely (Figure 5.11). About one-fifth of girls at all grade levels indicated that they very often or rather often feel lonely. More boys in the 1990 survey indicated they often feel lonely than was the case for the other two surveys.

Figure 5.11

Students who "very often" or "rather often" felt lonely (%)

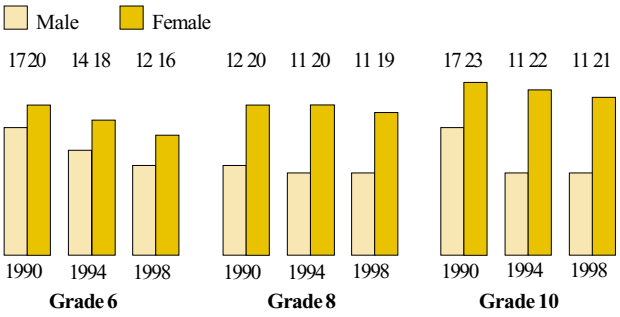


Figure 5.12

Students who "often" or "always" felt helpless (%)

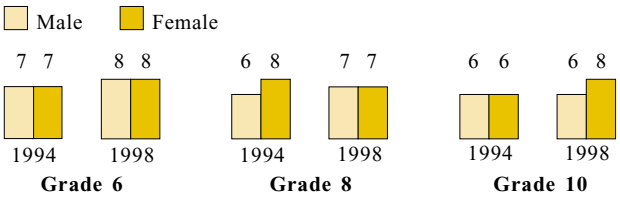
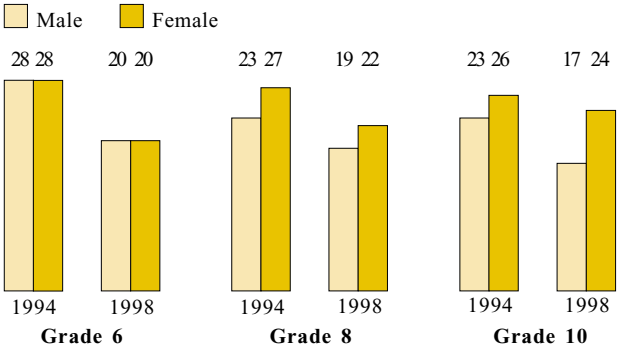


Figure 5.13

Students who were in a bad mood (irritable) more than once a week during the last six months (%)



Feeling Helpless

The concept of feeling helpless was introduced into the theoretical framework of the study because it seemed to be a powerful predictor of social adjustment problems. Students who feel helpless have difficulty making important career decisions and feel particularly vulnerable with regard to their capacity to shape their lives. Feeling helpless or powerless has been shown to be linked to poor social integration (Robinson et al., 1991, King et al., 1996). Feeling helpless may result from strains at home, especially those related to parental separation and the lack of a consistent framework of discipline (Resnick et al., 1998). Figure 5.12 indicates Canada has relatively few young people who "often" or "always" feel helpless. There are few or no gender differences on the measure.

Irritability

Periods of bad moods or irritability have been found to be linked to health-risk behaviours, such as smoking and drug use, and to health problems, such as sleeplessness and depression (Hill, 1994). About one-quarter of the girls and a slightly smaller proportion of the boys indicated that they were in a bad mood more than once a week. There was a slight decline in the proportions from the 1994 to the 1998 survey.

Body Image

Changing Body Appearance

Body image was addressed with items that asked about self-perception of body size and appearance as well as the desire to change one's body. These items may be related to a perceived need to diet.

Between one-third and three-quarters of students across the grade, survey year and gender groups indicated there was something about their body that they would like to change (Figure 5.14). Females in all groups were more likely than males to respond this way. This pattern was similar on both surveys. The proportions of males and females increased with age and levelled off in Grades 9-10 where about half the males and three-quarters of the females wanted to alter at least one aspect of their appearance (Figure 5.15).

Figure 5.14

Students who responded yes to the question "Is there anything about your body you would like to change?" (%)

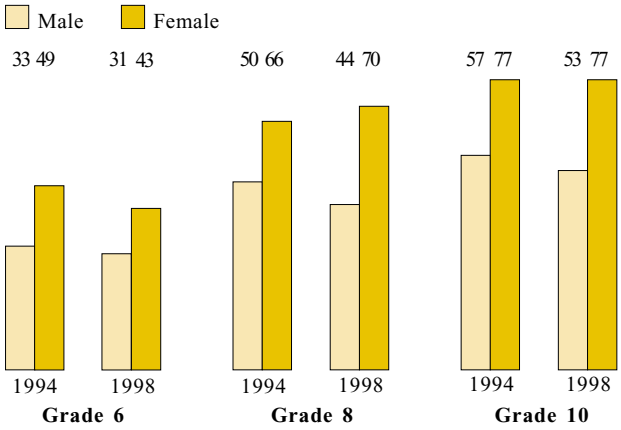
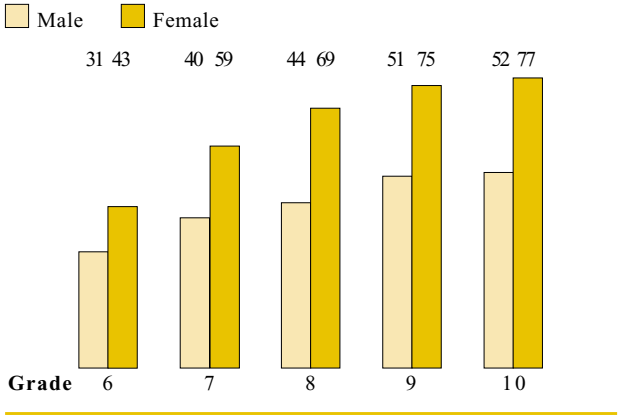


Figure 5.15

Students who responded yes to the question "Is there anything about your body you would like to change?" 1998 (%)



Body Size

When asked to rate their satisfaction with their body size, more males than females felt their body was about the right size (Figure 5.16). Differences between the 1994 and 1998 samples were small. Males in the higher grades were as likely to feel too thin as too fat. Females who were unhappy with their weight, for the most part, felt they were overweight. The proportions of students satisfied with their body size declined steadily from Grade 6 to Grade 9 and levelled off between Grades 9 and 10 (Figure 5.17).

Figure 5.16

Students who felt their body is about the right size (%)

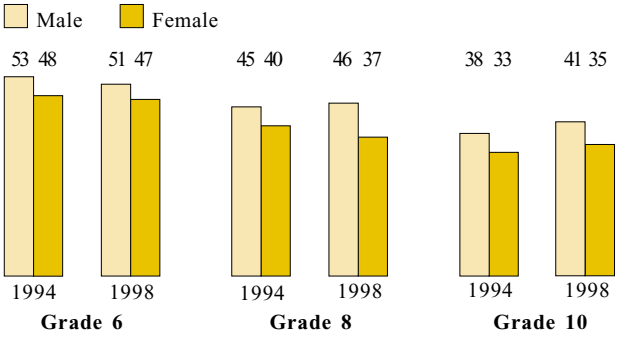


Figure 5.17

Students who felt their body is about the right size, 1998 (%)

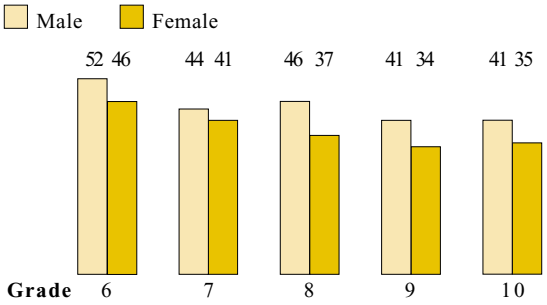
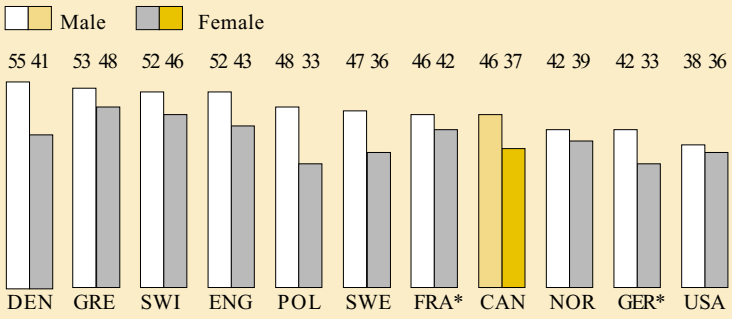


Figure 5.18

Thirteen year olds who felt their body is about the right size by country, 1998 (%)



**France and Germany are represented by regions: see Chapter 1 for details.*

Females reported more dissatisfaction with their body than males, but in some countries (the United States, France, Norway and Greece) these differences were minimal. For boys, satisfaction ranged from a high of 55 percent in Denmark to a low of 38 percent in the United States. For girls, satisfaction was greatest in Greece and least in Poland and Germany. Canada ranked in the middle on this measure.

Attractiveness

As with most questions regarding appearance, females were more negative than males when asked to rate how good looking they are (Figure 5.19). More females than males felt they are not very, or not at all, good looking, with 21 percent of female Grade 10 students responding this way in 1998. The differences among males from year to year were small, but females in 1998 were slightly more likely to feel they are not good looking than females in the 1994 sample. There is a sharp increase in the proportion of females who felt negative about their looks from Grade 6 to Grade 8, although this appears to level off after Grade 8 (Figure 5.20).

Figure 5.19

Students who felt they are "not very" or "not at all" good looking (%)

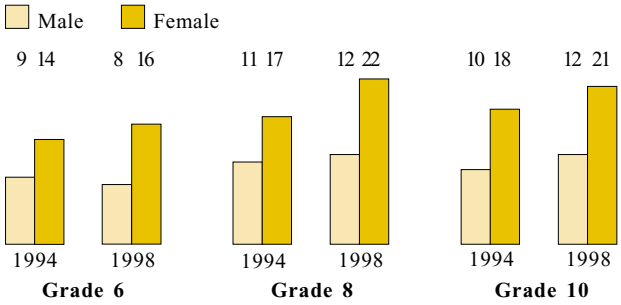
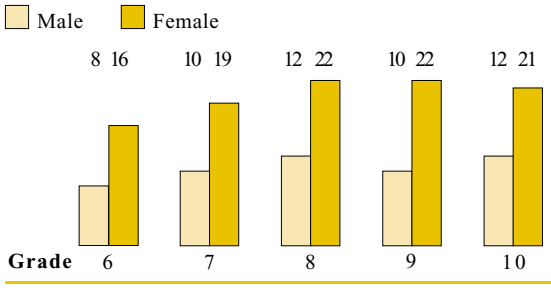


Figure 5.20

Students who felt they are "not very" or "not at all" good looking, 1998 (%)



Difficulty Sleeping

Students who often have difficulty sleeping may be reacting to problems in their social relationships (Wright and Wright, 1992). Figure 5.21 indicates that about 25 percent of youths reported difficulties getting to sleep. Gender differences appeared in Grade 8, with girls having increased difficulty and boys having less difficulty. There may be hormonal, physical activity, or social explanations for these gender differences. Alternately, sleep difficulties may be due to school stress or to involvement in multiple extracurricular activities. There do not appear to be marked changes in these patterns from 1994 to 1998.

Feeling tired in the morning may be the result of going to bed late or due to disrupted or inconsistent sleep. Figure 5.22 indicates that boys report slightly more morning fatigue than girls and that this trend peaks at Grade 9. In some regions, school scheduling has been altered such that some students must start school by 8:00 a.m. It is not surprising that some students begin school tired given the early school starting times and the long bus ride to school. The 1994 HBSC study suggested that some young people feel tired in the morning because they find attending school stressful (King et al., 1996). Figure 5.1 indicates a low, but positive, association between feeling happy and not feeling tired at school in the morning.

Figure 5.21

Students who had difficulty getting to sleep more than once a week, 1998 (%)

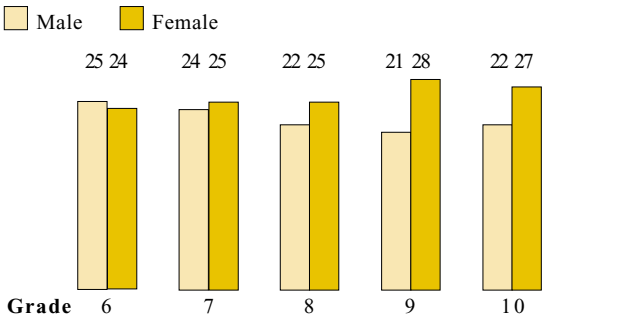
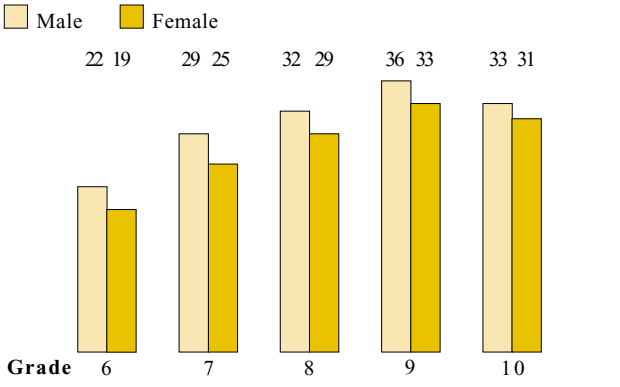


Figure 5.22

Students who were tired in the morning four or more times a week, 1998 (%)



Summary

A general sense of well-being was found to be strongly related to a positive relationship with parents, satisfaction with school and involvement with a group of friends with whom the students could share confidences. Unhappy youth were also likely to be lonely, depressed, feel helpless, irritable and dissatisfied with their body image. Sadly, evidence of a sense of well-being declined from Grade 6 to Grade 10 among both boys and girls.

Boys scored consistently higher on self-esteem than did girls, with little variation across the age groups. About three-quarters of the respondents indicated they were generally happy with who they are, although substantial numbers of girls in particular stated that they wish they were someone else.

The number of respondents who indicated they felt depressed once a week or more in the previous six months was noticeably high, especially for Grade 10 girls. Since periods of depression can lead to serious mental illness and/or suicide, this finding indicates a need for prevention programs. About 20 percent of girls at all grade levels often felt lonely, but only about half as many boys by Grade 10 felt this way. Increased opportunities for social interaction in school settings might help to reduce these numbers.

Girls were far more likely than boys to say there was something about their body they would like to change, with the numbers increasing sharply from grade to grade. By Grade 10, over three-quarters of the girls and half the boys agreed with this statement. Girls were nearly twice as likely as boys to say they were not very or not at all good looking. It is clear that girls struggle more than boys with issues related to body image.

Finally, sleeping difficulties are a problem for a significant minority of young people. Girls report more problems in getting to sleep while boys report more tiredness in the morning.

CHAPTER 6

Health, Illness and Medication

Although adolescence is characterized by dramatic changes in physical and social development, it is not commonly viewed as a period when illness and use of medication is commonplace. However, this view does not seem to be accurate. The ailments of young people can originate from the stress and anxiety caused by developmental changes and those aspects of adolescent life related to social adjustment and career decision making (Hechinger, 1994). Stress-related symptoms frequently take the form of recurrent headaches, backaches and abdominal pain. The survey elicited from respondents' self-reports of these health problems, and general perceptions of their health. These data are suitable for understanding the subjective experience of health, which underlies various health-enhancing or risk behaviours.

In this chapter, the relationship between a general feeling of health and other health-related variables, such as family and school relationships, nutrition and risk behaviour are examined. Also examined are trends in health problems, chronic illnesses and the medications used to deal with them. In previous reports, it was noted that Canadian youth, and particularly girls, tended to be more likely than youth in other countries to say they had headaches and backaches. They were also more likely than youth in other countries to take medication for their ailments. When it came to their general feelings about their health, Canadian youth fell in the middle range compared to other countries with young people from Israel, France and Sweden being close to the top. Not surprisingly, youth from the Eastern European countries were more likely to see themselves as less healthy. It is difficult to know whether adolescent strains cause problems with educational achievement and family relationships or are an outcome of them.

Figure 6.1

Students who felt very healthy, 1998 (%)

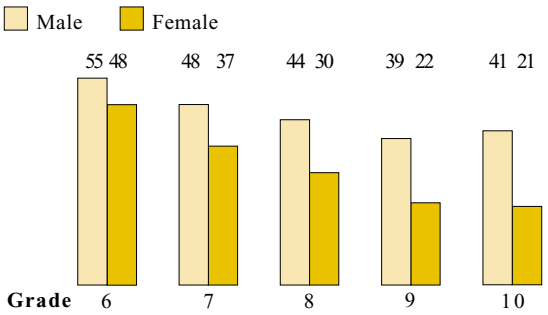


Figure 6.2

Factors associated with feeling healthy

Students who feel they are healthy and are more likely to	*Grade 6* M	F	*Grade 8* M	F	*Grade 10* M	F
Feel happy	○	○	○	○	○	○
Have high self-esteem	○	○	○	○	○	○
Have a positive relationship with their parents	○	○	○	○	○	○
Eat breakfast daily	○	○	○	○	○	○
Exercise more often	○	—	○	○	○	○
Be well adjusted at school	○	○	—	○	○	○
Not feel depressed	○	○	○	○	—	○
Achieve higher marks in school	—	○	○	○	○	○
Have a good diet	—	○	○	○	○	○
Not feel helpless	—	○	○	○	—	○
Not feel left out	○	○	—	○	—	—
Not feel lonely	—	○	—	○	—	○
Not have bad moods	—	○	—	○	—	○
Not smoke	—	—	—	—	○	○

Correlation coefficient: ○ .15 to .24 ○ .25 to .34 ○ .35 to .44 ○ .45+

General Health

Gender influences on general health are particularly strong between Grades 6 and 10. Significantly lower proportions of the girls surveyed in 1998 felt very healthy (Figure 6.1).

Over the three surveys there was a steady increase for the Grade 6 students and the Grade 8 girls in the proportion indicating they felt very healthy. There were few changes for the other groups over this time frame. This is a positive trend in that younger youth are feeling better about their general health, which may sustain them through the stressful teen years.

Figure 6.2 summarizes the relationship between feeling healthy and other health factors using the 1998 survey data. Health and happiness appear to go hand in hand. These findings corroborate the positive relationship between self-reported views of health and family relationships found in other research (Fisher et al., 1987, 1991). Fisher found that family organization (coherence) displayed the most consistent associations with adolescent ratings of general well-being. Family coherence was linked with emotional and physical well-being for boys and with emotional well-being and low anxiety scores for girls. The sense of feeling close and involved with family, especially with parents, was most important for female adolescents in terms of their reported health and well-being.

High self-esteem and a tendency not to feel helpless, depressed or lonely are also important dimensions in the broad concept of general health. Not surprisingly, feeling good about school and obtaining higher marks are also part of feeling healthy. Also, by Grade 10 those that feel healthy are less likely to smoke and engage in other health-risk behaviours.

Canadian youth, both boys and girls, are in the middle range of youth in countries reporting that they feel very healthy. Lower proportions of girls than boys in all countries report being healthy.

Health Problems

Minor physical ailments are common in adolescence and cumulative stress frequently plays a role in their development and maintenance (Greene and Walker, 1997). Headaches, infections, stomachaches, dizziness and tiredness are the most common complaints of students in the high school nurse's office (Schneider et al., 1995). Students often indicate that "not sleeping well" and "stress" most frequently play a role in their visits. Specific complaints of headache, dizziness or tiredness are associated with not sleeping well, family problems, stress, school problems and depression.

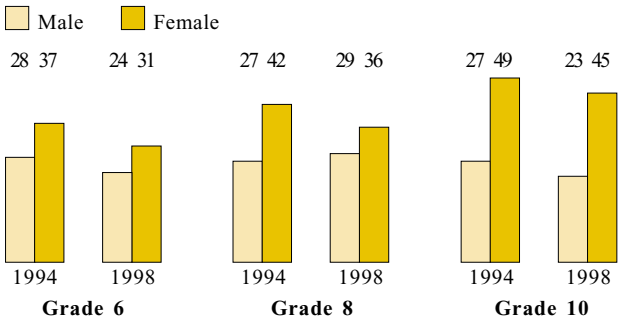
The frequency at which students have various minor ailments can be a useful indicator of students' physical and emotional health. On the 1994 and 1998 surveys students were asked how often they had experienced headaches, stomachaches, backaches and nervousness during the past six months. They were given the following response alternatives: "most days", "more than once a week", "about once every week", "about once every month" and "seldom or never".

Headaches

Figure 6.3 presents the percentages of students who indicated they had headaches once a week or more. More girls than boys at all three grade levels indicated they had at least weekly headaches. For all groups, except boys in Grade 8, there were slight declines in the proportion who indicated they had weekly headaches over the two surveys.

Figure 6.3

Students who had a headache once a week or more during the last six months (%)



There were small differences for the boys from grade to grade, but there were clear increases for the girls, which levelled off after Grade 9. About one-third of the boys in each of the grades seldom or never had headaches. This proportion was less for girls at each grade level and declines steadily to a low of one-fifth in Grade 10. Headaches have been shown to be related to variations in the quality of life with more headaches coinciding with a lower quality of life (Langeveld et al., 1997).

Backaches

With the exception of the Grade 10 students in 1994, where girls were more likely to experience backaches at least monthly, boys and girls were quite similar in reporting backaches (Figure 6.4). Backaches in both boys and girls may be associated with exercise, posture and rapid growth, while in girls they also may be associated with menstrual physiology.

For both boys and girls, the proportions having monthly backaches increased in each of the three grade groups from 1994 to 1998, though to a lesser extent for the Grade 8 students. For both boys and girls, there was a gradual increase in the proportions experiencing backaches from Grades 6 to 10, with the overall increase being greater for the females.

In 1998 slightly higher proportions of Grade 6 boys than girls experienced weekly back pain. This pattern reversed as the grade increased, with the girls being proportionally more likely to experience back pain regularly from Grade 8 onwards.

There is a substantial body of research on backaches because it is one of the major factors for adult absenteeism from work and for general difficulties with meeting life requirements (Linton, 1998). By age 16, the frequency of low back pain was found to be very similar to the level found in adults (Burton, 1996). The relatively high incidence of weekly back problems found in our sample suggests a fundamental need for both remediation and an exercise program which young people can take into adulthood.

Figure 6.4

Students who had a backache once a month or more during the last six months (%)

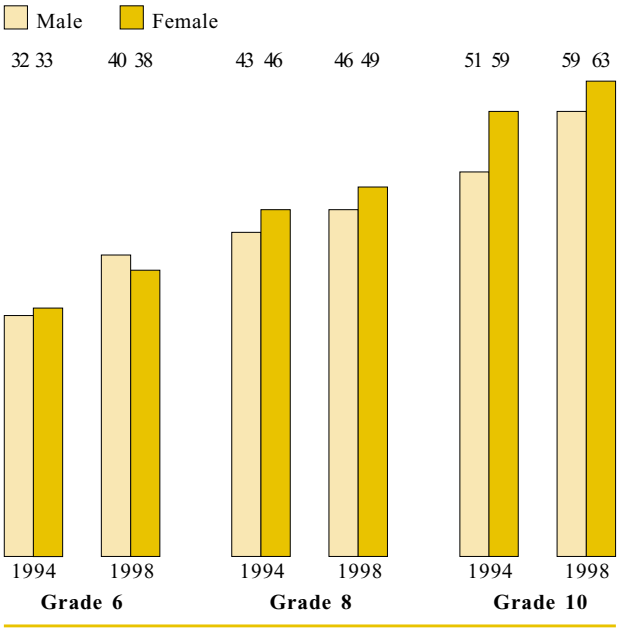
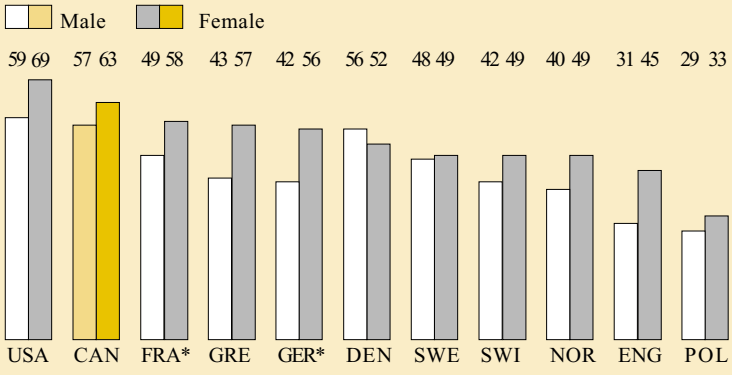


Figure 6.5

Fifteen year olds who had a backache once a month or more in the last six months by country, 1998 (%)



**France and Germany are represented by regions: see Chapter 1 for details.*

Canada ranks second highest in the proportion of young people who had backaches at least monthly, with only the American youths being higher. There was no common pattern of gender difference across the countries. It is difficult to understand why countries such as England would be so much lower than Canada on this measure.

Medication

Medication is the most commonly used form of treatment for adolescent pain and illnesses. Self-medication is known to increase during adolescence (Chen, 1993). Students were asked about their medical use of prescription and over-the-counter medications for general ailments.

Where gender differences occur in the use of medicine for a cough, girls were the higher group, though in most years and grade-level group differences were small (Figure 6.6). Differences from 1990 to 1998 tended to be small.

Girls were much more likely than boys to have used medicine for colds in the last month, particularly in the two higher grade levels (Figure 6.7). Differences across years and grades were small.

Figure 6.6

Students who used medicine for a cough in the last month (%)

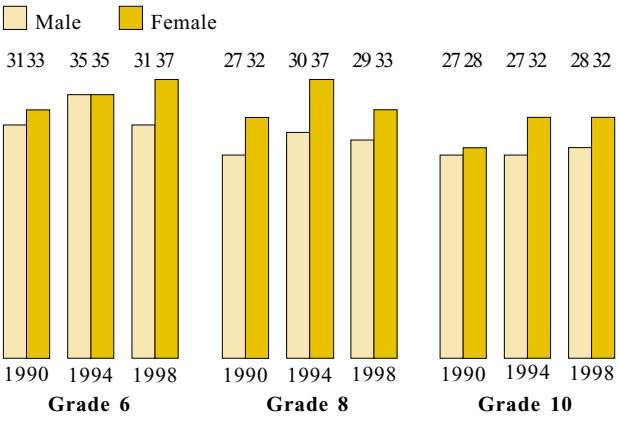
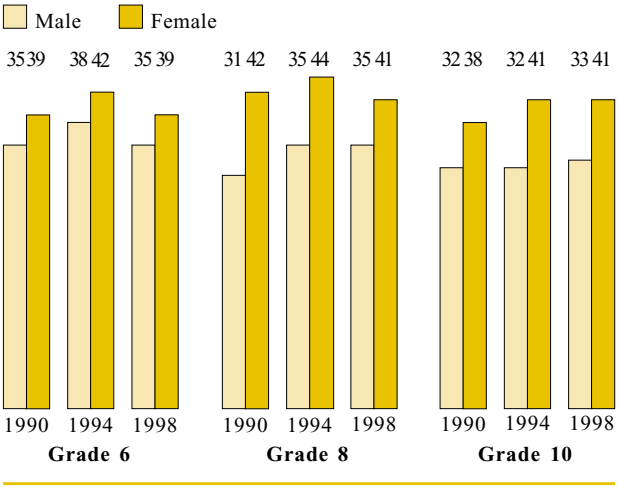


Figure 6.7

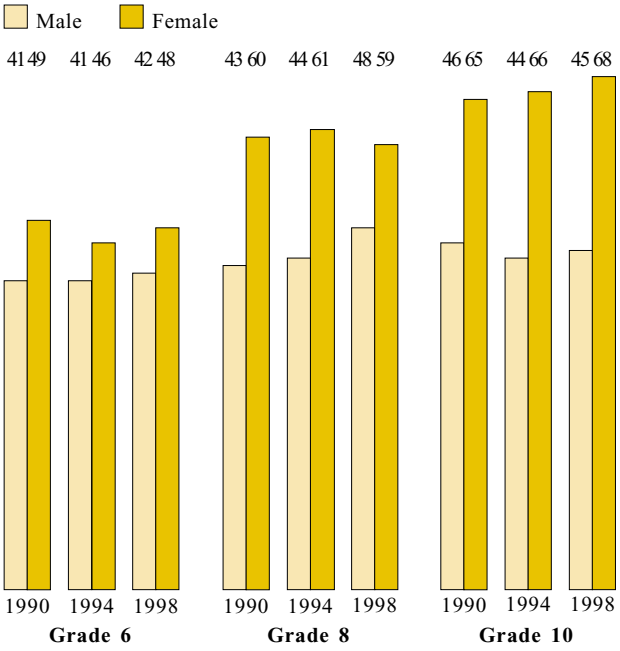
Students who used medicine for a cold in the last month (%)



Girls were much more likely to use headache medication than boys (Figure 6.8). The differences were greater as grade levels increased, as did the proportion of females using headache medication. Differences across surveys were small, as were the differences across grade levels for the males.

Figure 6.8

Students who used medicine for a headache in the last month (%)



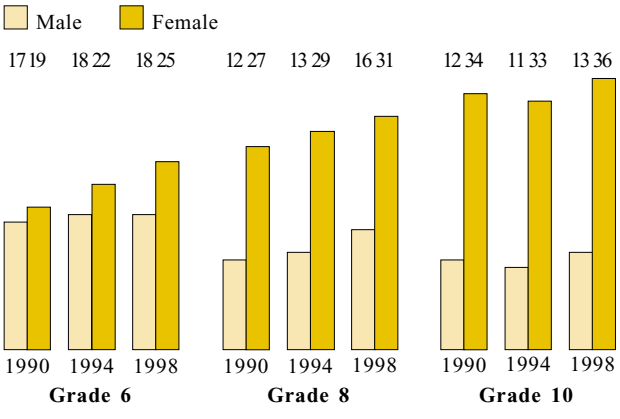
Girls were much more likely to use stomachache medication than boys (Figure 6.9). Differences were greater in higher grades as was the proportion of girls using stomachache medication. For girls, the use of stomachache medication increased from 1990 to 1998 for the lower Grades 6 to 8, but not for the Grade 10 students.

For males, the differences across time were not significant with the exception of Grade 8 students where usage increased over time. In 1990 and 1994, the Grade 6 males were more likely to use stomachache medication than the higher grade groups, but this pattern was not evident in 1998.

For all physical health problems, females used more medications than males. This trend increased with age more for stress-related problems (headache, stomachache) than for immunity-related problems (cough, cold). This indicates that girls may be experiencing more stress than boys.

Figure 6.9

Students who used medicine for a stomachache in the last month (%)



Illness and Medical Conditions

Although the literature suggests that serious and chronic illnesses affect approximately 10 to 30 percent of the adolescent population, more adolescents are at risk for death and poor health outcomes that are not primarily biomedical in origin (Bauman et. al., 1997). The social morbidities (suicide, homicide, depression, injuries, substance abuse, sexually transmitted diseases, unintended pregnancy and HIV/AIDS) are primarily the result of the social environment and/or behaviour. Medical and social science research reveals two disturbing trends (Gans et al., 1990). First, many health

problems are affecting adolescents at younger ages, and second, many adolescents are simultaneously involved in several health-threatening behaviours, such as smoking and alcohol use.

In the 1998 survey, students were asked to indicate if they have a long-term illness or medical condition (Figure 6.10). Between one-quarter and one-third of males and females in each of the five grades responded yes.

The most prevalent illnesses or medical conditions in the total sample are allergies (15%), asthma (12%), hearing difficulties (1%), endocrine conditions (0.7%), persistent headaches/migraines (0.6%), cardiac problems (0.4%) and difficulties with vision (0.4%). There are no differences between boys and girls in Grades 6 and 7, although differences appear in Grades 8, 9 and 10. Differences across the grades were small for males, though there was a gradual increase in medical conditions for females from Grade 6 to Grade 9. These findings show that females are reporting increased health conditions that are not related to injury. Although males do not report increased chronic health problems, they do report increased injuries as they get older (Figure 9.1).

Figure 6.10

Students who had a long-term illness or medical condition, 1998 (%)

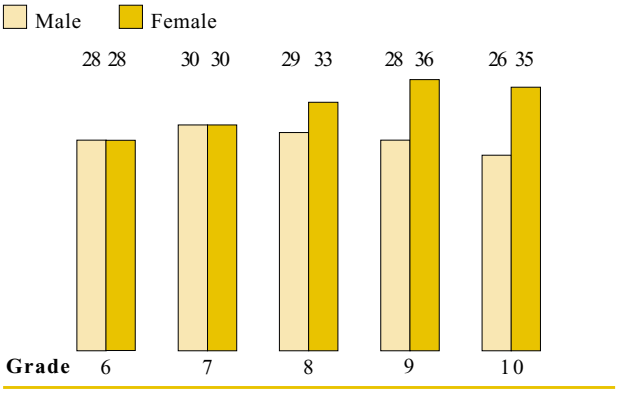
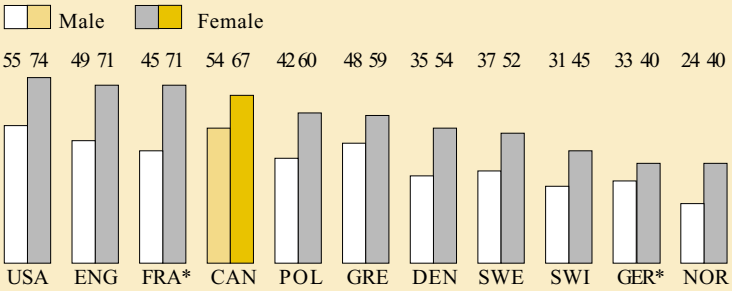


Figure 6.11

Thirteen year olds who had used medication for a headache, a stomachache, dizziness or sleeping difficulties in the past month by country, 1998 (%)



**France and Germany are represented by regions: see Chapter 1 for details.*

Canadian students were among the heavier users of medication across the sample countries. Girls were more likely to use medication in all countries. Reasons for the smaller proportions of Scandinavian, Swiss and German youth who use medication are not clear.

Summary

Students' perceptions of their general health were found to be associated with regular exercise, a good relationship with their parents, self-confidence, a positive attitude towards school, a good diet, positive relationships with peers and acceptance of body image. Boys were more likely to feel healthy than girls, and there was a general decline in perceptions of health from grade to grade. Headaches were very common among young women and increased as they advanced through the grades. This was also the case with backaches, except that gender differences were relatively small. There was a surprisingly high number of students who indicated they had regular backaches, suggesting a cause for concern in the future. Canadian youth are more inclined to use medications than those from other countries, Canadian girls in particular. Overall, girls were far more likely than boys to use medication.

Approximately one-third of the girls surveyed in 1998 indicated they had a long-term illness or medical condition. The figures were slightly lower for boys in Grades 8, 9 and 10. Allergies and asthma were the most common conditions reported.

CHAPTER 7

Healthy Eating, Dieting and Dental Hygiene

Healthy eating contributes to physical and emotional well-being which, in turn, significantly affects many other areas of students' lives. Adolescents are particularly susceptible to poor eating habits as they assert themselves and become more independent from parents and teachers. While healthy eating has been recognized in Canadian elementary school curricula for decades, it receives little attention in secondary schools. As our society continues the practice of dining out and using convenience foods at home, it is particularly important to monitor student eating and body image trends.

The specific food items mentioned in the survey were not intended to provide a comprehensive picture of young people's eating patterns, but to provide information on some specific foods that are more or less nutritious. Food items were selected as being more nutritious because they provide fibre, vitamins or other important nutrients (fruit, vegetables, low fat milk, whole-wheat breads) or less nutritious if eaten frequently because they are high in fat, salt and sugar (potato chips, hamburgers, hot dogs, whole milk).

The questionnaire items on food habits were selected to address frequency of consumption, rather than food quantity; it was assumed that students ate average portions on most occasions. Students were asked how often they eat or drink several foods and drinks. They responded using the categories "never", "rarely", "at least once a week, but not every day", "once a day" and "more than once a day".

A second major nutritional issue concerns dieting. There is widespread concern about excessive dieting, especially among young females, in Canadian society. At the same time, there are concerns about the effects of obesity on long-term health.

The chapter begins with a focus on healthy eating habits. The consumption of less-nutritious foods, having breakfast regularly and dieting patterns are then addressed. Finally, the dental hygiene habits and oral health of Canadian youth are considered.

Nutritious Foods

Psychosocial correlates of low intake of fruit and vegetables among adolescents include low family connectedness, dissatisfaction with weight, poor academic achievement and health-compromising behaviours such as binge eating, substance abuse and past suicide attempts (Neumark-Sztainer et al., 1998). Although advertising nutritious foods has increased, the popular media gives less attention to them than to snack foods. For this section of the report the response alternatives "once a day" and "more than once a day" have been combined in the figures under "daily".

Figure 7.1

Students who ate fruit and vegetables daily (%)

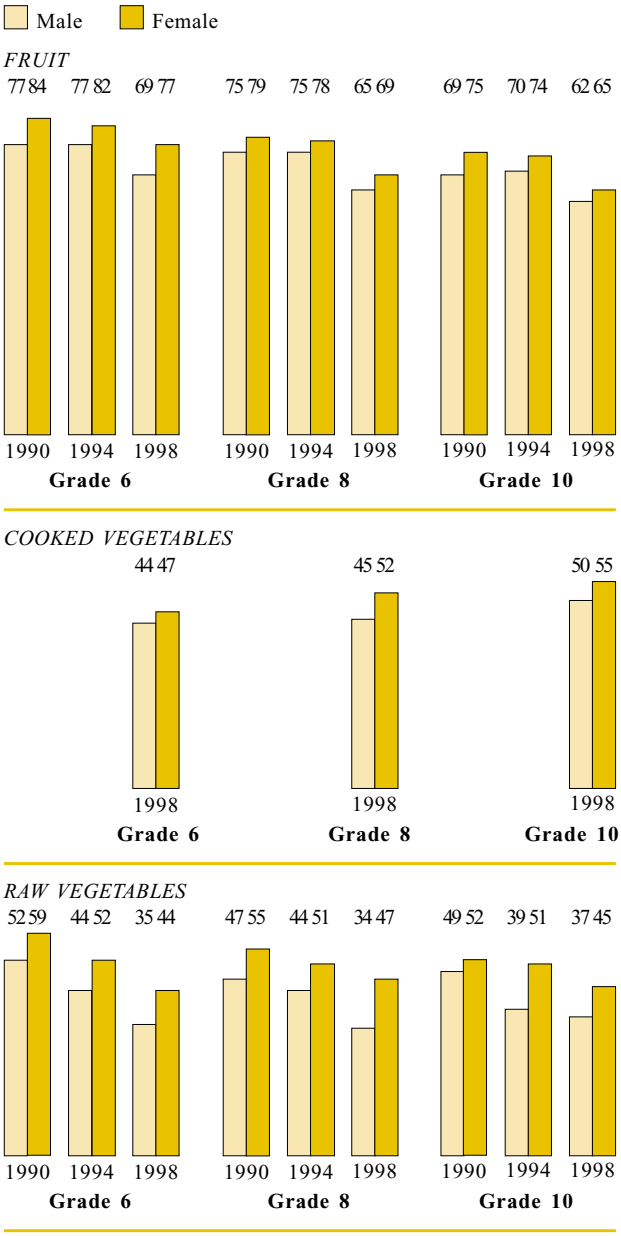


Figure 7.1 shows that a greater proportion of females ate fruits and vegetables daily. In each of Grades 6, 8 and 10, the proportions of both males and females eating fruit daily declined slightly from 1994 to 1998. Generally, females ate more nutritious foods than males, except for whole-wheat breads and low fat milk.

In the 1998 study, students were asked how frequently they eat cooked vegetables. Daily consumption generally increased across Grades 6 to 10 and higher proportions of females ate cooked vegetables daily. Daily consumption of raw vegetables has declined over time for all groups. There is no consistent pattern across the grades, and in most cases differences across the grades were quite small.

Students were asked about their consumption of whole-wheat or rye bread in the 1994 and 1998 studies. Slightly more males than females ate whole-wheat breads daily (Figure 7.2). For the Grade 6 students, there was a decline in the proportions eating whole-wheat or rye bread daily from 1994 to 1998. There was also a slight decline for both males and females from Grade 6 to Grade 10.

Between two-thirds and three-quarters of each of the grade groups responded that they drink low fat milk daily. Where gender differences occurred, proportionally more males were daily low fat milk drinkers. For Grade 6 and Grade 10, low fat milk consumption increased in 1994, but dropped again in 1998.

Figure 7.2

Students who ate whole-wheat or rye bread and drank low fat milk daily (%)

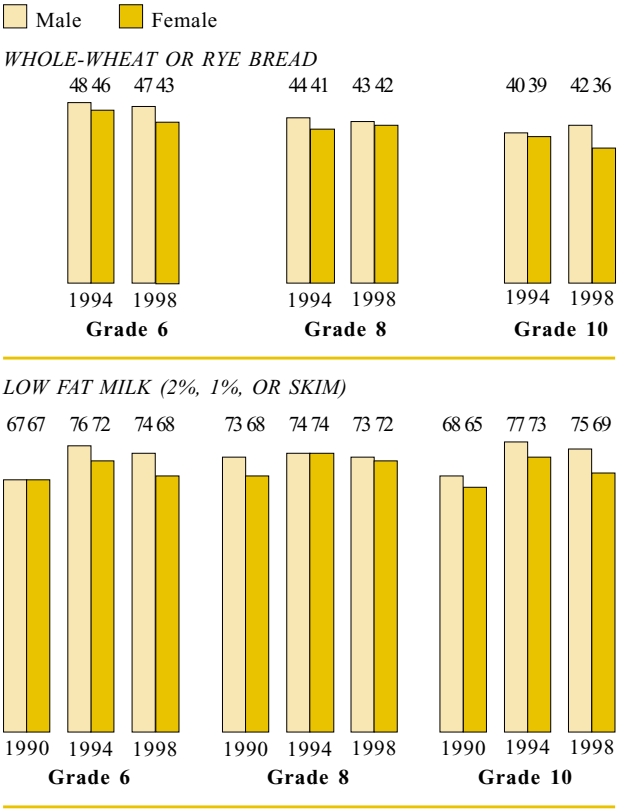
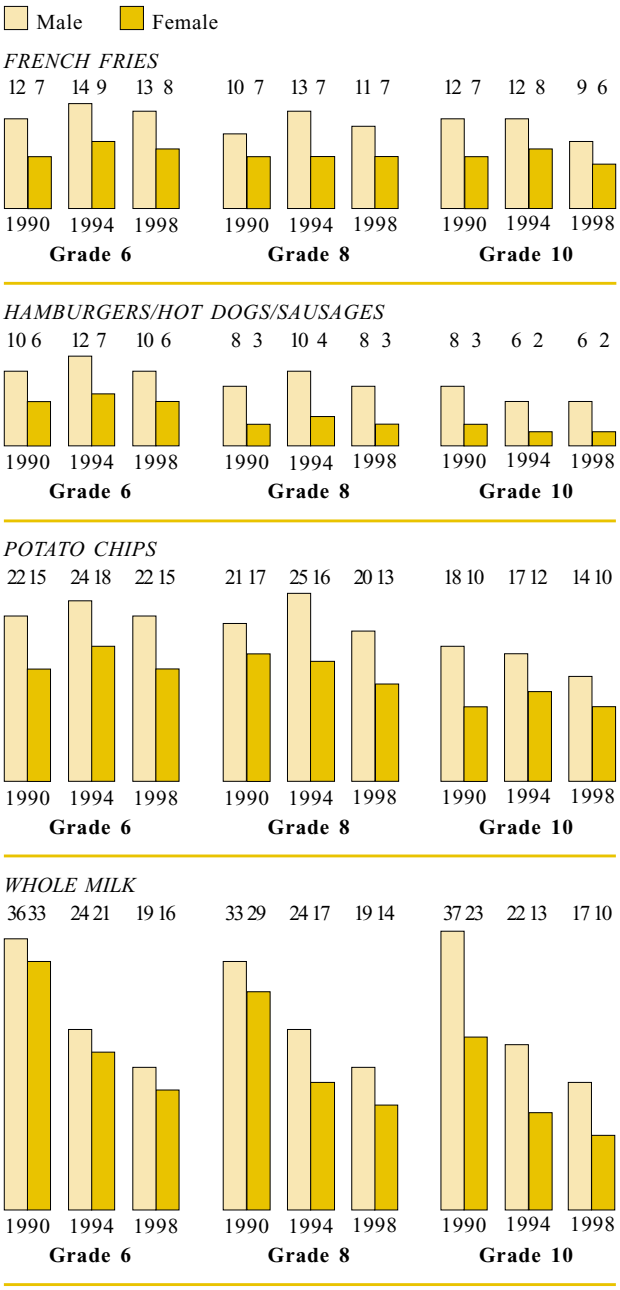


Figure 7.3

Students who ate/drank foods high in fats/sodium daily (%)



Less Nutritious Foods

Daily intake of food with little nutritional value by youth can be harmful to their physical development (Williams, 1995). Figure 7.3 shows that a greater proportion of males ate higher salt and high fat/sodium foods than females. Differences in the proportions of students eating french fries daily were small across both the three years and the three grades.

There was a decline as grade level increased in the proportion of students who ate hamburgers, hot dogs or sausages daily. Almost a quarter of the males in the two younger grades ate potato chips daily and were considerably more likely to do so than females. Differences across the three survey years were small. Fewer of the students in Grade 10 ate potato chips daily than in the earlier two grades.

More males than females in all grades across the three survey years drank whole milk, with the magnitude of difference between genders increasing by grade. There has been a sharp decline in the proportion, by about half, of young people drinking whole milk daily

over the three surveys. This may indicate that the public health message to eat lower fat foods is being attended to, at least with regard to milk.

Soft drinks and candy/chocolate bars were included as examples of high sugar foods in young people's diets. Foods containing sugar and caffeine, such as soft drinks and chocolate, are often taken to increase energy temporarily. Caffeine is also addictive and affects alertness states. Across all three grades and all three surveys, higher proportions of boys than of girls ate candy and drank soft drinks (Figure 7.4). Differences across surveys in the proportions of boys and girls consuming soft drinks daily were small and did not change significantly over time. For boys, there was a steady increase from grade to grade but for girls, daily drinking of soft drinks increased from Grade 6 to 8 but levelled off from Grades 8 to 10.

The proportion of students eating candy or chocolate bars was similar across grades and the three surveys for both males and females.

Approximately one in ten Grade 10 students drank coffee daily. Where gender differences occurred, males drank more coffee than females. Daily coffee consumption generally increased as students got older.

Figure 7.4

Students who ate/drank foods high in sugar/caffeine daily (%)

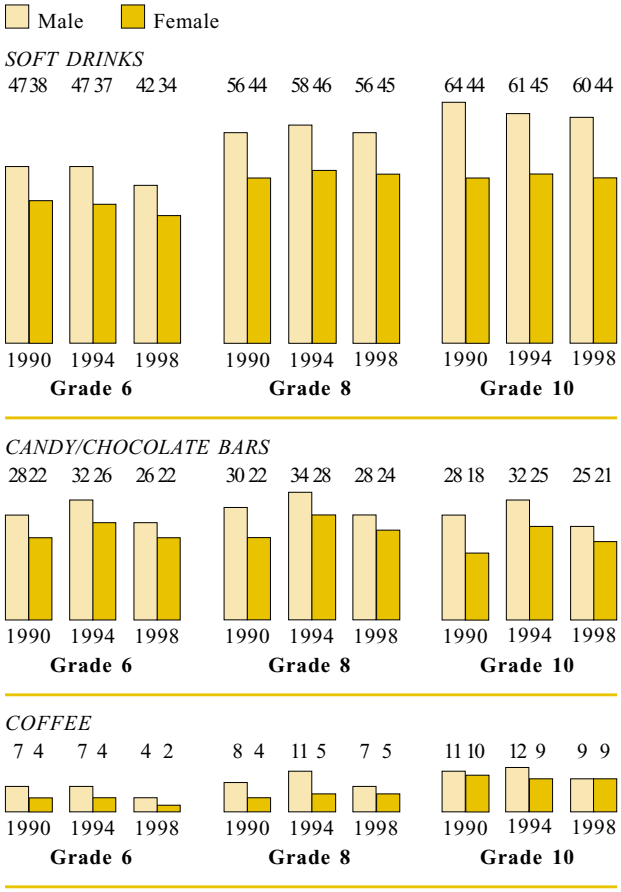
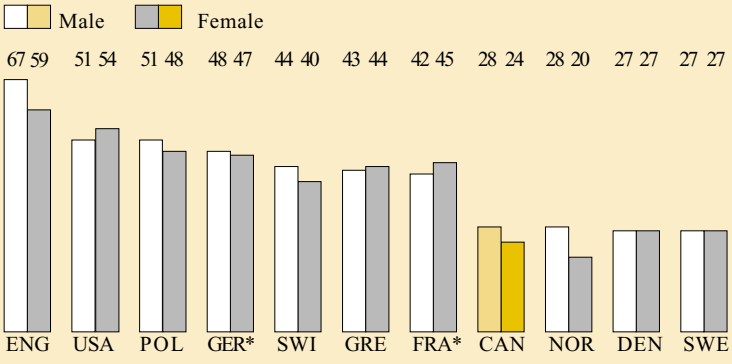


Figure 7.5

Thirteen year olds who ate chocolate or candy daily by country, 1998 (%)



**France and Germany are represented by regions: see Chapter 1 for details.*

In comparison to young people in other countries, Canadian and Scandinavian youth are far less likely to eat sweets daily. While these differences may reflect greater attention given to healthy eating habits, they may also reflect cultural differences in the dietary role of candies and chocolate. Having a "sweet" for dessert after meals, for example, is more common in some cultures than others.

Figure 7.6

Students who ate breakfast—at least juice and toast or cereal—daily, 1998 (%)

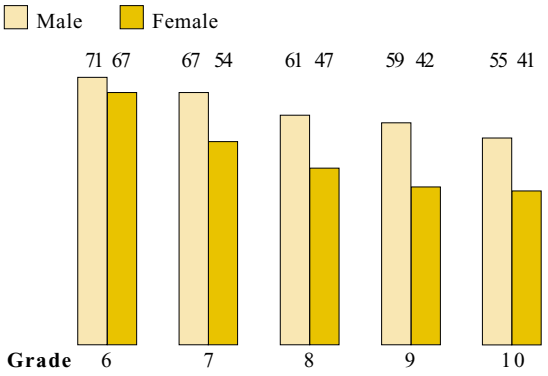
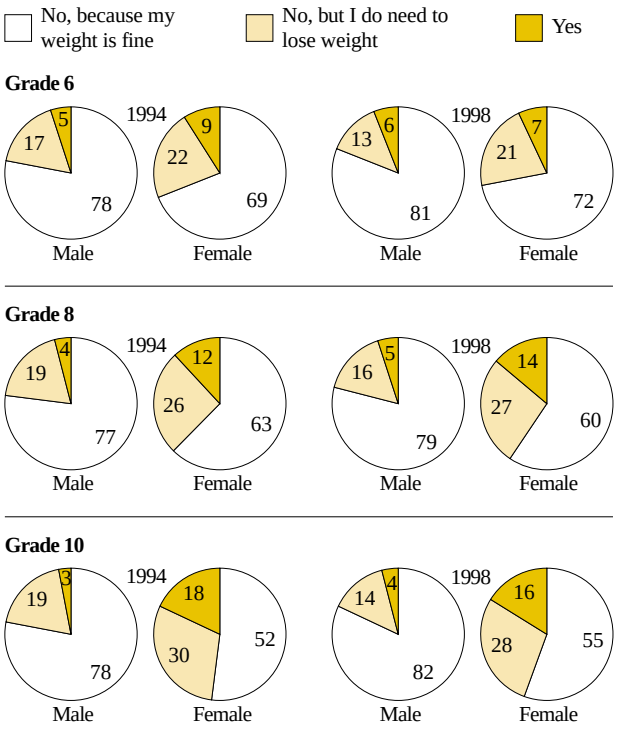


Figure 7.7

Students responses to "Are you on a diet to lose weight?" 1994, 1998 (%)



Breakfast

Breakfast is believed to be a key meal for young people as it prepares the body and mind for daily activities (Williams, 1995). However, as children get older they have greater control over what they eat for breakfast and over whether they eat it at all. A question was asked in 1998 regarding frequency of eating breakfast each week.

More of the males than the females ate breakfast of at least juice and toast/cereal daily in each of the five grades with the difference reaching as high as 17 percent among Grade 9 students (Figure 7.6). In Grade 6, almost 70 percent of all students ate breakfast daily. For males, there was a consistent decline in the proportion who ate breakfast daily as the grade level increased. For females, there was a much steeper decline that levelled off in Grades 9 and 10 at 40 percent. The gap between the proportion of boys and girls who start the day with breakfast tends to widen with age.

Dieting

Youth who develop unhealthy eating practices due to distorted perceptions of body weight are at increased risk of developing nutritional deficiencies (Page, 1991). The respondents were asked if they were on a diet or if they thought they needed to lose weight and their responses are summarized in Figure 7.7. More girls than boys thought they needed to lose weight and this proportion increased over grade levels. Many more females were on a diet, with almost half of the Grade 10 girls indicating they were either on a diet or needed to lose weight. For boys, there was little change, as grade increased, in the proportions of those on a diet or feeling that they should be dieting. However, the proportion of females on a diet and those feeling they needed to lose weight increased with grade level. Differences between the 1994 and 1998 surveys were small with few observable trends.

Figure 7.8 shows that, for males, the proportion dieting or feeling that they need to lose weight increased from Grade 6 to 7 and then gradually decreased from Grade 7 to 10. For females, the increase was much greater from Grade 6 to Grade 9 with a levelling off between Grades 9 and 10.

Figure 7.8

Students who were on a diet or felt they needed to lose weight, 1998 (%)

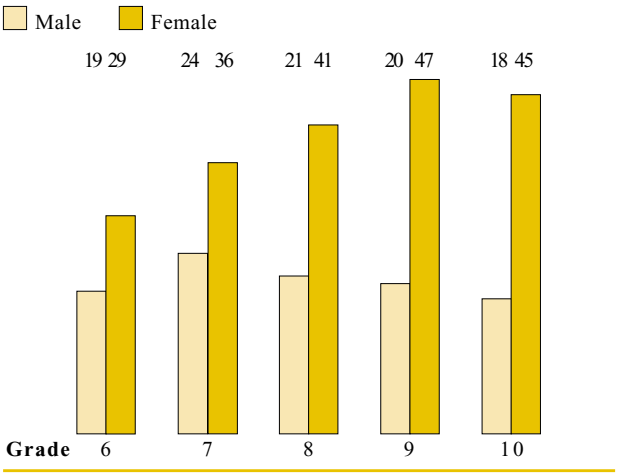
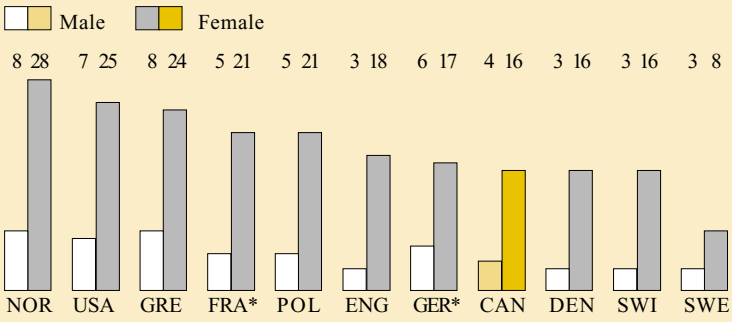


Figure 7.9

Fifteen year olds who were on a diet by country, 1998 (%)



**France and Germany are represented by regions: see Chapter 1 for details.*

While the proportion of Canadian 15-year-old girls who are dieting may seem high, it can be readily seen that the proportion is higher in many of the comparison countries. Gender differences in dieting behaviour were pronounced in all countries.

Figure 7.10

Students who brushed their teeth two or more times a day (%)

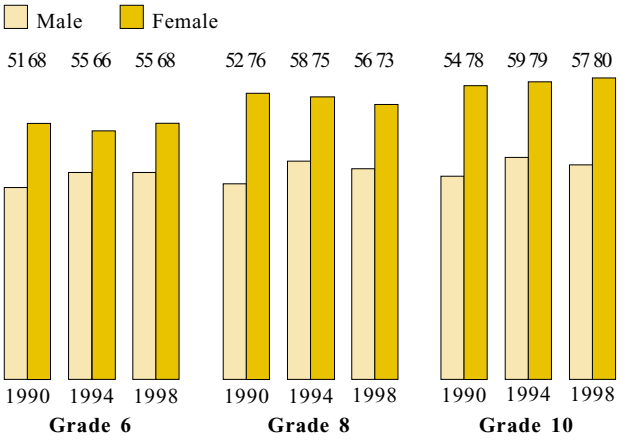
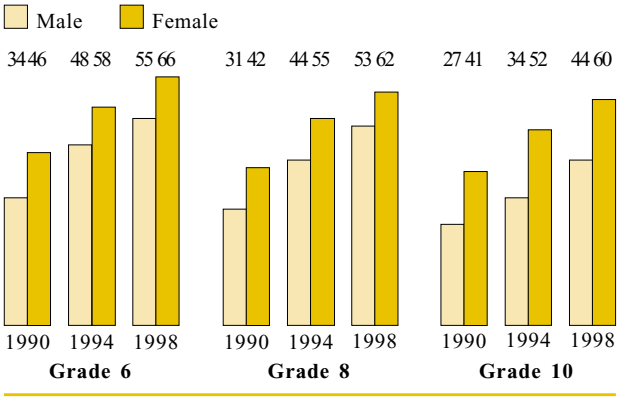


Figure 7.11

Students who flossed their teeth at least weekly (%)



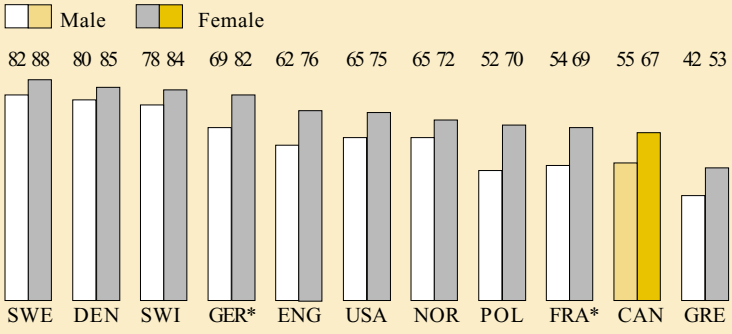
Dental Hygiene

Students are often motivated by social reasons rather than dental health reasons to observe good dental hygiene (MacGregor, 1994). Dental hygiene was addressed by asking how frequently the respondents brushed and flossed their teeth.

Girls were much more likely than boys to practise regular dental hygiene (Figure 7.10). More females (approximately 80%) than males (approximately 60%) at each grade level across the three surveys brushed their teeth two or more times a day. More of the girls also flossed their teeth at least weekly (Figure 7.11). Across the three surveys, there was a substantial increase in the proportions of boys and girls flossing weekly at each of the three grade levels. Flossing appears to be becoming a more common practice, although it decreases as grade increases.

Figure 7.12

Eleven year olds who brushed their teeth two or more times a day by country, 1998 (%)



**France and Germany are represented by regions: see Chapter 1 for details.*

Canadian youth were less likely to brush their teeth twice a day or more than youth in most other countries. Even though a significant proportion of Canadian girls brushed twice daily, their peers were ahead in all countries except Greece.

Summary

It was difficult to measure dietary practices accurately because it was necessary to use frequency of consumption rather than actual quantities, but the findings have general relevance. Over three-quarters of the respondents indicated they ate fruits and vegetables daily in Grade 6, but this was down to less than 70 percent by Grade 10. There was a worrisome decline in daily fruit and vegetable eating over the three surveys. This pattern was also evident in the intake of raw vegetables. Girls were slightly more likely to eat vegetables and fruits than boys, and boys were more likely to eat hamburgers, hot dogs, french fries and potato chips. Over two-thirds of the respondents were found to drink low fat milk daily.

A surprisingly high proportion of students by Grade 10 indicated they did not have breakfast every day. Just under half the boys and over three-fifths of the girls were in this category.

Far more girls than boys indicated they thought they needed to lose weight with the proportion increasing from grade to grade. There was little difference between the 1994 and 1998 surveys, but the substantial number of young women on a diet suggests a real concern.

Canadian youth rank behind those in other countries in terms of the proportion who brush their teeth twice or more daily. Girls are more likely than boys to brush their teeth twice or more per day and to floss weekly. Most brush at least once a day, but just over half of the boys brush twice a day. There is little difference from grade to grade and over the three surveys.

Overall, eating patterns have changed slightly with reduced consumption of more nutritious foods and increased intake of less nutritious foods. Dieting, although still particularly high among girls, did not change over the three surveys. Finally, the proportion of youth who floss at least weekly has increased sharply through the 1990s to over 50 percent, but Canadian youth are well behind other countries in the proportion who brush their teeth at least twice a day.

CHAPTER 8

Exercise and Leisure Activities

Much progress has been made in recent years on the promotion of physical activity among adults, and there is general agreement on the amount and type of activity that is beneficial for health. The evidence base for the effect of physical activity on young people, however, is not as strong as that for adults, and there is still debate about what is most appropriate. Nevertheless, it is clear that adolescence is the time when an active lifestyle is established that can carry over into adulthood.

Regular physical activity can have multiple outcomes in young people for their current and future health and well-being. It has a favourable effect on sleep quality and can also enhance self-esteem, both of which are factors in youth's coping mechanisms. The potential social and psychological benefits of physical activity for some young people can be limited, however, by an overemphasis on competitive performance. If appropriately structured, physical activity may enhance social and moral development. There are small but significant benefits of increased physical activity in reducing body fat. Physical activity also has a small but beneficial association with serum lipid and lipoprotein concentrations and blood pressure. In addition, weight-bearing and strength-enhancing physical activity can promote skeletal health in young people. However, physical activity can also increase the risk of musculo-skeletal injuries.

When the physical activity levels of youth from 24 countries were compared in the 1994 HBSC survey, Canadian youth ranked in the upper third of the countries. Gender differences were pronounced in all participating countries with far more boys than girls being regularly active. Ironically, in 1994, Canada ranked above Sweden, the country often referred to as the model of appropriate physical activity.

Figure 8.1

Factors associated with exercise

Students who exercise are more likely to	*Grade 6* M	F	*Grade 8* M	F	*Grade 10* M	F
Be well integrated socially	○	○	○	○	○	○
Feel healthy	○	—	○	○	◉	◉
Have a good diet	○	◉	—	◉	○	◉
Feel confident	—	○	—	○	○	—
Spend fewer hours watching television	—	—	—	○	—	○

Correlation coefficient: ○ .15 to .24 ◉ .25 to .34 ◉ .35 to .44 ● .45+

Figure 8.2

Students who exercised two or more times a week outside school hours (%)

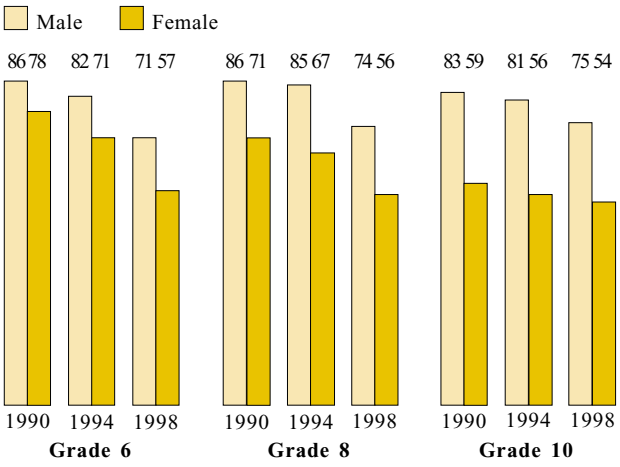
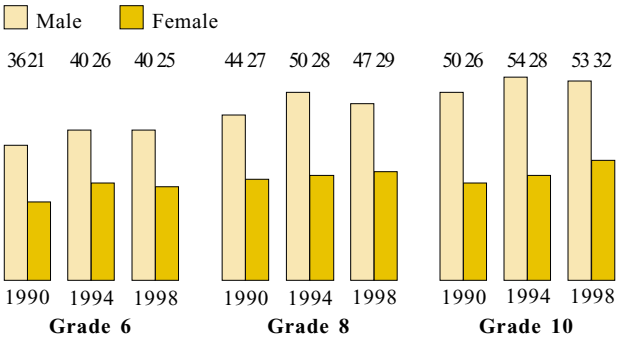


Figure 8.3

Students who exercised four or more hours a week outside school hours (%)



A related issue is the proportion of time youth spend in more passive leisure activities such as watching television and videos, and playing computer games. In this chapter physical activity frequency and duration and time spent in other leisure activities are examined.

Frequency of Physical Activity

Daily physical activity is believed to be the ideal conditioning strategy as it builds cardio-vascular endurance, reduces the risk of chronic diseases, such as hypertension and osteoporosis, and may become habitual (Jonas,1995). Figure 8.1 indicates that the more our respondents exercised the greater the likelihood they would feel healthy, have a healthy diet, and have positive peer relationships. Girls who exercised regularly were less likely to spend an excessive amount of time watching television.

Students were asked how often they exercise in their free time, outside of school hours, until they are out of breath or they sweat (Figure 8.2). One-half to three-quarters of the girls and three-quarters or more of the boys exercised twice or more a week. Boys in all three age groups and across all three years were more likely than girls to exercise regularly; the gender differences varied from 8 to 25 percent.

In all three grade groups, smaller proportions of males exercised twice or more a week in the 1998 group than in the other two years. This was also true for the Grade 6 and 8 girls. Thus, there was a consistent decline in exercise frequency from 1990 to 1998. Overall, the frequency of exercise in youth has clearly decreased over the three survey administrations. There was also a clear decrease in exercise frequency with age.

Duration of Physical Activity

In order for physical activity to have the maximum effect on health, it must be of sufficient duration to improve or maintain cardio-vascular fitness, flexibility and coordination skills (Curtis and Russell, 1997). Students were asked how many hours a week they exercise in their free time, outside of school hours, until they are out of breath or they perspire (Figures 8.3 and 8.4).

Smaller proportions of students exercised for longer periods of time than exercised frequently. Approximately one-quarter of girls and one-half of boys exercised to a level where a training effect could occur. Boys in all three age groups and across all three years were more likely than girls to exercise four or more hours a week with the differences between males and females varying from 14 to 26 percent.

Boys in each of the three grade groups surveyed in 1990 were less likely to exercise four or more hours a week than those surveyed in the other two years. This pattern also held for the Grade 6 girls. For the Grade 8 girls there were no differences across survey years and for the Grade 10 girls there was an increase in exercise of four or more hours a week from 1990 to 1998.

In 1998, the proportion of boys exercising four or more hours a week generally increased across the grade levels from a low of 40 percent in Grade 6 to a high of 52 percent in Grade 10 (Figure 8.4). This was also true of the girls, but with a lesser overall increase and with a leveling off in Grades 7, 8 and 9.

These data demonstrate that, from 1990 to 1998, slightly more students engaged in intensive physical activity of more than four hours per week, but that significantly fewer students frequently exercise. Thus, students were still getting the same or more exercise, but less frequently. One explanation for this finding may be that students are moving to more structured exercise activities, for example, they may be joining teams or clubs or going on supervised outings. Students may be moving away from casual exercise with friends after school, such as riding bikes, playing street hockey and skipping.

Figure 8.4

Students who exercised four or more hours a week outside school hours, 1998 (%)

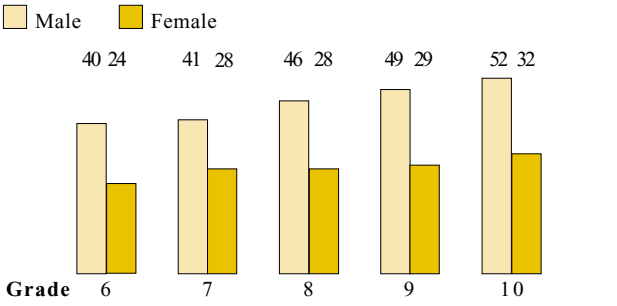
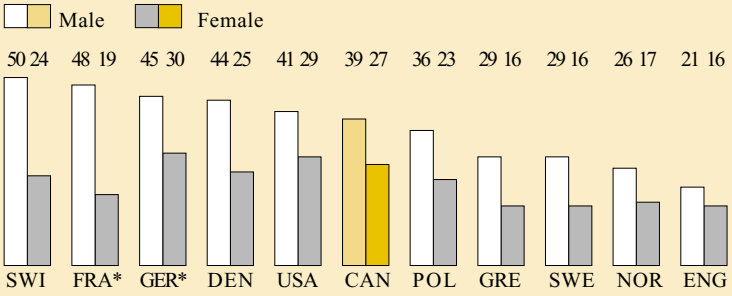


Figure 8.5

Eleven year olds who exercised four or more hours a week outside school hours by country, 1998 (%)



**France and Germany are represented by regions: see Chapter 1 for details.*

On the measure of exercise duration, Canadian 11-year-old males are in the mid-range, ahead of Scandinavian countries. For girls, Canada ranks below only Germany and the United States.

Figure 8.6

Students who watched television four or more hours a day (%)

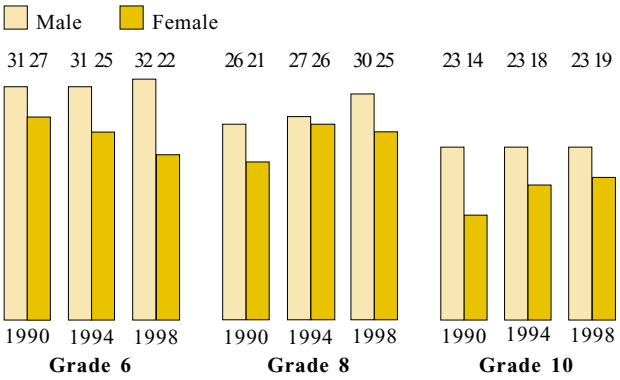
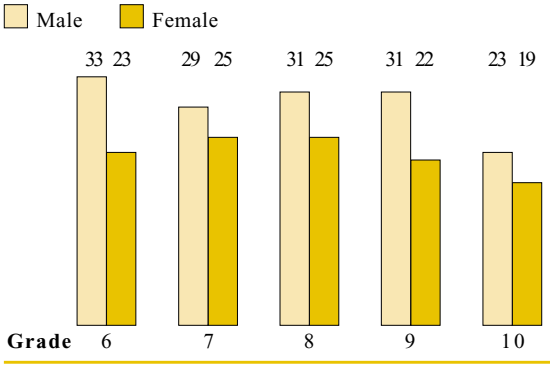


Figure 8.7

Students who watched television four or more hours a day, 1998 (%)



Structured activities occur less often due to the organization and scheduling involved. However, structured physical activity may last just as long as, or even longer than, physical activity around the home, because of the investment of all concerned in setting up and participating in structured activities. This general explanation may also explain the trend towards greater physical activity duration in older students who, if they are exercising, may be more likely to be involved in structured physical activities such as competitive sports.

Watching Television and Videos

Almost all students watch some television, but it is probably unhealthy to watch four or more hours a day because it may be at the expense of more beneficial physical or creative activities. The students were asked how much, on average, they watched television each day. Figures 8.6 and 8.7 present the proportions of students who watched television four or more hours a day. Generally, 20 to 30 percent of students regularly watched a significant amount of television, with more males doing so. While for Grade 6 females, there was a slight decrease in time spent watching TV, the levels of TV watching among Grade 6 males were consistent across the three survey years with just under one-third watching four or more hours a day. Slightly more Grade 8 males were likely to watch television this often in 1998 than in the other two years, while fewer Grade 8 females watched television to this degree in 1990 than in the other two years. The Grade 10 males were similar across the three survey years and there was a slight increase in the proportion of Grade 10 females who watched TV four or more hours a day from 1990 to 1998.

Among the Grade 6 students, males watched more television than females with the gap increasing over time. In 1990 and 1998, Grade 8 males were more likely to watch four or more hours of television daily,

while there were no gender differences in 1994. More Grade 10 males were likely to watch television than females, but this gap decreased over time.

The proportions of males watching television four or more hours a day was quite similar across Grades 6 to 9, with a drop-off in Grade 10. This was also true of the females, but with a smaller drop at Grade 10, which may reflect increasing school workloads, employment at part-time jobs and other social interests.

Overall, there have been few variations in television watching over the three surveys. In 1998, slightly fewer students in upper grades, and slightly more Grade 10 males watched television four or more hours a day.

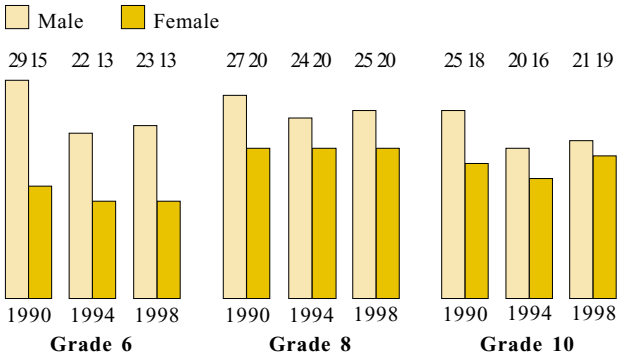
The patterns for watching videos were similar, although the proportions of students were somewhat less (13 to 29 percent). In all three grade groups across the three survey years, proportionally more males than females indicated they watched videos four or more hours a week (Figure 8.8).

Comparing across grades using the 1998 survey data, video watching peaked for the females in Grade 8 and for the males in Grade 9, though differences from grade to grade were small.

Video watching has decreased slightly overall since 1990, especially for males, and may be linked with an increase in other types of leisure activities such as playing computer games and using the Internet.

Figure 8.8

Students who watched videos four or more hours a week (%)



Computer Games

In contrast to watching television and videos, playing computer games was much more prevalent among males than females for all grades and years (Figures 8.9 and 8.10). For Grade 6 students, there was a slight decline in playing computer games from 1990 to 1994 and a marked increase from 1994 to 1998. For the Grade 8 students, there were similar proportions playing computer games four or more times a week in the first two survey years and again a higher proportion in 1998. For the Grade 10 students, the proportion of females, which was low, was similar across the three years while the proportion of males playing computer games increased steadily.

In all grade groups, the increase in proportions of males playing computer games intensively from 1994 to 1998 was substantial; about one-third more of them were in this category in 1998. For the females, computer game playing seems to be an activity for the more junior grades. The proportion of females in 1998 who played four or more hours a week declined from a high of 13 percent in Grade 6 to a low of 5 percent in Grade 10. For males, computer game playing is quite consistent through Grades 6 to 9 and begins to decline in Grade 10.

Young peoples' recent increased participation in playing computer games may be related to a number of factors. They have more access to this form of leisure activity due to the proliferation of homecomputing, e-mail and computer game systems. Significant technological advances in computer games have made them more realistic, interesting and challenging (Hollingsworth and Eastman, 1997; Downes and Reddacliff, 1997).

Figure 8.9

Students who played computer games four or more hours a week (%)

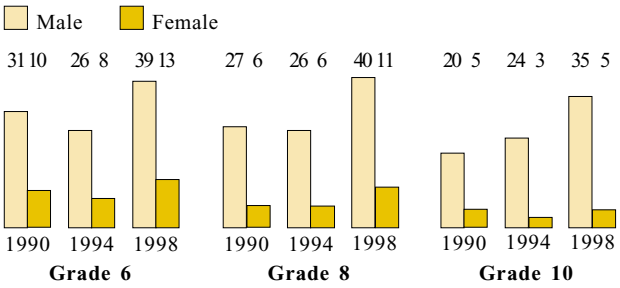


Figure 8.10

Students who played computer games four or more hours a week, 1998 (%)

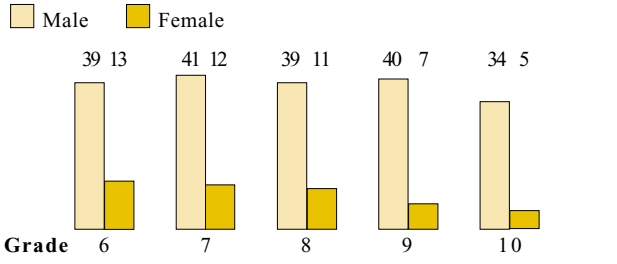
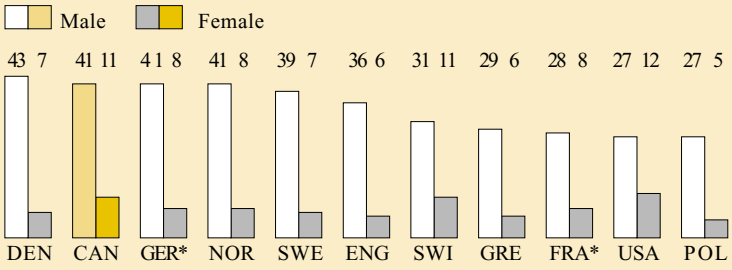


Figure 8.11

Thirteen year olds who played computer games four or more hours a week by country, 1998 (%)



**France and Germany are represented by regions: see Chapter 1 for details.*

A higher proportion of Canadian thirteen year olds indicated they play computer games intensively than their counterparts in any of the other countries in the 1998 survey. On the male side, the Danes were more likely to play four or more hours a week followed by Canadians, Germans and Norwegians. The higher proportion of Canadian girls playing computer games intensively is exceeded only by the American girls.

Summary

Substantial proportions of Canadian youth participated in physical activity twice or more a week outside of school, but the proportions are lower for girls and, for both genders, frequency of physical activity decreased with age. Ironically, it was also found that more students are exercising four or more hours a week outside of school: this means that they are exercising less often but for longer periods when they do. Boys were nearly twice as likely to exercise regularly out of school than girls and the rates increased from grade to grade. There was also a clear decline over the three surveys in the proportion of youth who exercised twice a week or more.

This decrease in exercise frequency may explain the increased amount of time given to other leisure activities, especially playing computer games. Television watching declines as students get older, perhaps due to casual employment, but over 20 percent still watched four hours or more per day by Grade 10. Boys were more likely to spend a large amount of time watching television than girls. Over the three surveys, and especially between 1994 and 1998, there was a dramatic increase in the proportion of boys who played computer games for four hours per week or more. The proportion of girls who played computer games at least four hours per week is relatively low, although Canadian girls led many other countries in this activity.

CHAPTER 9

Injuries

Unintentional injuries are the leading cause of death among children and youth. Those developing strategies to reduce the injury rate need information about how and where young people are injured (Williams, et al., 1997; Mitchell, 1998). There are strategies to reduce the number of injuries among youth (Health Canada, 1997). Teaching young people to take fewer risks in their daily activities, making work and play settings safer, modifying equipment and supervising children more closely can all reduce the risk of injury. Legislation is also effective: laws mandating the use of seatbelts and bicycle helmets have been shown to prevent or reduce the severity of injury incidents involving vehicles and bicycles.

Responses to a series of questions introduced on the 1994 survey showed Canadian Grade 8 and Grade 10 students in the upper quartile of countries reporting large numbers of injuries, although different access to medical care in each survey country may account for the ranking to some degree. In particular, sports injuries are very prevalent among Canadian youth. Over 35 percent of Canadian young people in Grades 6, 8 and 10 reported at least one injury for which they had been treated by a doctor or nurse; over 40 percent had been treated for more than one injury. Not inconsequential events, many of these injuries involved fractures, sprains and cuts, and led to an average of two missed days of school. The social and real costs of these injuries have serious economic implications (Stark et al., 1997; Osberg et al., 1996).

Incidence of Injuries

An examination of the factors related to the occurrence of injuries using the data from this study revealed very little about the individual characteristics that put young people at greater or lesser risk. Certainly for the older students, those who used alcohol were more likely to be involved in injury events, but there was little other information indicating who was most vulnerable. Other researchers have noted that young people with characteristics related to risk taking, sensation seeking and impulsiveness are more likely to be injured (Robertson, 1992).

Figure 9.1

Students who were injured in the past year and had to be treated by a doctor or nurse (%)

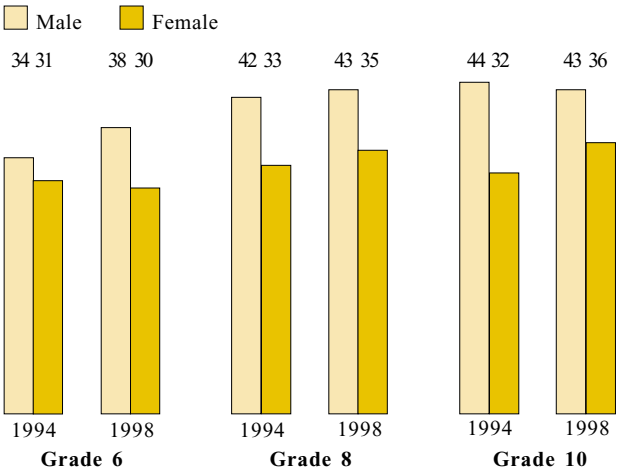


Figure 9.1 presents the notably high percentage of youth who reported at least one injury requiring medical attention in the previous 12 months on the 1994 and 1998 surveys. The figure does not incorporate cases where an individual received more than one injury requiring medical attention, and therefore it does not represent the total number of injuries. Boys were more likely than girls to be injured at all grade levels. Differences were relatively small between the Grades 8 and 10 students, but Grade 6 students were less likely to have been injured. There were only minor differences between the 1994 and 1998 surveys.

One of the real costs of injuries is the amount of school time that injured young people miss while they are recovering. Figure 9.2 indicates that about half of the students who were injured sustained injuries severe enough to keep them from school or other usual activities for at least a day. Gender differences were relatively small for the Grades 6 and 8 samples, but Grade 10 girls were more likely than Grade 10 boys to miss school because of an injury. The older students who took time off from school after an injury were more likely to take more time, and overall boys required more time off on average than girls for injuries.

Figure 9.3 combines the three grades of respondents from the 1998 survey to illustrate the time of year injuries are most likely to occur. The pattern was similar for both boys and girls. December to April is the period of fewest injuries. Injuries are most likely to occur in Spring and Fall. This appears to be related to the fact that organized sporting activities, especially those that involve physical contact, intensify and overlap across seasons (National Institutes of Health, 1992). The figures for summer injuries were also quite high; young people have more free time then to engage in outdoor activities.

Figure 9.2

Students who were injured in the past year, had to be treated by a doctor or nurse and who missed at least one full day of school or other usual activities (%)

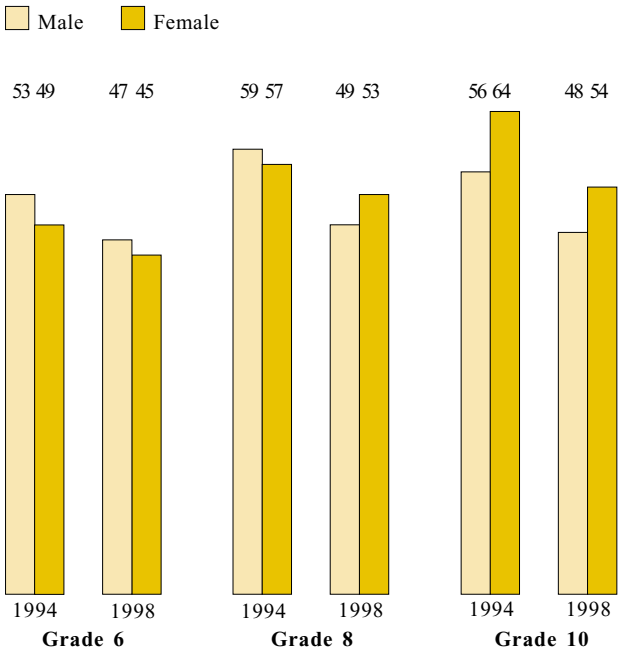


Figure 9.3

Time of year when most serious injuries occurred, all 1998 survey students

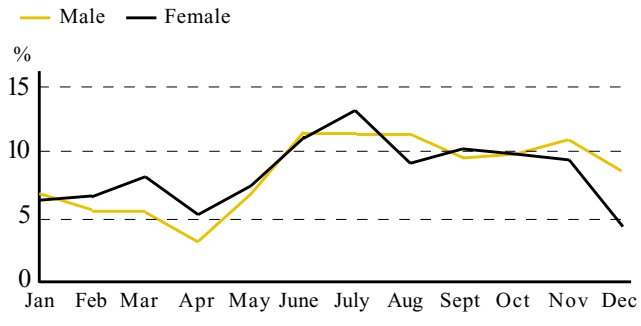
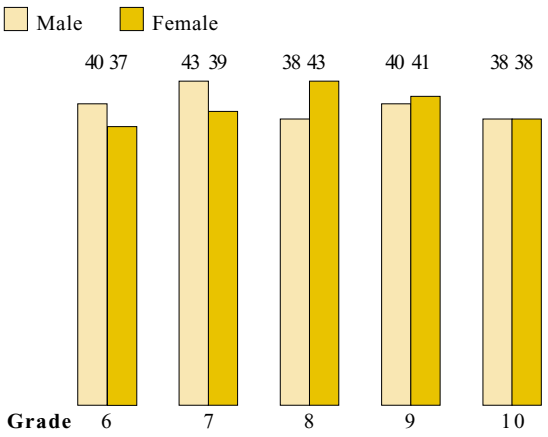


Figure 9.4

Students who were injured in the past year and missed a full day of school or other usual activities, but were not treated by a doctor or nurse, 1998 (%)



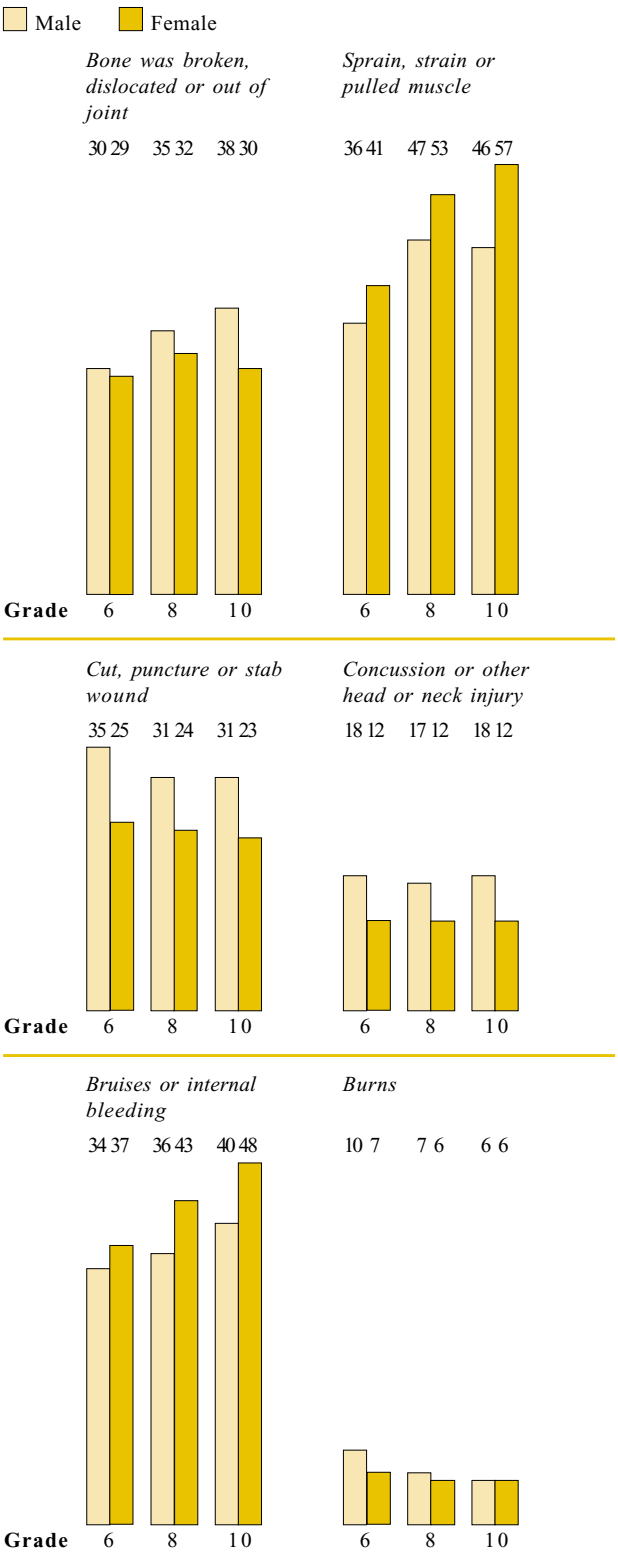
Not all serious injuries required treatment by a health professional. Figure 9.4 indicates the percentage of students who missed a day or more of school because of injuries that were not treated by health professionals. At about 40 percent of all students, these figures were remarkably high and gender differences were relatively small from grade to grade. Added to the medically treated injuries, these figures show that the majority of students receive a significant injury during a typical year.

Types of Injuries

Figure 9.5 summarizes the types of injuries received by young people that required medical treatment. The most common type of injury was a sprained, strained or pulled muscle. For girls, the incidence of this type of injury increased over the grades, while for the boys it levelled off after Grade 6. Bruises or internal bleeding were also quite common and increased in proportion steadily from grade to grade. Girls were more likely than boys to experience sprains, strains, pulled muscles and bruises or internal bleeding, but boys were more likely to have broken bones, head or neck injuries (including concussions) and cuts, punctures or stab wounds.

Figure 9.5

Type of most serious injury suffered by students who saw a doctor or nurse for the injury, 1998 (%)

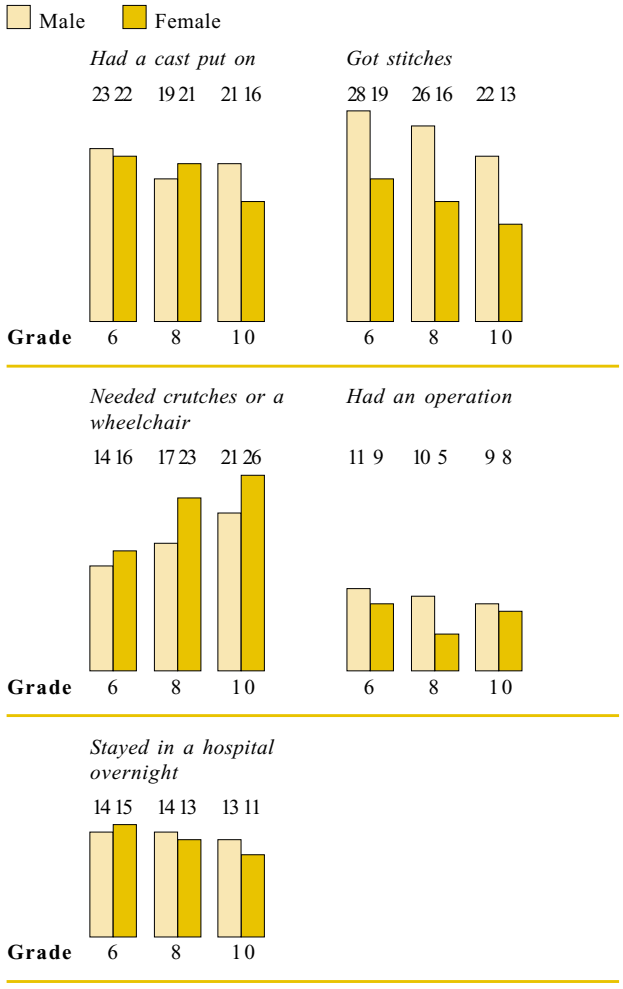


Treatment Required for Injuries

Figure 9.6 summarizes the types of treatment received by injured students. Stitches were common, especially for boys, although the numbers receiving stitches declined from Grade 6 to Grade 10. About 20 percent of the injuries required a cast and about 14 percent required an overnight stay in the hospital. The proportions of students requiring crutches or a wheelchair increased from Grade 6 to Grade 10, but the proportion requiring stitches declined. Girls were more likely to need crutches and boys were more likely to get stitches. About 10 percent overall required an operation.

Figure 9.6

Treatment received for most serious injury suffered by students who saw a doctor or nurse for an injury, 1998 (%)



Where Injuries Occur

Those who develop injury prevention programs need to know the circumstances and settings in which injuries typically occur. Figure 9.7 indicates where the students were at the time their most significant injury occurred. For both boys and girls there was an increase from grade to grade in the proportion of injuries that occurred at sports facilities and a corresponding reduction in the injuries that occurred at home. Boys were more likely than girls to sustain sports-related injuries, but there were relatively small gender differences in injuries that occurred on the street or road. Over half of injuries that occurred in school involved students playing in games and playground activities. A second significant group of school-related activities involved being struck or cut or falling. Street-related injuries typically involved bicycles and in-line skates and, of course, automobiles, but they also included falls. Each setting presents its own risk-related problems.

Figure 9.7

Where students were when they were injured, by grade and gender (1998)

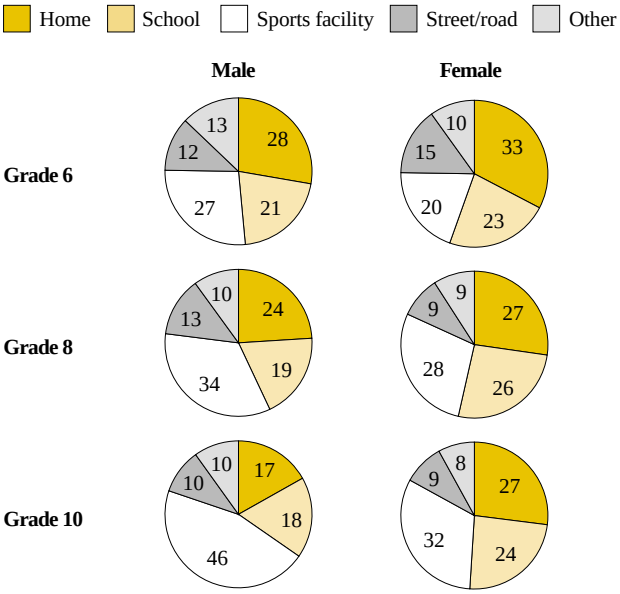


Figure 9.8

Students who "always" wore a seatbelt when riding in a car or truck (%)

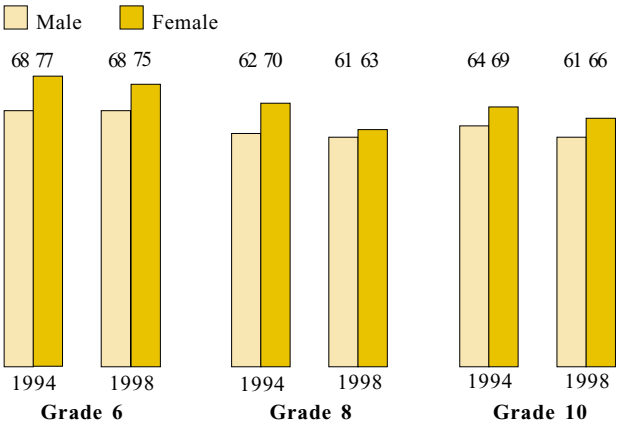
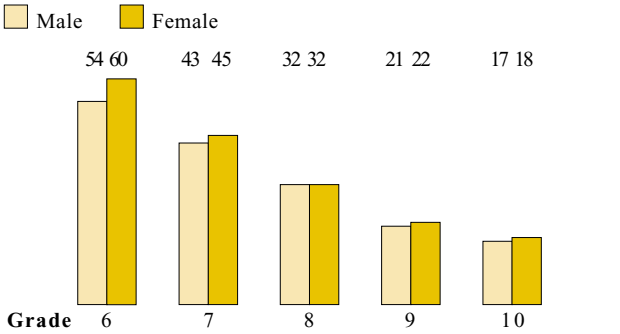


Figure 9.9

Students who "often" or "always" wore a bicycle helmet, by grade and gender (%)



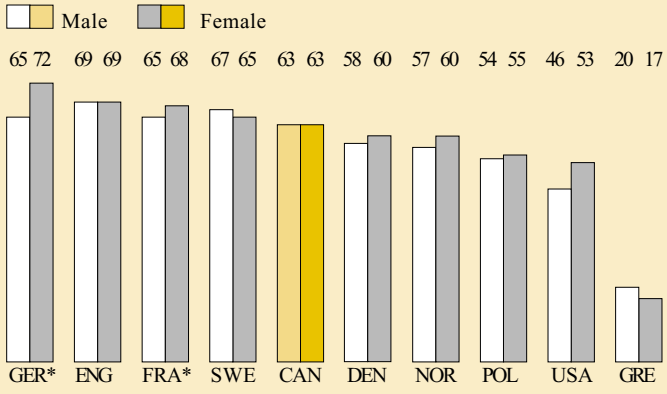
Preventing Injuries

There are a great variety of injury prevention programs in Canada ranging from providing traffic safety guards, playground supervisors and protective equipment to reduce the risk of injury in sports events to legislation mandating the use of helmets by bicycle riders and seatbelts by automobile drivers and passengers. Figure 9.8 indicates levels of compliance with the seatbelt legislation among the students. Although seatbelts are legally required, a surprisingly large proportion of young people do not wear them all the time, ranging from 25 to 39 percent. Girls were more likely than boys to always wear seatbelts at all grade levels, and Grade 6 students slightly more likely than Grade 8 or Grade 10 students. Certainly, it is the drivers' responsibility to ensure that children wear seatbelts, but it is quite clear that a substantial number of young people are not being required to wear seatbelts while in an automobile.

Figure 9.9 presents the proportions of bicyclists who "often" or "always" wear helmets when bicycling. Helmet regulations vary by province, although the injury prevention advantages have been well established by research (Thompson et al., 1989). The sharp decline in helmet use as students grow older represents a real concern.

Figure 9.10

Thirteen year olds who "always" wore a seatbelt (1998), by gender and country (%)



**France and Germany are represented by regions: see Chapter 1 for details.*

All the countries represented in this figure have seatbelt legislation in place. Canada falls into the highest use group where approximately two-thirds of the students always wear a seatbelt. The figures for the United States and Greece are surprisingly low.

Summary

Unintentional injury may be the most serious health problem facing school-aged children. Approximately 40 percent of Grades 9 and 10 respondents reported an injury requiring medical attention. Boys were more likely to be injured than girls. For the Grade 6 students, injuries were more likely to occur in and around the home, but by the time the students were in Grade 10 they were more likely to be injured at sports facilities. Since most injuries occur around schools and sports facilities, specific prevention programs should be targeted at these settings.

A third of the Grade 8 and Grade 10 students do not always wear a seatbelt when riding in an automobile in spite of legislation requring them to do so in all provinces, and the vast majority of older bicyclists do not usually wear protective helmets.

CHAPTER 10

Tobacco, Alcohol and Drugs

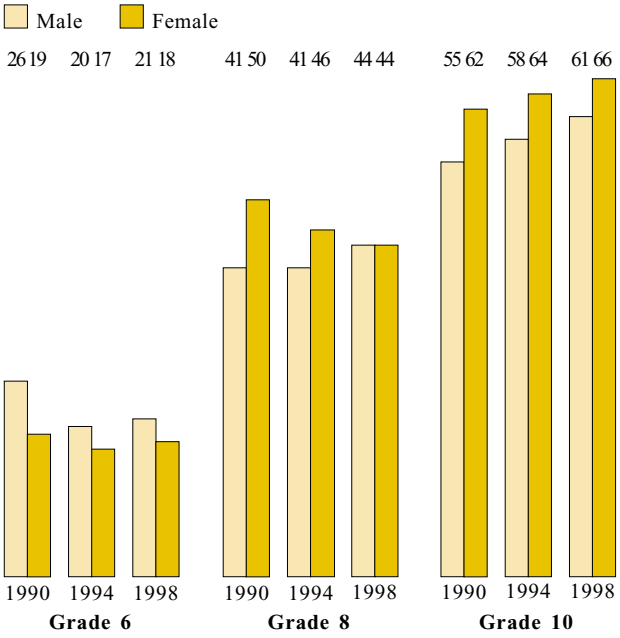
Psychoactive substances in some form have been used and abused since the beginning of human history. Alcohol, tobacco and mood-altering drugs are still widely used in Canada, although the health risks associated with their use have long been known. For example, thousands of studies have demonstrated the harmful health effects associated with tobacco use. It has been identified as the leading cause of preventable death throughout the Western world. Diseases such as lung cancer, chronic bronchitis, coronary heart disease and emphysema have been clearly associated with regular tobacco use.

Advertising has emphasized the fashionable and status-enhancing qualities of cigarettes, but recent legislative changes related to tobacco advertising, warning labels on cigarette packages and raising the legal age to purchase cigarettes have had some effect on cigarette use. Policies designed to move smoking out of schools have at least forced young people to do their smoking off school property. Educational programs focusing both on initiation and cessation have been widely implemented. The trend data presented in this chapter provide an indicator of the success of these initiatives.

The effects of excess alcohol consumption on health have also been clearly documented, not only in terms of diseases such as certain cancers, strokes, hypertension and liver disease, but also with social and economic problems. For young people in particular, alcohol is strongly related to traffic injuries, violence and high risk sexual activity. Alcohol use is the norm among Canadian adults, but uncontrolled alcohol use in terms of drinking to excess or while driving a vehicle under the influence of alcohol produce not only fatalities and serious traffic incidents but inappropriate role modelling for youth.

Figure 10.1

Students who had tried smoking (%)



In comparison with legal substances such as alcohol and tobacco, illicit drugs are not widely used among adults, but among youth the picture is quite different. Drugs such as hashish and marijuana have become part of the lifestyle of many youth. Excess use of these substances has long-term health consequences as well as harmful implications for family, social life and schooling. The use of solvents and drugs such as heroin and cocaine have serious and immediate health implications for youth.

Tobacco

As the evidence of the health risks of smoking began to accumulate in the 1970s, teenagers' smoking rates began a steady decline to a low point in 1990 (Bondy, Cohen and Redom, 1999). Since that time adolescent smoking rates have begun to rise.

Figure 10.1 summarizes the proportions of students who have tried smoking. By Grade 10 over half of our sample had smoked at least one cigarette. Interestingly, although more Grade 6 males than females had tried smoking, by Grade 10 significantly more females than males had tried smoking. This is part of a significant shift in the health-risk behaviour of young women over the past 20 years. More and more young women are taking similar chances with their health as young men. There was little change over the three surveys for the Grade 6 and 8 cohorts, but there was a steady increase over the three surveys in the proportion of Grade 10 students who had tried smoking.

Figures 10.2 and 10.3 present the proportions of young people who were daily smokers. Only about one-third of those who tried smoking were, by Grade 10, daily smokers. Although there are many explanations offered for the decision to smoke, the dynamics of the decision-making process are still not clearly understood. Also it should be noted that 11 percent of both boys and girls also smoked but not daily, bringing the Grade 10 totals of smokers in 1998 to 34 percent of girls and 28 percent of boys. In spite of the intensive efforts to stop youth smoking, there has been a slight increase in youth smokers since 1990 although there was little change between the 1994 and 1998 surveys. The proportion of daily smokers is very high, 23 percent of Grade 10 girls, and constitutes a serious health problem.

Percentages of daily smokers presented in Figure 10.3 differ slightly from those presented in Figure 10.2 because the special sample for the 1998 survey contains more older students in each grade. This is because it includes those who had been held back at least a grade and these students were more likely to be daily smokers. Gender differences were very small from grade to grade until Grade 10 girls become substantially more likely than boys to be daily smokers. There is no clear point where the incidence of smoking sharply increases.

Figure 10.2

Students who smoked daily (%)

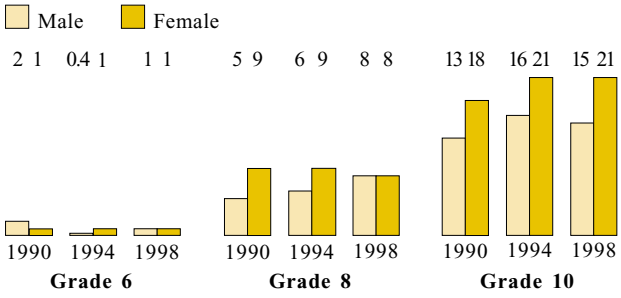


Figure 10.3

Students who smoked daily, 1998 (%)

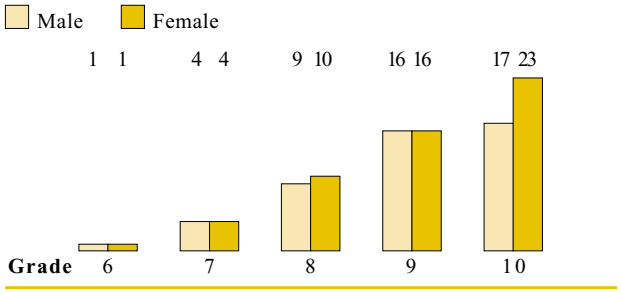
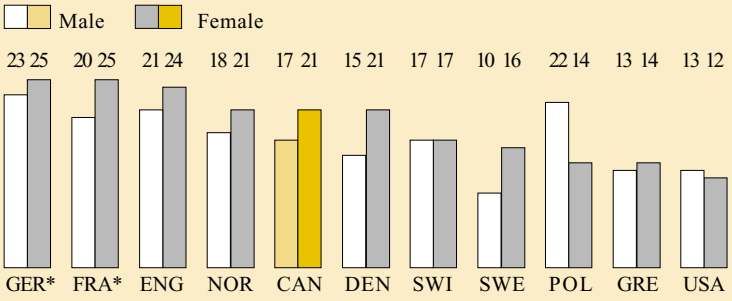


Figure 10.4

Fifteen year olds who smoked daily by country, 1998 (%)



**France and Germany are represented by regions: see Chapter 1 for details.*

In most Western countries, more girls than boys are daily smokers. The reverse is true in Poland and other Eastern European countries. The figures for the United States are low if compared to Canada, Germany, France and England. Sweden has been consistently lower than the norm in their proportions of daily smokers over the past 15 years.

Figure 10.5

Students who had tried alcohol, 1998 (%)

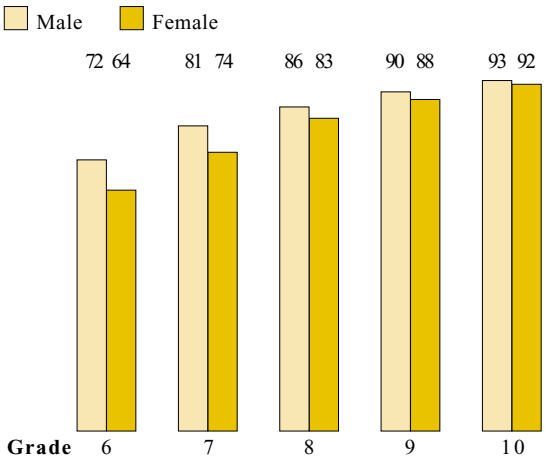
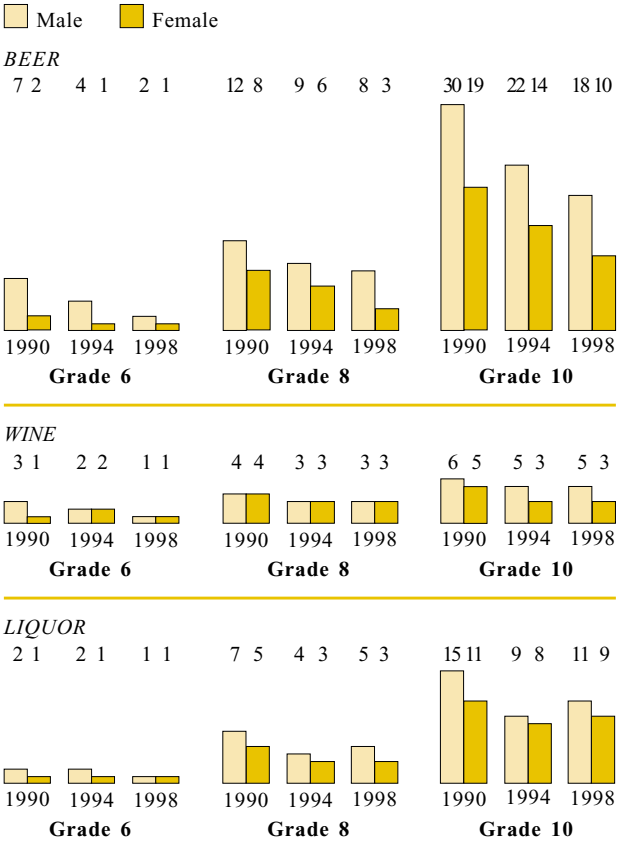


Figure 10.6

Students who drank beer, wine and liquor at least once a week (%)



Alcohol

Excessive alcohol consumption begun early in life not only leads to chronic liver disease and cirrhosis and alcoholic psychosis, but also is implicated in unintentional injuries and deaths, including traffic injuries (Harkin, Anderson and Goos, 1997).

Since alcohol is widely used in most Canadian homes, and consumption of wine or beer is a normal part of special occasions, it is not surprising that by Grade 10 over 90 percent of young people had tried alcohol. Even for our Grade 6 sample, about two-thirds had tried alcohol. Slightly more boys than girls had tried alcohol, but the differences were small in Grades 9 and 10.

Figure 10.6 presents the proportions of students who drank beer, wine or liquor at least weekly. It is especially interesting to note the decline in weekly beer drinking over the three surveys for all grade groups. Nevertheless, the proportion was quite high considering the fact that these young people were all under drinking age. Weekly wine drinking was relatively low and did not change much over time. There was little change in the proportion of weekly liquor drinkers between 1990 and 1998.

While it is not uncommon for adolescents to seek greater independence and try more adult-like behaviour that might involve alcohol use at parties, the high proportion of Grade 10 students who had been drunk at least twice indicates potentially serious alcohol-abuse problems (see Figure 10.7). Since these young people tend to be beginning drivers the combination of driving and drunkenness and driving under the influence of alcohol can be lethal. Also there are implications for unwanted pregnancies, STDs and injuries. The rates were highest in 1990, dropped in 1994 and then rose slightly for the Grades 8 and 10 groups. Gender differences were very small by Grade 10.

Figure 10.7

Students who had been "really drunk" two or more times (%)

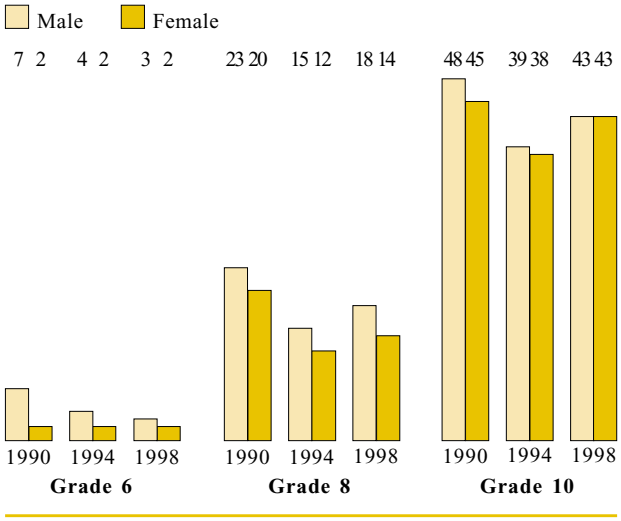
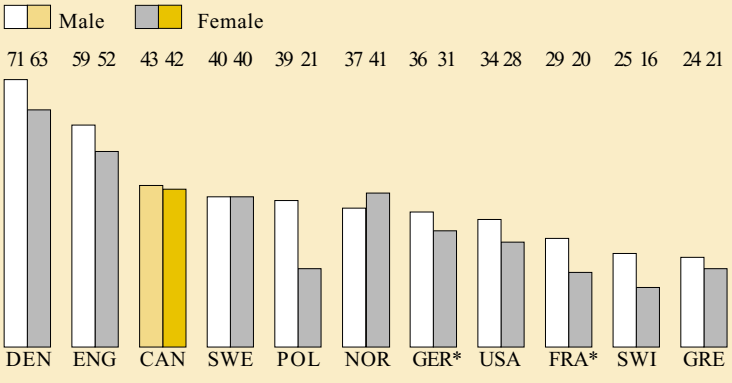


Figure 10.8

Fifteen year olds who had been "really drunk" two or more times by country, 1998 (%)

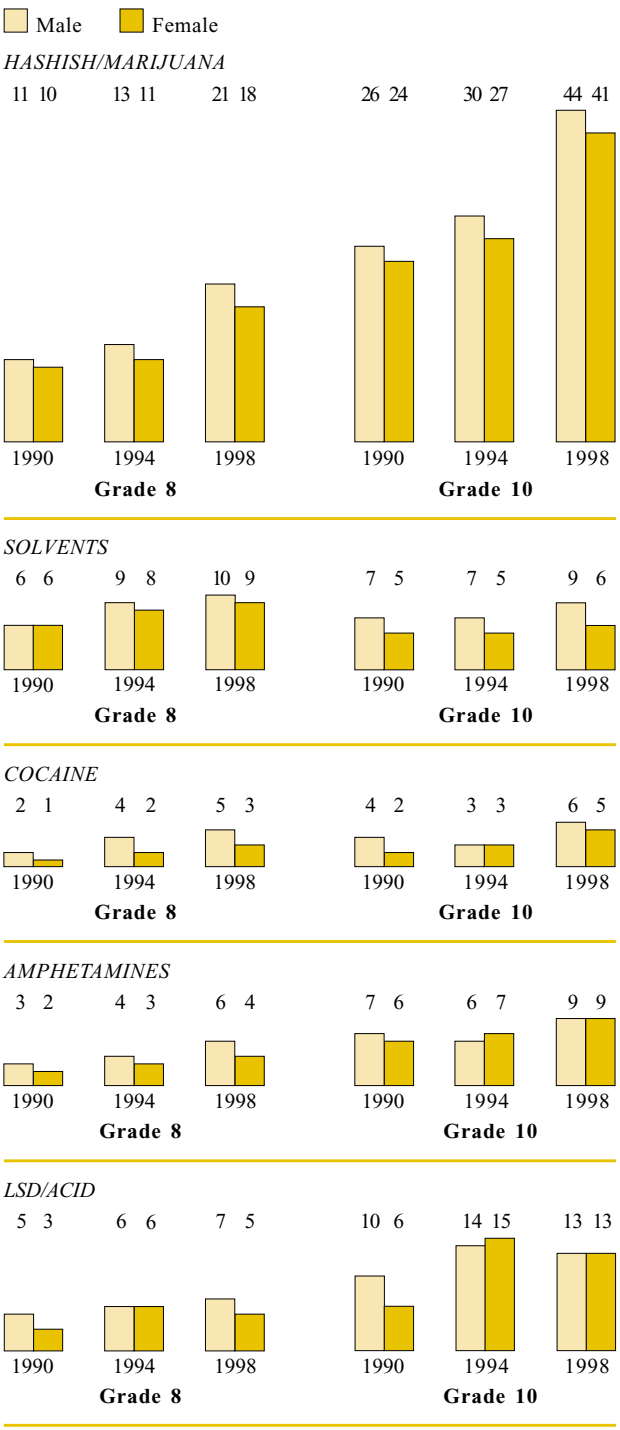


**France and Germany are represented by regions: see Chapter 1 for details.*

Denmark and England had greater rates of youth drunkenness than the other countries with Canada placing in the middle group. A major review of substance-use policies undertaken by WHO-Europe noted that in countries such as France, Switzerland and Greece, where wine is commonly taken at meals and alcohol purchase and use policies are not strongly enforced, drunkenness among youth tends to be less common. More restrictive alcohol policies appear to be associated with a greater incidence of adolescent drunkenness, for example, in Denmark, Sweden, Norway, Germany and England (Harkin, Anderson and Goos, 1997).

Figure 10.9

Students who had used drugs (%)



Drugs

The question on drug use was only asked of young people in Grades 8 and 10. Perhaps the most notable trend presented in Figure 10.9 is the sharp increase in hashish/marijuana use between 1994 and 1998. Interestingly this was associated with lower use of beer which may suggest a shift in substance use. Certainly marijuana is much more widely available at the present time than in the past and the cost is relatively low. The figures appear to be quite high for both the Grades 8 and 10 groups suggesting the widespread availability of the substance. Slightly more boys than girls at all grade levels were users. Solvent use has changed little over time, but cocaine and amphetamine use appear to be slowly creeping up. The proportions of youth using LSD did not change much over time for the Grade 8 cohort, but the proportions of Grade 10 students using LSD in 1994 and 1998 were significantly higher than in 1990. A question on the use of the drug Ecstasy or "E" was added to the 1998 survey. This drug appears to be used widely at youth "raves" or extended dance parties. The proportions of those who have tried it was relatively low (5 percent for boys and 3 percent for girls), but Grade 8 students were almost as likely to have tried it as Grade 10 students.

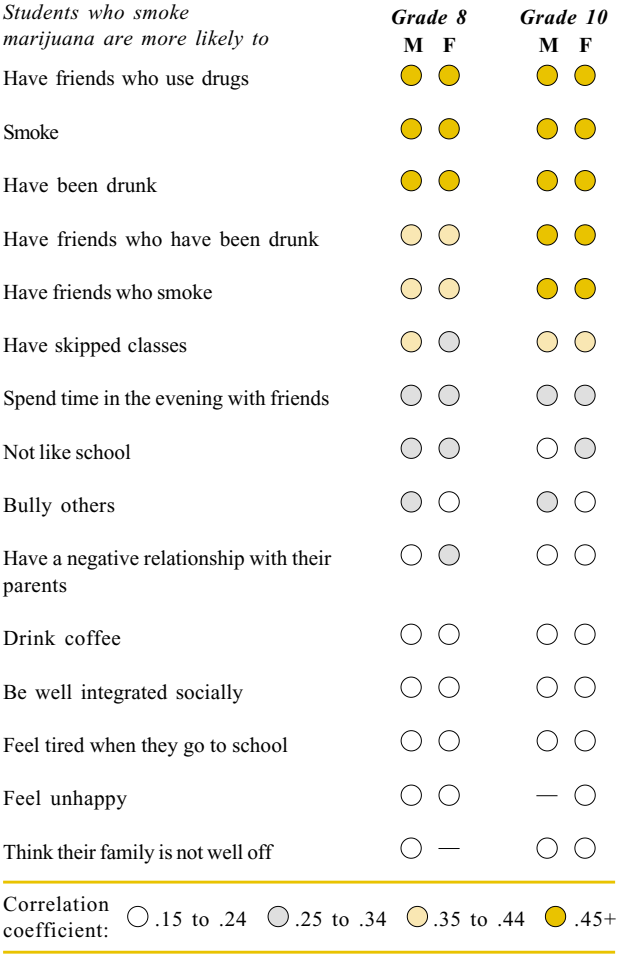
Drug use among European adolescents appears to be substantially less than the Canadian figure reported here, especially with regard to amphetamines, LSD and marijuana (Harkin, Anderson and Goos, 1997). However, it should be noted that marijuana use is also on the increase in Western European countries. These pronounced differences in drug use by youth between Canada and other Western countries should be examined and related to differences in policies and programs across jurisdictions.

Generally speaking, opiates and cocaine use are of greatest concern to public health officials, especially with regard to injection use, and for both there is a small but significant group of youth users.

Figure 10.10 emphasizes the strong relationship between the use of marijuana and other health-risk behaviours. Marijuana users are also likely to use alcohol and smoke cigarettes and spend a great deal of time with other adolescents who engage in the same behaviours. They are more likely to feel pressured at school and home, to skip classes and to bully others. Marijuana use among older adolescents may be more normative and commonly available at parties, but among young adolescents its use is clearly part of a high health-risk lifestyle.

Figure 10.10

Factors associated with marijuana use



Summary

One of the most disturbing findings in this study is the fact that there has been no reduction in the proportion of young people who smoke. By Grade 10, nearly two-thirds of the respondents had tried smoking; 17 percent of Grade 10 boys and 23 percent of Grade 10 girls were daily smokers.

The pattern is equally alarming for marijuana use, with sharp increases in the proportion of students who had used marijuana three or more times by Grade 10: 44 percent of the boys and 41 percent of the girls. Solvent use was up slightly for Grade 8 students and for Grade 10 boys. Cocaine, amphetamine and LSD use rose between 1990 and 1998. Drug abuse is becoming an increasing problem for adolescents and requires serious attention from health-promotion professionals.

There was a decline between 1990 and 1994 in the number of respondents who had been drunk twice or more, but the numbers were back up again in 1998. Episodes of drunkenness were remarkably high in an age group where the use of alcohol is illegal and where governments have introduced strong control procedures.

CHAPTER 11

Implications

The main purpose of this report was to present trends in the health of Canadian youth based on three HBSC surveys conducted in 1989-90, 1993-94 and 1997-98. The majority of Canadian youth aged 11 to 15 appear to be well-adjusted in terms of their physical and mental health, their relationships with their parents, peers and school, and their health behaviours. However, particular areas of concern have been identified and in this chapter they have been summarized and directions for programs and policies suggested.

As noted in the introduction, population health focuses on the interrelated conditions and factors that influence the health of populations over the life course, identifies systematic variations in the patterns of occurrence, and applies the resulting knowledge to develop and facilitate the implementation of policies and actions to improve the health and well-being of these populations. This research report focuses on the psychosocial environments of the home and family, school and peer culture settings, the individual capacity and coping skills and personal health behaviours of the young people themselves. The information should be of use to health, education, social service and recreation professionals working directly or indirectly with youth and youth-serving organizations, but it also has implications for the federal, provincial and territorial governments which have the responsibility for initiating major policies and programs.

The Family

The findings from the three surveys reinforce the importance of a supportive home life to the physical and mental health of youth. Most young people who have good relationships with their parents, based on effective communication, trust and understanding, are far more likely to be well adjusted in all aspects of their life than those who do not. Young people who do not have good relationships at home are far more likely to engage in health-risk behaviours, such as smoking and drug use, to experience adjustment problems at school and to suffer from health problems. There are many homes in which children feel burdened by unrealistic expectations and an absence of trust and understanding. Given these findings, it is especially disturbing to find that from the children's' perspective fathers' capacity to communicate with their children, and especially their daughters, weakens as young people move into their middle teens.

Although nearly three-quarters of the 1998 survey respondents lived with both parents, there was evidence of strains in families, especially in single-parent and blended family homes. The common pattern of two parents fully engaged in the labour market increases the pressure on them to be responsive to their children. Parents need information about effective parenting and about the implications of ineffective parenting on the lives of their children. The home is the optimum setting for the modeling and development of sound values, social skills and personal health practices. Young people learn about healthy eating, the benefits of physical activity and the value of good relationships primarily from the example set by their parents. In order to be responsive to their childrens' needs as they progress through school, parents need to maintain regular communication with teachers and develop realistic expectations for achievement in order for their children to feel accepted and supported. Even through the challenging adolescent years, parents must sustain their capacity to communicate with their children and to encourage discussion of the most sensitive issues, such as sexuality and relationships. Children are also influenced by the media, their peers and their communities; parents need programs and resources to help them in their roles as guides and mentors as they help their children develop into healthy adults.

The School

School does make a difference to the health of youth. It is the basic arena in which they develop social and life skills. Students who are unhappy at school because of lower-than-expected achievement, adjustment problems and poor relationships with teachers and other students tend to disengage from school. They often become friends with other young people who have had similar experiences and share negative views of school. Together they engage in health-risk behaviours, such as skipping classes, smoking and drug use. It is difficult for teachers to make all their students feel accepted and respected for their individuality when they must differentiate among them using marks. However, if students do not feel that they belong at school and that school is not meeting their needs, the costs to both the students and society can be substantial.

Compared to students from other countries, Canadian students continue to be generally happy with their school experience. However, the HBSC survey shows that there are emerging and ongoing problems: a large number of students skip classes; bullying behaviour by both boys and girls is commonplace; the victims of bullies tend to be isolated and to have emotional problems; a small but significant number of students do not feel safe at school; and, there is a small number of male students who carry weapons. Schools play an important role in the social development of youth: young people must feel accepted and supported, not threatened and isolated.

A number of approaches to the improvement of the school as a safe, secure and supportive setting contributing to promoting the health of young people have been developed in the last decade. In Europe, the World Health Organization, Council of Europe and European Union have worked together to develop and promote the European Network of Health Promoting Schools (ENHPS). The ENHPS Program is a process by which a school community undertakes a community needs assessment to identify and set priorities among the identified health problems. The specific program that is subsequently planned varies from school to school and from community to community. One school community may focus on reducing smoking while another may focus on building self-esteem.

In Canada, the Canadian Association for School Health in collaboration with Health Canada and approximately 30 national health and education sector organizations, developed the Comprehensive School Health Model. This model was based on the idea that health is a pre-requisite for learning and consists of four components: instruction for all students for and about health so that they have the knowledge and skills to maintain and improve their own health; a healthy, safe, violence-free physical environment in which to grow and develop; a healthy, safe and supportive psychosocial environment in which to develop social skills and the skills needed to live in a civic society; and support services of various kinds for those young people and their families who live in conditions of risk or who already have difficulties. The programs developed evolve from the needs identified in the specific school community and depend on the collaborative action of many sectors (e.g., public health, recreation, social services, justice) as well as education.

Both of these models focus on the processes of becoming a more health promoting setting that is supportive of the development of the students and teachers within it. Both of these models are based on the principle that all sectors within a school community, including the students, will be involved in identifying the problems and needs and developing the solutions. They are also both based on the principle that policies and programs and best practices are necessary to respond to student needs for support, acceptance and recognition; opportunities to develop and maintain social skills and relationships; opportunities for physical and leisure-time activities; and a school climate emphasizing respect and tolerance of all school community members.

The Peer Group

The mental health of young people and the degree to which they engage in health-risk behaviours are strongly associated with the relationships they have with their peers. Youth who are well integrated socially are far less likely to experience emotional problems than youth who have few friends and feel isolated. Having difficulty relating to peers is strongly associated with feeling helpless and suffering periods of depression and sleeplessness. Young people who feel included and accepted develop positive self-esteem; those who feel rejected and ridiculed rarely do. Ironically, some students who are socially integrated but who spend a great deal of time with their friends in the evenings are likely to engage in health-risk behaviours, such as smoking, alcohol and drug use. Young people typically engage in these behaviours in the company of friends who also smoke, drink or use drugs. Smoking in particular is almost exclusively done with other smokers in settings that reinforce its social and health-related irresponsibility. Youth who smoke and adopt other risk behaviours, at least in part, appear to be seeking peer-group approval and acceptance not available to them from other sources.

A core group of young smokers do not respond to the warnings in educational programs and on cigarette packages; 17 percent of Grade 10 boys and 23 percent of Grade 10 girls are daily smokers. It was not new or surprising to find that young people who engaged

in one risk behaviour were more likely to engage in others. For example, 90 percent of Grade 10 daily smokers had also used marijuana.

Most interventions specifically targeted at individual risk behaviours have had little or short-term success. An integrated and systematic approach that recognizes the role of the home, the school, the peer group and the community is required. Schools can encourage teachers to use teaching/learning methods that enable social interaction and skill development. The constantly changing secondary school class makeup associated with individual student timetables that appears to contribute to the social isolation of some students can be countered with a wide and varied extracurricular program designed to respond to the interests of students, stable homeroom groupings and mentoring programs. Parents can provide opportunities at home for young people to get together with friends in activities that are enjoyable, healthy and that support positive peer-group relationships. The community can provide programs, space and resources to help young people use their time in ways that enhance their physical, social and emotional health.

Gender Issues

While today's young women continue to be better adjusted at school than young men, to attain higher levels of school achievement and to be more likely to aspire to and to participate in post-secondary education, they also show evidence of higher levels of stress. For example, girls are far more likely to be concerned about their appearance; to diet; to take medication; to have headaches, backaches and stomachaches; to lack confidence and to suffer periods of depression. They are closing in on boys in the proportion who use drugs and alcohol and are well ahead of boys in the proportion who smoke. On many of these measures there has been an increase through the 1990s.

How they appear to others has become even more important for young women who view their appearance as a fundamental component of a successful career. Concerns about marriage, family and career must seem almost overwhelming for young women today. The stress of competing at school is so great for some that they may disengage from school and, sooner or later, may associate with others who have had similar experiences. Health-risk behaviours, such as smoking and drug use, become the norm for these young women. A sensitive, caring support system involving the school, the home and the community must be available to help both boys and girls through the difficult transitions of the teen years.

Unintentional Injuries

The number of young people in Canada who receive injuries that require medical treatment is disturbingly high, especially by international standards. In spite of our efforts to make sporting activities safer, injuries in both organized and unorganized sport continue to be a serious problem. The playground is also a major source of injury. Legislation regarding seatbelt use does not seem to have had the desired effect on youth: Germany, France and Sweden all have better compliance records. The vast majority of older adolescent bicyclists do not wear helmets. Although Canada prides itself on its safety legislation, safe equipment and appropriate supervision, more effort is required to reduce the injury rates noted in this report.

Concluding Comments

Perhaps the most important theme to arise from this trends analysis is the increase or continuance of health-risk behaviours in youth in spite of educational programs and legislation that have been directed toward reducing the behaviours. Part of this resistance appears to be related to the marginalization of some youth that encourages them to reject much of what they see in school and society and to establish their

own norms and values which may include smoking and substance abuse. Health and social problems associated with youth alienation require prevention programs directed at our basic institutions of the family and the school. Addressing the root causes of poor health among youth requires working collaboratively across government and non-government organizations to ensure a comprehensive approach to promoting their health where they live, learn, work and play. Increasing young people's access to protective factors for their health and well-being in the environment, such as social support, safe communities, positive parenting and increased health literacy and coping skills can help improve some of the inequities in health attitudes and behaviours observed through this study.

Prevention is fundamental, but what can be done to re-engage the already disengaged? Some success has been achieved with "secondary school retrieval programs" designed to upgrade basic skills, provide supervised work experiences and enable graduation. Community recreation initiatives that provide space and stimulating activities to youth have also been successful. Interventions such as these must recognize the significance of the peer group in meeting basic social and emotional needs if they are to be viable.

The primary purpose of this report is to provide information on trends in the health of Canadian youth. Some analyses have been presented to identify factors associated with particular health problems and to illustrate the strong relationships among risk behaviours; the policy implications of the findings are stated in very general terms. Obviously more analysis of the data and more effort to develop specific policy is required. The HBSC surveys provide a wealth of useful information about the health behaviours of youth from both a national and cross-national perspective. More policy-directed research on the role of the family, school and peer group in the health of youth is clearly required.

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