

HEALTH BEHAVIOUR IN SCHOOL-AGED CHILDREN:
WORLD HEALTH ORGANIZATION COLLABORATIVE
CROSS-NATIONAL STUDY (HBSC)

Findings from the 2006 HBSC Survey in Scotland

HBSC SCOTLAND NATIONAL REPORT

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Candace Currie
Kate Levin
Joanna Todd
and the HBSC National Team

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FOREWORD

Among the many important issues for public health in Scotland today, possibly the single most important one is the critical impact for future health of our formative years. Our trajectories in life are largely established by our late teens, and so are the lifelong health impacts of the advantages and disadvantages accrued during childhood and youth. The balance of advantages and disadvantages that an individual gains are not down to chance (though chance always plays some part in life). They are closely linked to the circumstances of children's and young people's lives - to their social, economic and cultural context.

Neither the circumstances of life nor the way we react, or are expected to react, to them are static. Things change over time. They also vary by place and social group. The teenage 'finding of self' will take a different form for a 13-year old from an affluent suburb in the 1950s than for a 13-year old on a peripheral social housing estate in the 1990s. And if one is a girl and the other a boy, the differences are even more marked. To understand the processes at work, so that we might intervene to ensure a better opportunity for all young people, requires serious study over a long period of time.

The series of Health Behaviour in School-aged Children (HBSC) surveys in Scotland is one of our most important foundations for such study. Since the first national survey in 1990, successive surveys have been carried out every four years. This report, on the fifth survey in 2006, is important not just for what it says about young people in 2006. It is important because it shows how their health-related behaviours and the context in which they take place has been changing. Or not changing.

The HBSC has always laid stress on the academic and methodological robustness of its approach. Consistency has been maintained, as far as possible, over time and between the 43 countries now included in the HBSC. But rigour alone is not enough to improve public health and commitment to dissemination and use of the knowledge gained is also vital.

The clear presentation of findings both challenges and motivates us. After two decades of effort, why is it that smoking rates are no lower than in 1990 and drinking rates are higher? And, in what I personally find the most intriguing single result, why is it that happiness (and a range of associated measures) has improved between 1994 and 2006? Is it a secular by-product of change in society or the outcome of intentional actions through policy or other initiatives? We do not know. And without such understanding, how can we hope to know how to do better?

NHS Health Scotland (and its predecessors) has funded the HBSC in Scotland since its inception and have already committed to the next survey in 2010. There is still much to learn about how we can best support young people both at individual level and by improving the contexts that drive and constrain their decisions and supposed 'choices'. Maximising the advantages and opportunities of childhood and youth is a key goal for all organisations seeking to promote the health of Scotland's population, from the Scottish Government to the individual practitioner. All will profit from the knowledge contained in this report and from the more detailed analyses, which will follow.

Dr David S Gordon
Head of Public Health Observatory Division
NHS Health Scotland

EXECUTIVE SUMMARY

This report presents data on adolescent health from the World Health Organization (WHO) collaborative cross-national Health Behaviour in School-Aged Children (HBSC) study in Scotland. Prevalence statistics for 2006 and trends across five consecutive surveys in 1990, 1994, 1998, 2002 and 2006 are included. Over 6,000 pupils were sampled in the most recent Scottish survey of 2006. The main findings are summarised below.

FAMILY LIFE

The majority of young people in Scotland (68%) live with both their parents, while 19% live with just one parent (17% with their mother and 2% with their father), and a further 12% live in a step family. Most of those children living with two parents (78%) report that both are in employment. A further 19% report that one parent is in employment, compared with 70% of children from single parent families. Young people find it easier to talk to their mother (80%) than to their father (60%) and ease of communication with parents (particularly fathers) deteriorates with age for both boys and girls. Boys and girls find it equally easy to talk to their mothers about things that bother them but boys are more likely than girls to have easy communication with their fathers.

THE SCHOOL ENVIRONMENT

A quarter of young people like school 'a lot', girls more than boys. Liking school declines with age. Two thirds of young people rate their school performance highly relative to their classmates but this proportion declines with age. Schoolwork pressure was reported by nearly a third of young people, particularly at age 15 when 34% of boys and 45% of girls report feeling stressed by schoolwork. The majority (68%) of young people find their classmates kind and helpful. 84% of 15-year-old girls aspire to go on to university or further education on leaving school, compared with 54% of boys.

PEER RELATIONS

Half of girls and a third of boys contact their friends daily via phone, text messages and/or the internet, and electronic media contact increases with age. Girls find it easier than boys to talk to their best friend about things that really bother them, however ease of communication with best friend increases with age for both boys and girls. Boys are more likely than girls to spend time with friends immediately after school or in the evening.

EATING HABITS

Almost three quarters of young people eat a family meal four or more days a week and almost two thirds eat breakfast every school day. The frequency with which young people have breakfast decreases with age, as does the frequency of having a family meal. 40% of young people eat fruit daily and 38% eat vegetables daily, with higher proportions of girls than boys eating both. The proportion of young people eating fruit daily decreases with age, while there is no change in vegetable consumption. Daily consumption of water is more than double the daily consumption of soft drinks.

PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

29% of boys and 16% of girls meet the Scottish Government moderate to vigorous physical activity guidelines. Older boys take part in vigorous exercise less often but for longer durations than younger boys, while girls take part less frequently as they get older but duration of exercise remains the same across all ages. Approximately half of young people in Scotland walk to school, primary pupils more often than secondary. Boys play computer games and watch television more often than girls, and for both, TV and computer usage is higher at the weekend than during the week. Whilst the use of computers for game playing decreases with age, computer use for other purposes (chatting on-line, internet, e-mailing, homework) increases.

WEIGHT CONTROL BEHAVIOUR

One third of young people report that they have previously been or are currently on a diet and there has been a 50% increase in reported dieting among boys since 1990. Girls are twice as likely as boys to be dieting or doing something else to lose weight (22% and 11% respectively). Boys are less likely to try to control their weight as they get older, while the opposite is true for girls.

BODY IMAGE AND BMI

25% of boys and 40% of girls report that they feel too fat. 36% of boys and 26% of girls consider themselves to be good looking. Young people's views of their physical appearance and body size are less favourable at age 13 than at age 11. Of those who reported their height and weight, three quarters of 15-year-olds are classified as having a normal weight, 12% as being overweight, and 2% are classified as being obese, according to their self-reported height and weight.

TOOTH BRUSHING

There has been a steady increase from 1990 to 2006 in the proportion of boys and girls who brush their teeth two or more times a day, and girls are more likely than boys to brush their teeth twice a day or more; 80% compared with 65%.

MENTAL WELL-BEING

The majority of young people (84%) are satisfied with their life, 49% are very happy, 36% never feel helpless, 22% never feel left out of things, 21% rate their health as excellent and 20% always feel confident. Boys fare better than girls on all six mental health measures and prevalence of well-being decreases with age, for girls more than boys. Young people's happiness, confidence and never feeling helpless have increased since 1994, and the proportion not feeling left out has increased since 1998.

SUBSTANCE USE

More than one in four young people have tried smoking and, at age 15, girls are more likely to have tried smoking than boys. 13% of girls and 10% of boys report that they are smoking at present. By age 15, two thirds of smokers report that they smoke every day. One in five 13-year-olds and two in five 15-year-olds drink alcohol at least once a week. 48% of 15-year-old girls and 43% of 15-year-old boys have been drunk on at least two occasions. Although boys and girls are equally likely to drink alcohol by age 13, the type of drink consumed varies; boys are most likely to drink beer, while girls prefer alcopops and spirits. 28% of 15-year-olds and 7% of 13-year-olds have used cannabis. Nine percent of 15-year-olds are 'experimental users' of cannabis while a further ten percent are 'regular users'.

SEXUAL HEALTH

Schools, friends and parents rank first, second and third respectively as sources of information on sexual matters for both boys and girls. Approximately three quarters of 15-year-olds say that it is easiest to discuss personal and sexual matters with friends. Nearly a third of 15-year-olds have had sexual intercourse (30% of boys and 34% of girls). 85% of boys and 74% of girls who are sexually active used a condom on the last occasion that they had sexual intercourse.

BULLYING AND FIGHTING

Approximately 10% of young people report having being bullied at least two or three times at school in the previous couple of months, although by age 15 this has decreased to 7%. One in twenty of young people report bullying others (8% of boys; 3% of girls). 8% of girls and 22% of boys have been in a physical fight in the previous 12 months. Fighting among boys decreases with age.

INJURIES

Almost half of young people have received an injury requiring medical attention in the past 12 months. Boys are more likely to be injured than girls.

ACKNOWLEDGEMENTS

We thank the Regional and Island Authorities for granting permission for their schools to participate in the survey; and all the young people who completed questionnaires; and the schools and teachers who kindly agreed to administer the survey.

Acknowledgement is made to all national teams in the international HBSC research network who collaborated on the production of the HBSC international research protocol and the support of the WHO Regional Office for Europe.

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HBSC National Team:

Candace Currie (Principle Investigator)

Dorothy Currie

Jo Inchley

Kate Levin

Rebecca Smith

Joanna Todd



THE HEALTH BEHAVIOUR IN SCHOOL-AGED CHILDREN:
WHO COLLABORATIVE CROSS-NATIONAL STUDY (HBSC)

INTRODUCTION AND METHODS

INTRODUCTION

Health improvement of young people in Scotland

The improvement of young people's health in Scotland is a key aim of recent Government policies. National and local targets and programmes concerned with children and adolescents have focused on physical activity, nutrition, mental health and sexual health with an overarching aim to reduce health inequalities. Other areas of concern are smoking, alcohol or drug use and risks associated with overweight. Support for the development of health promoting environments for young people has been highly visible in the context of the Health Promoting School in Scotland. A target was set by the government for all schools to be health promoting by 2007. The strong commitment to young people's health is now evident in recent legislation. The Schools (Health Promotion and Nutrition) (Scotland) Act 2007 (*Scottish Government, 2007*) states that schools have a duty to promote the physical, social, mental and emotional health and wellbeing of all pupils.

The Health Behaviour in School-Aged Children: WHO Collaborative Cross-National Study (HBSC)

The Health Behaviour in School-Aged Children (HBSC) Study in Scotland is a key source of information on child and adolescent health in the country. HBSC takes a broad perspective, gathering information on wide-ranging aspects of young people's health and well-being as well as the social contexts within which they are growing up (*Currie et al., 2004*). The HBSC Cross-National Study initiated in 1983 in three countries, has now grown to include 43 countries in Europe and North America. Scotland became a member country in 1986 and the first national HBSC survey was conducted in 1990. National surveys have been conducted every four years since then in line with the cross-national survey cycle. The study in Scotland is based at the Child and Adolescent Health Research Unit, University of Edinburgh. CAHRU is also the HBSC International Coordinating Centre (ICC). NHS Health Scotland funds the national study and also provides support to the ICC.

The target population of the HBSC study is young people attending school, aged 11, 13 and 15 years old. These age groups were selected because it is during these years that important stages of development occur (i.e., the onset of adolescence, the challenge of physical and emotional changes and the middle teenage years when important life and career decisions are being made). The school-based survey is administered to a nationally representative sample of approximately 1500 pupils from each age group in each participating country. Pupils complete questionnaires in the classroom during one school period.

HBSC is conducted in collaboration with the World Health Organization Regional Office for Europe and this partnership supports the wide dissemination of research findings to inform and influence health promotion and health education policy and practice at national and international levels. The Scottish HBSC team has produced a range of papers, reports and briefing papers to inform policy makers, practitioners, and academics on findings from the study. These are available on the CAHRU website¹. A full list of international publications is presented on the HBSC website².

The report

HBSC surveys in Scotland have produced a wealth of data on the health of the nation's youth over the last two decades. This report provides up-to-date information on young people's health and behaviour in Scotland, as well as the social contexts affecting their lives. Where possible, patterns are traced back to the early 1990s. The data presented capture all the key priority areas of mental health, physical activity, eating habits, substance use and sexual behaviour. Less commonly reported issues are also examined; examples include how young people feel about their bodies, their efforts at weight control, their experience of bullying and fighting, how they get along with friends and family and relationships at school. Uniquely, HBSC places young people's health in social and economic context and gathers data on family structure and socioeconomic circumstances. The report therefore also shows how social contexts of young people's lives have changed over recent years. Analyses assessing the role that these factors play in explaining young people's health and well-being are reported elsewhere (*Levin et al., 2007; Todd et al., 2007*).

STUDY METHODOLOGY

Questionnaire design

The Scottish HBSC questionnaire follows the international HBSC survey protocol, developed by the HBSC international network of researchers from member countries. The questionnaire is designed by network members working in focus groups according to area of expertise in various aspects of adolescent health. The study methods are outlined briefly below, with a more comprehensive description available elsewhere (*Roberts et al., 2004; 2007*). For each survey round a full research protocol is developed which includes the scientific rationales for topic areas included in the international standard questionnaire. While some items remain from each survey year to the next, others may change and others still may be dropped entirely according to national and international priorities and methodological developments. Items are subject to validation procedures in several countries before final versions are submitted for inclusion in the international questionnaire (*Boyce, et al., 2006; Elgar et al., 2005; Haugland and Wold, 2001; Vereecken and Maes, 2003*). In 2006 there were 53 questions (with 122 items) that were considered 'core' to the international study. These questions are mandatory for all member countries of the network, including Scotland, to ensure that international comparisons can be made on a number of key social, health and behaviour measures. In addition to the mandatory questions required by the HBSC network, optional thematic packages validated internationally are made available. The Scottish HBSC questionnaire also includes items that are of specific interest to the health of Scottish adolescents.

The Scottish national questionnaire was piloted in the autumn term of 2005 before the final version was submitted for documentation to the international HBSC databank in Bergen.

The questionnaire is designed to take approximately 40 minutes to complete.

Sample Design

The HBSC 2006 sample was designed to be nationally representative and produce robust prevalence estimates describing the social context, health and health behaviour of 11, 13 and 15 year olds in Scotland. The survey was conducted in schools, using the class as the sampling unit, with all the pupils in selected classes being asked to complete the confidential questionnaire anonymously.

The target population was school children in the final year of primary school (P7, average age 11.5 years) and in the second (S2) and fourth (S4) years of secondary education (average ages 13.5 and 15.5 years respectively). All local authority funded and independent sector schools were included in the sample frame with the exception of schools for children with special needs.

The sample was proportionally stratified by school funding (educational authority or independent) and education authority for state funded schools, with implicit stratification for socio-economic status, taking the proportion of children with free school meals as a proxy. Samples were selected separately for each school year group.

Within each strata schools were selected with probability proportional to the number of classes in the required year group. This meant that larger schools had a higher probability of inclusion in the sample of schools. For each age group, one class from each selected school was included in the sample.

Sample size and Precision of Estimates

The recommended minimum sample size for each of the three age groups was set at 1536 students, in accordance with International HBSC protocol. This calculation assumed a 95% confidence interval of $\pm 3\%$ around a proportion of 50% and a design factor of 1.2. The design factor is the amount by which the sample size computed for a simple random sample should be multiplied to account for cluster sampling, ie sampling classes rather than children. For example, the proportion of 11 year old boys who have ever smoked is 9%. The standard error under the

assumption of random sampling is 0.9%. The true complex standard error for this proportion, which takes account of the sample design, is 1.3%, resulting in 95% confidence intervals of 6.5%-11.7%. This compares with a confidence interval of 7.0%-10.5% under the assumption of random sampling. The design factor in this example is $1.3/0.9=1.4$.

Response Rates

Of the 396 school classes asked to participate in the survey, 300 (76%) took part. The breakdown of response rates is shown in Table 1.1. Pupil responses within classes were good, with approximately 11% of pupils in the class not returning a questionnaire. The main reason for school (class) non-response was that they were too busy. The main reason for pupil non-response was illness or unexplained absence. Pupils not present on the day were not followed up after the survey.

Table 1.1 **Response rates by class**

HBSC Scotland 2006 Survey

RESPONSE RATES IN 2006	PERCENTAGE	ACHIEVED SAMPLES
Primary 7		
Class response	75	
Pupil response	91	
Total response	68	1,785
Secondary 2		
Class response	84	
Pupil response	88	
Total response	74	2,309
Secondary 4		
Class response	70	
Pupil response	87	
Total response	61	2,306
Whole sample response	70	6,400

Administration of survey instrument

Questionnaires were administered in schools between January and March 2006. The administration of the questionnaire in schools was conducted by school teachers who were given precise instructions on how to carry this out. Teachers were also given a class return form to complete which detailed how many pupils completed the questionnaire, how many were absent and reasons for absence. On completion, each pupil placed the questionnaire in an envelope and sealed it. The completed questionnaires were then returned by all schools. Coding of responses and data entry was conducted according to protocol guidelines. The national dataset was then submitted with complete documentation of the procedures adopted, as well as any deviations in the wording of questions or choice of responses, to the international data bank in Bergen. The Norwegian Social Science Data Service (NSD) performed cleaning and data quality checks under the supervision of the HBSC data bank manager, and produced the full international dataset, available for use by members of the research network.

Ethical approval and consent

The study, including the proposed design, timetable and intention of use, is first approved by the Moray House School of Education Ethics Committee. Directors of Education were contacted and permission was requested to invite schools to take part in the survey. Once permission was granted, selected schools were sent a letter of invitation, information about the HBSC survey, along with an example questionnaire, and details of what is involved in taking part. Consenting schools then sent a letter, written by CAHRU, to the parents of pupils in selected classes, requesting consent for their children to be surveyed. Parental consent forms were opt-out, so that only those pupils whose parents signed an opt-out form were not included in the survey. Pupils themselves could also opt out of the survey on the day if they chose not to take part. They were provided with information leaflets about the survey before the survey day.

RESULTS

Presentation of Findings

The Report is made up of 14 chapters, including this first one which gives a broad introduction and background to the study. Chapters two, three and four give a descriptive summary of social factors which are known to be associated with the health behaviour of young people: family life, the school environment and peer relations. The remainder of the report describes prevalence of various health indicators and behaviours, broken down by age and gender. Most of the findings presented in this report are based on collapsing response options to questionnaire items.

Data Analyses

For the most part, comparisons were drawn between genders and age groups in the prevalence of health outcomes described by proportions. Design adjusted chi-square tests were carried out to assess statistical significance of differences between genders and age groups. All differences or changes reported are significant unless otherwise stated. In this report a 99% level of significance was used in the comparison of proportions. This more conservative measure was used in preference to 95% as many tests of proportions were carried out. Analyses for age and gender took account of the effect of the survey design- stratification, clustering and weighting- on the precision of the estimates presented. The Complex Survey package of SPSS 14 (SPSS Inc, 2005) was used for all design-adjusted analyses

Many of the items were collected over a number of surveys in Scotland and trends are reported for these. Where differences 'between 1990 and 2006' are described, the statistical test carried out was between the proportion in 1990 and the proportion in 2006. In a few cases comparisons were drawn between intervening years but these are highlighted in the text.

In some cases, reported data appear not to add up, eg. Figure 2.3, percentages of mother SES appear to add up in total to 101%. This is due to rounding error. Similarly, columns in Figure 6.13 appear to be different for an equivalent percentage. This apparent inconsistency is again due to rounding.

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NOTES:

- 1 www.education.ed.ac.uk/cahru
 2 <http://www.hbsc.org/>



THE HEALTH BEHAVIOUR IN SCHOOL-AGED CHILDREN:
WHO COLLABORATIVE CROSS-NATIONAL STUDY (HBSC)

FAMILY LIFE

2

- In Scotland, 68% of young people live with both their parents, 19% with a single parent (17% with mother and 2% with father) and 12% in a step family; the remaining 1% live in a variety of care arrangements
- Of those children living with both parents, 78% have both parents in employment, and a further 19% have one in employment, whilst among children from single parent families 70% have a parent in employment
- Of the 64% of fathers who have been assigned socio-economic status (SES), most fall into skilled manual (SES 4) and managerial/technical (SES 2) categories. Among the 60% of mothers with an assigned SES, the most common category is managerial/technical (SES 2)
- 57% of young people think their family is quite or very well off, with 11-year-olds more likely to describe their family as very well off than 13 or 15-year-olds
- Young people find it easier to talk to their mother (80%) than to their father (60%) and ease of communication with parents (particularly fathers) deteriorates with age for both boys and girls
- Boys and girls find it equally easy to talk to their mothers about things that bother them but boys are more likely than girls to have easy communication with their fathers



INTRODUCTION

For adolescents, as well as younger children, the family is a vital setting for physical, emotional and social development. Family provides the context in which many health behaviours are established and its influence continues throughout adolescence and onward through the life course (*Pedersen et al., 2004*).

The composition of the family unit has undergone significant change in recent decades and many children in Scotland are growing up in increasingly diverse living arrangements. Overall, the association between family structure and adolescent health tends to show more favourable outcomes for children living in two-parent families compared to step- and single-parent families (*Amato and Keith, 1991; Griesbach et al., 2003; McMunn et al., 2001; Todd et al., 2007*). However, the variations in social, cultural and political norms across Europe mean that associations between family structure and health are likely to vary (*Iacovu, 2004*).

Importantly, research suggests that it is not only family composition that is important, but the quality of relationships between family members (*Houseknecht and Hango, 2006; Martinez and Forgatch, 2002*). Good parent-child relations can serve a protective function, helping children to achieve positive health outcomes and avoid stress (*Barrett and Turner, 2006*). Adolescents who have good relationships with their parents experience fewer behavioural problems and are less likely to engage in risk taking behaviour (*McArdle et al., 2002; Pedersen et al., 2004; Ward and Laughlin, 2003*).

Family socioeconomic circumstances can also have a profound influence on the health and well-being of young people. In particular, parental occupation and family affluence are associated with a range of adolescent health outcomes. Children from high affluence families are more likely to have high life satisfaction, engage in physical activity, have healthy eating patterns and brush their teeth twice daily (*Currie et al., 2008; Holstein et al., 2004; Levin et al., 2007; Maes et al., 2006*).

HBSC FINDINGS

Various dimensions of family life are measured in HBSC, including family structure, parental employment and occupation, family affluence and parent-child communication.

FAMILY STRUCTURE

Young people were asked who they lived with¹. In 2006, 68% of young people in Scotland live with both their parents, 19% with a single parent (17% with mother and 2% with father) and 12% in a step family. A further 1% report living in another home environment, such as a foster home, children's home or they report that they are being cared for by members of the extended family ([Figure 2.1](#)). These figures are very similar to Census data (*ONS, 2007*).

The proportion of young people living with both parents has gradually declined since 1990, while the proportions living in single parent and step family households have increased ([Figure 2.2](#)). This trend is found in many other European countries (*Berthoud and Iacovu, 2005*).

PARENTAL EMPLOYMENT AND FAMILY SOCIOECONOMIC STATUS

Among children defined as living with both parents, 78% have parents who are both employed, 19% have one parent in employment and 4% have parents who are not working. Seventy one percent (71%) of children who live with just their mother have working mothers and 70% of those living with only their father have working fathers.

Young people were asked the occupation of their parent(s) and from this information a socio-economic status (SES) between 1 (high) and 5 (low) was assigned to each parent, using the Registrar General's social class classification. Almost two thirds could be assigned a socio-economic status (60% of mothers and 64% of fathers). The remainder fall into one of three categories: 'employed and SES unknown', 'not employed' or 'don't know'. Where the job description is impossible to classify (18% of fathers and 14% of mothers), parents are described as 'employed - SES unknown'. Parents who do not work because they are sick, retired, studying, unemployed or caring for others are described as 'not employed'. Where no information is provided, occupational status is classified as 'don't know'.

Figure 2.1:
FAMILY STRUCTURE

HBSC Scotland
2006 Survey

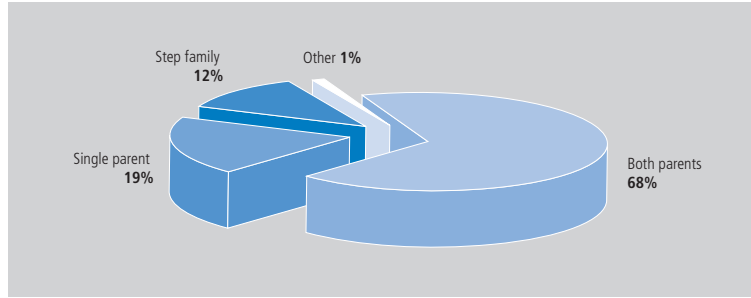


Figure 2.2:
FAMILY STRUCTURE 1990 – 2006

HBSC Scotland
2006 Survey

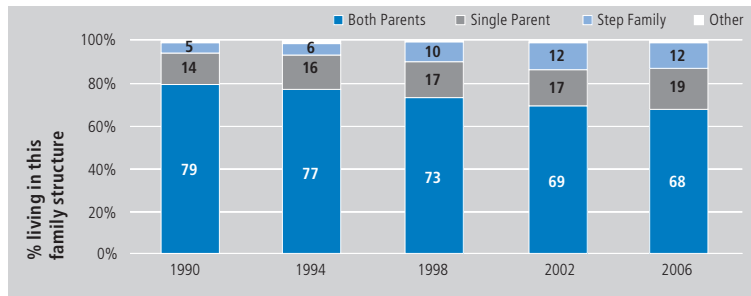


Figure 2.3:
SES OF MOTHERS AND FATHERS

HBSC Scotland
2006 Survey

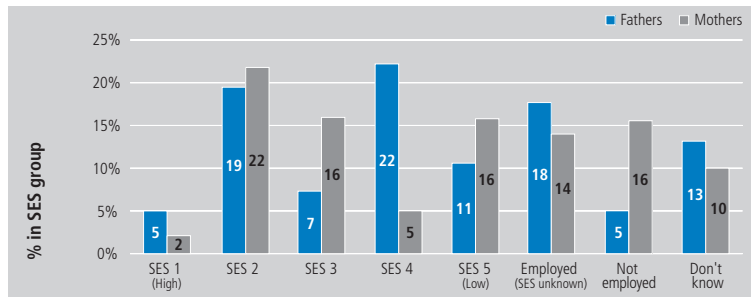


Figure 2.4:
FAMILY SES

HBSC Scotland
2006 Survey

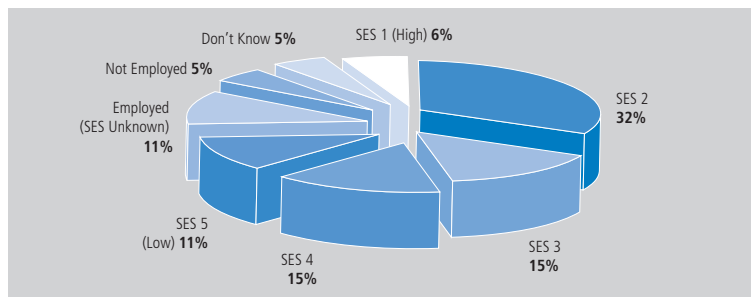
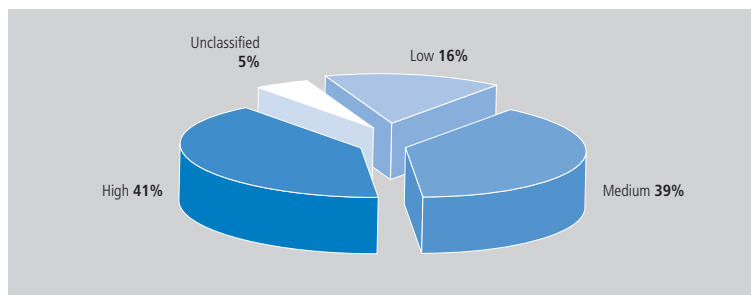


Figure 2.5:
FAMILY AFFLUENCE

HBSC Scotland
2006 Survey



The occupational status of children's parents is presented in [Figure 2.3](#). Of the 64% of fathers who have been assigned socio-economic status, most fall into the 'skilled manual' (SES 4) and 'managerial/technical' (SES 2) categories. Among the 60% of mothers with an assigned SES, the most common category is 'managerial/technical' (SES 2), followed by 'skilled non-manual' (SES 3) and 'unskilled' (SES 5). Two thirds (65%) of mothers who are not employed are 'taking care of others' or 'full time in the home', compared with 27% of fathers who are not working.

The family's socio-economic status (Family SES) is that of the parent with the higher SES (where more than one parent is present in the main home). This indicator is useful, as it provides a single SES score for the home environment within which the young person is living. Seventy nine percent (79%) of young people are assigned a family SES classification in this way. Of the remaining 21%, half have an employed parent of unknown SES and the other half are equally divided between families with unemployed parent(s) and families where no information was provided on socio-economic status ([Figure 2.4](#)). A third of young people are assigned a family SES score of 2 and a further third are assigned a family SES score of 3/4.

FAMILY AFFLUENCE

As illustrated above, children and young people are often unable to give sufficient information about their parents' occupational status (therefore it is difficult to provide an SES score). As an alternative, family affluence can be used as a proxy measure of socio-economic status. To assess family affluence, young people were asked to report (a) the number of cars in their family, (b) the number of computers at home, (c) the number of family holidays taken in the previous 12 months and (d) if they have their own bedroom. The Family Affluence Score (FAS) is a validated measure derived from these items and children are classified as having low, medium or high affluence (*Currie et al., 1997; 2008*). Fewer children are unclassifiable using FAS than SES (21% of children were unclassifiable according to parental occupation, whereas only 5% could not be given a Family Affluence Score).

In 2006, 41% of young people were classified as having high affluence families, 39% medium affluence and 16% low affluence ([Figure 2.5](#)). These cut-offs are devised for international comparisons, where the UK is relatively affluent. High, medium and low tertiles of the FAS distribution are often used for within-country analyses.

PERCEIVED WEALTH

A subjective measure of family affluence was obtained by asking young people 'How well off do you think your family is?'. Thirty seven percent (37%) of young people responded 'average', 39% 'quite well off' and 18% 'very well off' ([Figure 2.6](#)). Just 6% of young people thought that their family was not well off, although perception of wealth changes with age. 11-year-olds are more likely to describe their family as very well off than 13 or 15-year-olds. The family affluence score, on the other hand, is reported similarly by all three age groups.

Young people were asked to report perceived wealth in two previous surveys in Scotland (1998 and 2002) and trend analysis shows an increase in the proportion describing their family as very well off between 1998 and 2006. The figures show increases from 9% to 16% among girls and 12% to 19% among boys ([Figure 2.7](#)).

COMMUNICATION BETWEEN PARENTS AND ADOLESCENTS

Young people find it easier to talk to their mother (80%) than to their father (60%) about things that really bother them. Easy communication with parents becomes less likely with age for both boys and girls, particularly with fathers. Seventy three percent (73%) of 11-year-olds, 61% of 13-year-olds and 47% of 15-year-olds find it easy to talk to their father. Boys and girls find it equally easy to communicate with their mother, but boys find it easier than girls to talk to their father at all three ages ([Figures 2.8 and 2.9](#)).

Between 1990 and 2006 there was an increase in easy communication with fathers for boys but not for girls and very little change in easy communication with mothers for either boys or girls ([Figures 2.10 and 2.11](#)). The data also show a persistent gender difference in ease of communication with fathers but not mothers.

Figure 2.6:
PERCEIVED FAMILY WEALTH BY AGE

HBSC Scotland
2006 Survey

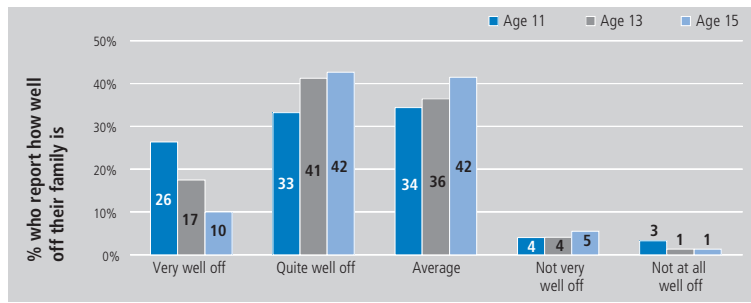


Figure 2.7:
PERCEIVED WEALTH 1998-2006

HBSC Scotland
1998-2006 Surveys

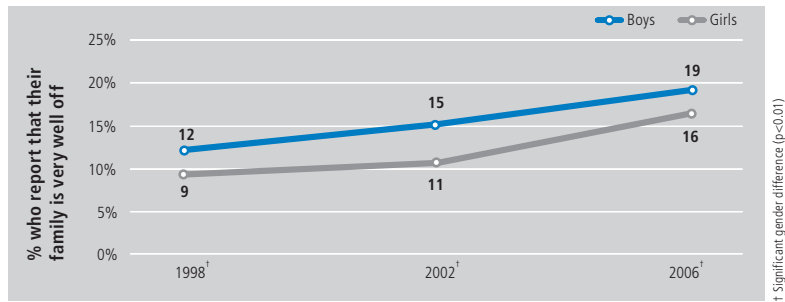


Figure 2.8:
EASY TO TALK TO FATHER

HBSC Scotland
2006 Survey

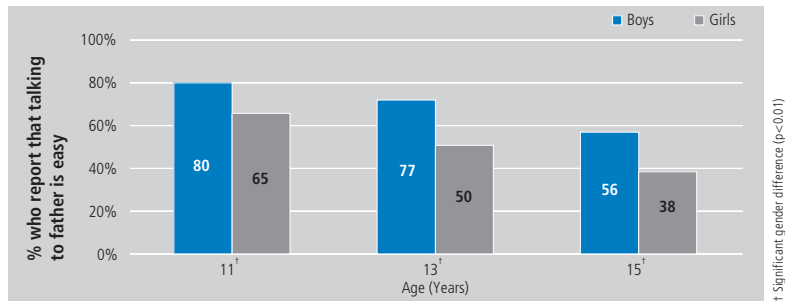


Figure 2.9:
EASY TO TALK TO MOTHER

HBSC Scotland
2006 Survey

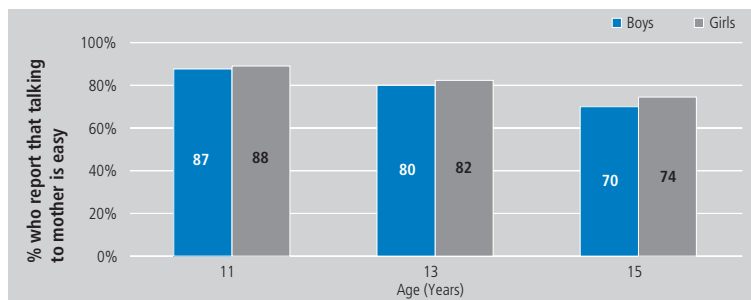


Figure 2.10:
EASY TO TALK TO FATHER 1990-2006

HBSC Scotland
1990-2006 Surveys

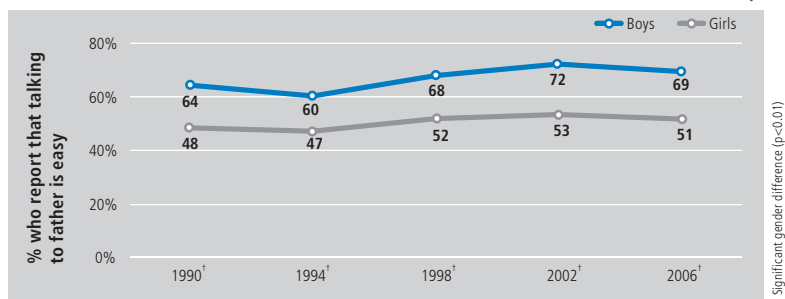
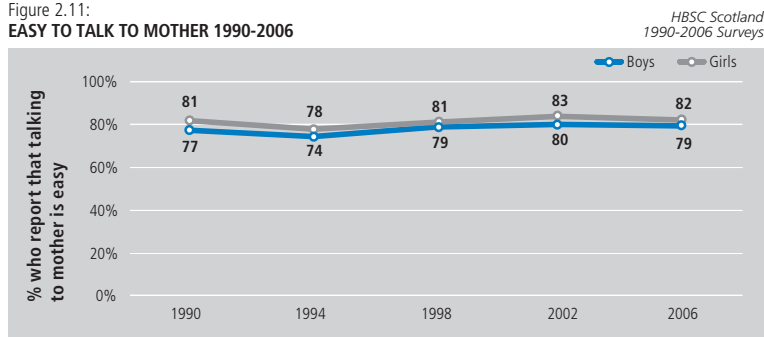


Figure 2.11:
EASY TO TALK TO MOTHER 1990-2006



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NOTES

- 1 Children were asked about where they lived all or most of the time (their main home) and, if applicable, a second home (where they lived some of the time). Results described in this report refer to their main or only home.

THE SCHOOL ENVIRONMENT

- A quarter of young people like school 'a lot'; a higher prevalence of girls than boys, and liking school declines with age
- Two thirds of young people rate their school performance highly relative to their classmates but this proportion declines with age
- Schoolwork pressures affect nearly a third of young people, particularly at age 15 when 34% of boys and 45% of girls report feeling stressed
- 68% of young people find their classmates kind and helpful
- 84% of 15-year-old girls aspire to go on to university or further education on leaving school, compared with 54% of boys



INTRODUCTION

School is a particularly influential social context for young people's health (*Hurrelmann et al., 1995; Lerner and Galambos, 1998; Nutbeam et al., 1993; Samdal et al., 1998; Torsheim et al., 2000; Torsheim and Wold, 2001*). It plays a significant role in shaping pupils' self-perceptions and health behaviours, which inevitably affect future, as well as current, health and well-being. In acknowledgement of the inextricable link between learning and health, the creation of supportive school environments lies at the heart of the 'Health Promoting School' (HPS) concept. The European Network of HPS, supported by the WHO Regional Office for Europe, Council of Europe and the European Commission (*Stewart Burgher et al., 1999*), aims to encourage schools to develop a whole school approach to promoting all aspects of pupils' health. The HPS recognises the importance of a positive ethos and the need for respectful, caring relationships within the school and the wider community, to enable young people to fulfil their potential (*Scottish Health Promoting Schools Unit, 2004*). In Scotland, a target was set for all schools to become Health Promoting Schools by 2007 (*Scottish Executive, 2003*).

HBSC FINDINGS

Young people are asked a number of questions in the HBSC survey that relate closely to the inclusive ethos encapsulated in the Health Promoting School concept. Questions include how much pupils enjoy school, the psychosocial environment of school, perceived academic achievement and stress of schoolwork.

ENJOYMENT OF SCHOOL

One in four young people report that they like school 'a lot'. However, this decreases with age as [Figure 3.1](#) clearly demonstrates; 39% of 11-year-olds, 23% of 13-year-olds and 14% of 15-year-olds say they like school 'a lot'. Boys are less likely than girls to report liking school a lot at 11 and 15, although they do not differ at age 13.

[Figure 3.2](#) also shows the consistent difference over time between boys and girls in liking school 'a lot' (except in 2002). Between 1990 and 2006, boys' views have not changed, whereas the proportion of girls liking school 'a lot' reduced between 1990 and 2006. This is due, primarily, to a fall between 1990 and 1994.

PERFORMANCE AT SCHOOL

Young people were asked how they thought their teachers rated their school performance compared with their classmates. Sixty five percent (65%) of boys and 70% of girls feel their performance is 'good' or 'very good', although perceived performance declines with age. Seventy four percent (74%) of 11-year-olds, 68% of 13-year-olds and 61% of 15-year-olds report high school performance ([Figure 3.3](#)). There are no significant gender differences within any of these age groups.

Trend data show that there has been no change over the past three surveys in young people's perceptions of their performance at school ([Figure 3.4](#)). However, a gender difference is apparent at all three time points for all age groups combined; a higher proportion of girls than boys reporting 'good' or 'very good' performance, although the difference is not large.

PRESSURE OF SCHOOLWORK

Young people were asked how pressured they felt by schoolwork. Overall, nearly one in three (29%) report that they feel 'some' or 'a lot' of stress about schoolwork. A higher proportion of 15-year-old pupils (40%) feel stressed compared with 11-year-olds (23%) and 13-year-olds (25%), perhaps reflecting exam pressures or concerns about the future. No gender difference in feeling stressed is found among younger pupils. However, a higher proportion of 15-year-old girls feel stressed by their schoolwork than boys (45% versus 34% respectively) ([Figure 3.5](#)).

The proportions of boys and girls feeling stressed by their schoolwork in 2006 are very similar to those found in 1994 and 1998 but are lower than the 2002 figures ([Figure 3.6](#)). No gender difference is found in any of the survey years for all age groups combined. However, a consistent gender difference is found for S4 pupils at all time points, with girls more likely than boys to experience stress due to schoolwork (data not shown).

Figure 3.1:
LIKE SCHOOL A LOT

HBSC Scotland
2006 Survey

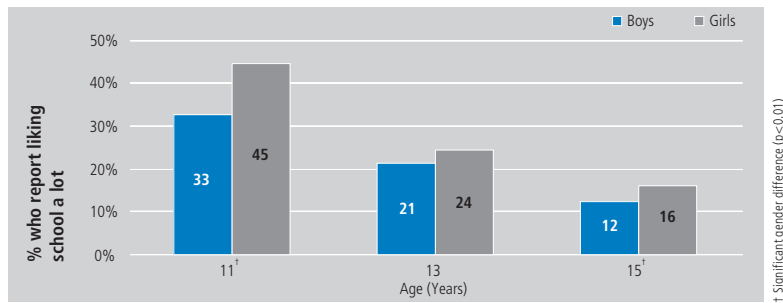


Figure 3.2:
LIKE SCHOOL A LOT 1990-2006

HBSC Scotland
1990-2006 Surveys

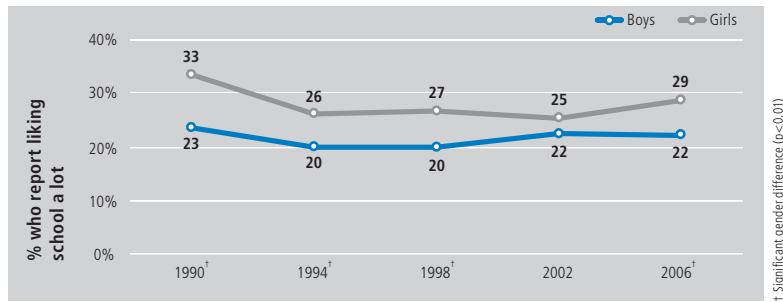


Figure 3.3:
PERFORMANCE AT SCHOOL

HBSC Scotland
2006 Survey

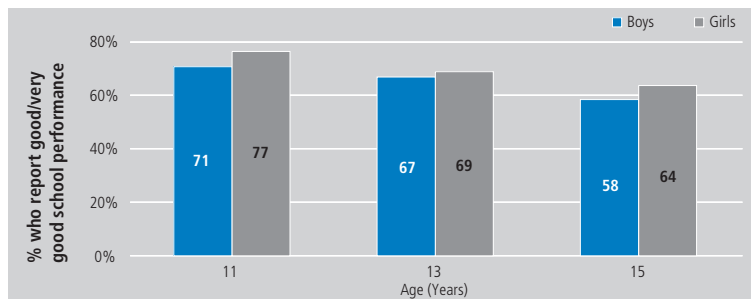


Figure 3.4:
PERFORMANCE AT SCHOOL 1998-2006

HBSC Scotland
1998-2006 Surveys

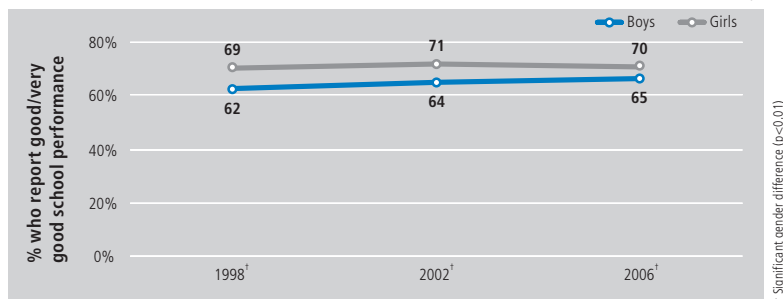
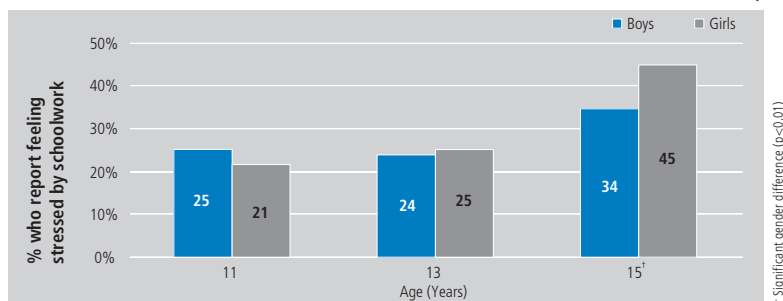


Figure 3.5:
FEEL PRESSURED BY SCHOOLWORK

HBSC Scotland
2006 Survey



CLASSMATE SUPPORT

An important element of school life is the degree to which young people feel a sense of belonging (Osterman, 2000). Relationships with peers, friends and teachers all contribute to this feeling. In the HBSC survey, pupils are asked if they agree or disagree with the statement: 'most of the pupils in my class(es) are kind and helpful'. Overall, 68% of young people agree with this statement, but this proportion declines with age; 83% of 11-year-olds, 64% of 13-year-olds and 56% of 15-year-olds feel their classmates are kind and helpful. No gender differences are found at any age (Figure 3.7) and the proportions of boys and girls in 2006 reporting that their classmates are kind and helpful are very similar to those found in the previous 2002 survey.

ASPIRATIONS ON LEAVING SCHOOL

Fifteen-year-olds were asked about their aspirations on leaving school¹. Nearly half (46%) hope to go to University while 22% hope to go to a Further Education college. The remaining 32% chiefly comprise those who plan to join an apprenticeship or trade (11%), those who are uncertain what they will be doing (10%) and those who expect to be in work (9%). Less than 0.5% expect to be unemployed. There are substantial gender differences in pupils' aspirations, with more girls than boys expecting to go to University or Further Education college and more boys expecting to be working, employed as an apprentice, or developing a trade when they leave school (Figure 3.8). Trend data show that little has changed in the aspirations of S4 pupils since 1998 and that the gender divide remains fairly constant (Figure 3.9).

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NOTES

- ¹ Young people were asked to select one of the following: 'University', 'Further education college', 'Apprenticeship or trade', 'Youth training or skill seekers', 'Working', 'Unemployed' or 'Don't know'

Figure 3.6:
FEEL PRESSURED BY SCHOOLWORK 1994-2006

HBSC Scotland
1994-2006 Surveys

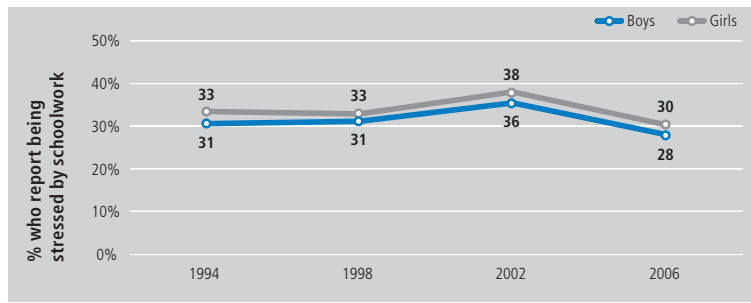


Figure 3.7:
CLASSMATES KIND AND HELPFUL

HBSC Scotland
2006 Survey

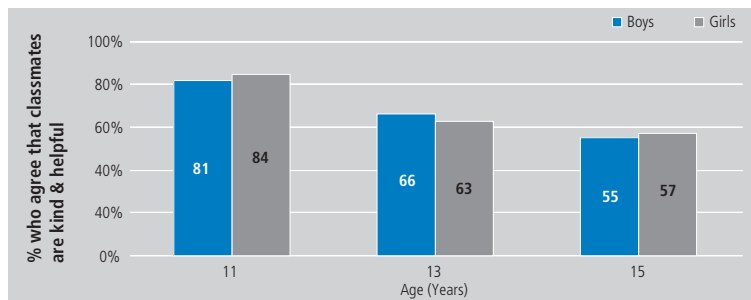


Figure 3.8:
EXPECTATIONS ON LEAVING SCHOOL AMONG S4 PUPILS

HBSC Scotland
2006 Survey

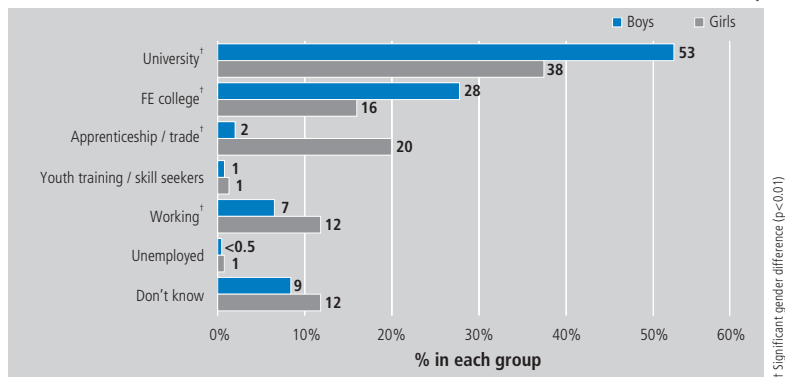
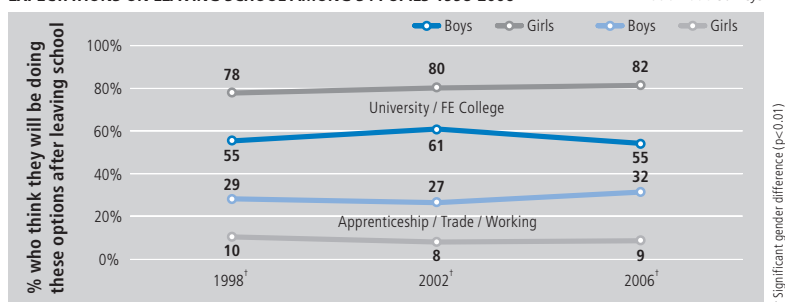


Figure 3.9:
EXPECTATIONS ON LEAVING SCHOOL AMONG S4 PUPILS 1998-2006

HBSC Scotland
1998-2006 Surveys





PEER RELATIONS

- Boys are more likely than girls to spend time with friends immediately after school or in the evening
- Most young people say they find it easy to talk to their best friend about things that really bother them
- Easy communication with best friend increases with age, and girls find it easier to talk to their best friend than boys
- Half of girls and a third of boys contact their friends daily via phone, text messages and/or the internet and electronic media contact increases with age



INTRODUCTION

Spending time with friends and peer social group membership are important elements of the network of social relations that young people need. This network also includes relationships within the family, school and immediate neighbourhood. Being liked and accepted by peers influences health and risk behaviours and is associated with psychological well-being (*Raja et al., 1992*). Isolation from peers during adolescence can lead to feelings of loneliness and psychological symptoms (*Muuss and Porton, 1999*), as interaction with friends is vital for the development of social skills and the ability to cope with stressful events (*Berndt, 1992*). The initiation and maintenance of risk behaviour has also been attributed to the peer group (*King et al., 1999; Settertobulte and Gaspar de Matos, 2004*). However, the direction of the influence is not clear. Adolescents may seek out friends with patterns of behaviour similar to their own or they may conform to peer group norms.

Most research concerning peer influence focuses on risks resulting from engagement in peer groups. For example, smoking and other drug use have been linked to social integration in the peer group (*Killen et al., 1997; Kuntsche and Jordan, 2006; Paavola et al., 1996*). However, peer contact is also important for the development of protective factors such as emotional well being (*Martin and Huebner, 2007*) and young people socialise around health promoting behaviours, such as physical activity (*Settertobulte and Gaspar de Matos, 2004*), as well as risk behaviours.

HBSC FINDINGS

HBSC measures several aspects of peer relations including number of friends, time spent with friends, use of electronic communication and ease of talking to best friend.

NUMBER OF CLOSE FRIENDS

Most young people report having several close friends. Less than 1% say they have no friends, 1% say they have just one, 2.5% two and 96% have three or more close friends. The vast majority (89%) of boys and girls have three or more close friends of the same sex and this does not vary substantially with age (*Figure 4.1*). Opposite sex friendships, however, do vary with age; approximately 60% of 11-year-old boys and girls have three or more friends of the opposite sex compared with 70% of 13 and 15-year-old pupils (data not shown).

PEER CONTACT FREQUENCY

Boys are more likely than girls to have frequent contact¹ with friends immediately after school or in the evening (*Figures 4.2 and 4.3*). Forty-one percent (41%) of young people (45% of boys and 37% of girls) have frequent contact with their friends after school and slightly more (46%) in the evenings (51% of boys and 42% of girls).

Fifteen-year-olds are less likely than younger boys and girls to have frequent after school contact (*Figure 4.2*). Age differences in evening contact with friends, however, differ for boys and girls (*Figure 4.3*). While 11-year-old boys are less likely than older boys to spend four or more evenings out with friends, a similar proportion of girls have frequent evening contact with their friends at all ages.

Boys' rates of frequent contact with friends in the evening have declined between 1994 and 2006 but remained consistently higher than those of girls (*Figure 4.4*). Whilst girls' evening peer contact has not changed substantially between 1994 and 2006, there has been a recent small decline. Similar long-term data for after-school contact is not available, although the proportions in 2006 are very similar to those found in 2002.

COMMUNICATION WITH BEST FRIEND

Most young people say they find it easy (or very easy) to talk to their best friend about things that really bother them (90% of girls and 82% of boys). However, there are a small number who say that they do not have a best friend at all (2% of girls and 3% of boys). Easy communication with best friend increases with age, and girls are more likely than boys to report that it is easy to talk to their best friend at all ages (*Figure 4.5*).

Figure 4.1:
THREE OR MORE CLOSE FRIENDS OF SAME GENDER

HBSC Scotland
2006 Survey

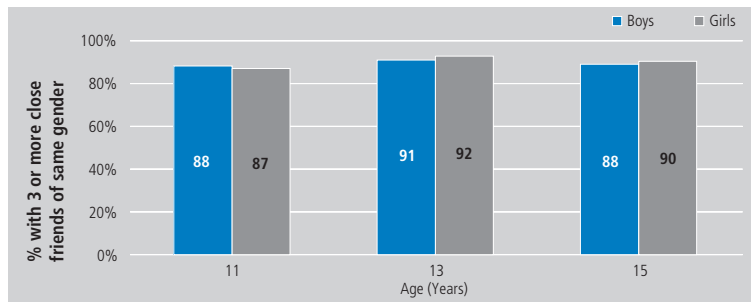


Figure 4.2:
SPEND TIME WITH FRIENDS AFTER SCHOOL 4+ DAYS/WEEK

HBSC Scotland
2006 Survey

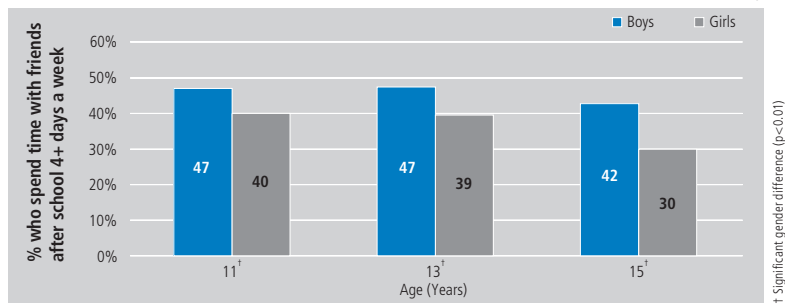


Figure 4.3:
SPEND TIME WITH FRIENDS ON 4+ EVENINGS/WEEK

HBSC Scotland
2006 Survey

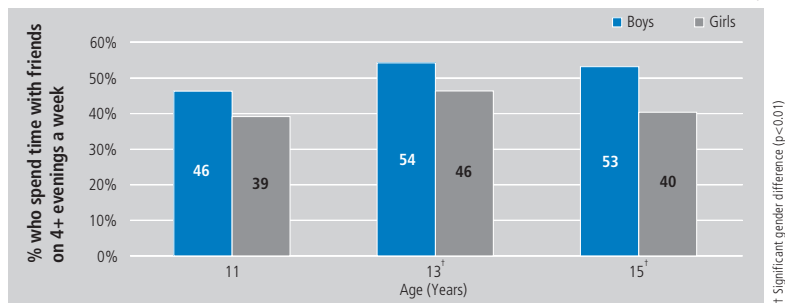


Figure 4.4:
SPEND TIME WITH FRIENDS ON 4+ EVENINGS/WEEK: 1994-2006

HBSC Scotland
1994-2006 Surveys

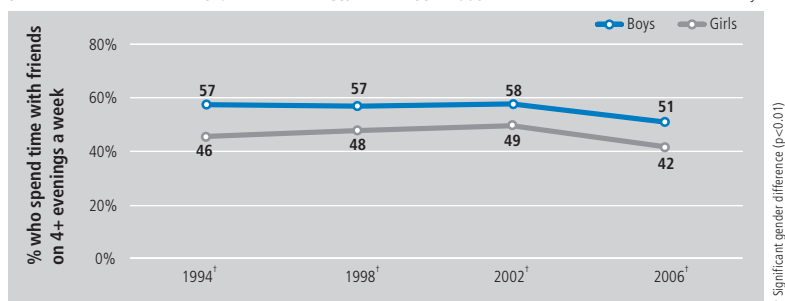
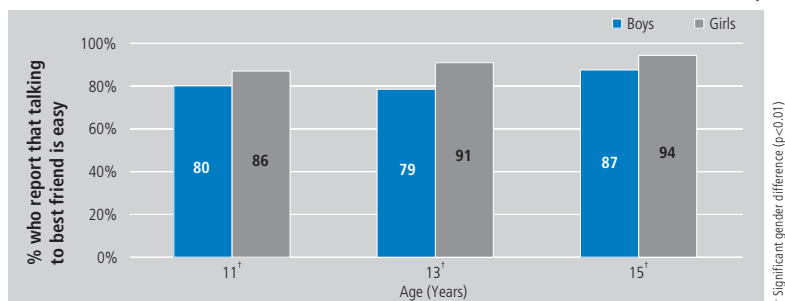


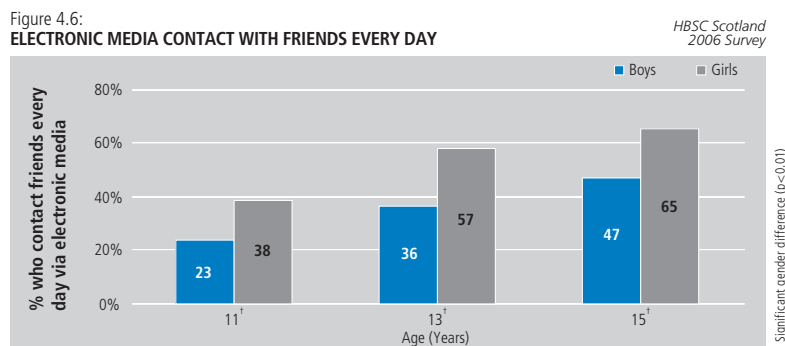
Figure 4.5:
EASY TO TALK TO BEST FRIEND

HBSC Scotland
2006 Survey



ELECTRONIC MEDIA CONTACT

Another form of communication included in the HBSC survey concerns contact with friends via electronic media (phone/text messages/internet). Forty-five percent (45%) of young people report daily contact (53% of girls and 36% of boys). Older boys and girls are more likely to use electronic media every day to contact their friends than their younger counterparts (Figure 4.6). Gender differences are apparent within all three age groups.



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NOTES

- 1 Frequent contact is defined here as "spending time with friends on 4 or 5 days a week"

EATING HABITS

- Almost three quarters of young people eat a family meal 4 or more days a week and almost two thirds eat breakfast every school day
- Both family meal and breakfast frequency decrease with age
- Forty percent of young people eat fruit daily and 38% eat vegetables daily, with higher proportions of girls than boys
- The proportion of young people eating fruit daily decreases with age while there is no change in consumption of vegetables
- Girls and boys are equally likely to eat sweets (34%), crisps (28%) and chips (13%) daily
- Daily consumption of water (51%) is more than double daily consumption of soft drinks



INTRODUCTION

The Scottish national diet has been the focus of increasing government attention over the last two decades and has been repeatedly identified as a key priority area (*Scottish Executive, 2003; Scottish Office, 1996, 1999*). The Scottish Government has recently launched a discussion paper on the future of food in Scotland, 'Choosing the Right Ingredients' (*Scottish Government, 2008*). Eating well is a long-term investment in health and habits formed in childhood and adolescence are thought to track into adulthood, influencing the risk of major chronic diseases (*MacPherson et al., 1995*). As children move into adolescence they have more control over their food choices with greater opportunities to choose and buy their own food and drinks outside the home (*Cooke et al., 2005*). There are multiple influences on food choices including exposure to foods in the home and at school, taste preferences, affordability, advertising and personal concerns about weight and body image.

Cross-national comparisons have highlighted the poor diet of Scottish schoolchildren in the international context of Europe and North America. In particular, young people in Scotland have high levels of consumption of soft drinks, sweets, chips and crisps (*Alexander et al., 2004; Janssen et al., 2005; Vereecken et al., 2004; Vereecken and Maes, 2000*).

There has been a concerted effort to improve children's experiences of food in school with the implementation of 'Hungry for Success' (*Scottish Executive, 2003*) and more recently the Schools (Health Promotion and Nutrition) (Scotland) Act (*Scottish Executive, 2007*). These aim to increase access to healthier food choice within school with set nutritional standards.

HBSC FINDINGS

The HBSC study measures the frequency with which a range of foods and drinks is consumed, as well as young people's experience of eating family meals, breakfast and school meals. A regular family meal is associated with healthier eating for children and adolescents and contributes to both the development of 'regular' eating patterns (important for weight control) and psychosocial development (*Compañ et al., 2002; Videon and Manning, 2003*). Breakfast is recognised as an extremely important meal for young people both nutritionally and for cognition and learning (*Vereecken et al., 2004*). Fruit and vegetables are vital components of a healthy diet and protect against certain diseases such as heart disease and some cancers. Conversely, crisps and chips have high levels of fat and salt and excessive consumption of these foods is considered unhealthy. Sweets and sugary drinks can lead to tooth erosion and contribute to obesity. Water consumption is increasingly regarded as important for children during the school day and schools are advised to give pupils at least three fluids breaks a day (*Cooke et al., 2003*). The information collected in 2006 on daily food and drink consumption is comparable only with findings from 2002, as the format of the questions was different in previous surveys.

FAMILY MEALS

Over half of 11-year-olds (55%) eat a meal with their parents every day compared with 40% of 15-year-olds ([Figure 5.1](#)). A further 28% of 15-year-olds eat a family meal on at least 4 days a week and one in five eat with their parents once a week or less often. There is no gender difference in the reported frequency of family meals.

The frequency with which young people eat family meals has been included in the Scottish HBSC survey since 1994. In 1994, 58% of young people ate a meal with their parents every day but this has fallen to 48% in 2006 ([Figure 5.2](#)). There was an increase in the proportion of girls reporting daily family meals between 2002 and 2006 (42% to 49%) but this is still lower than in 1994 (57%).

BREAKFAST CONSUMPTION

Eating breakfast every school day declines with age; 77% of 11-year-olds compared with 51% of 15-year-olds. Whilst there is no gender difference at age 11, at 13 and 15 girls are less likely to eat breakfast than boys ([Figure 5.3](#)). There was a gradual decline between 1990 and 2002 in the tendency to eat breakfast every day, although there has been a small increase between 2002 and 2006 among girls¹ ([Figure 5.4](#)).

Figure 5.1:
FREQUENCY OF FAMILY MEALS BY AGE

HBSC Scotland
2006 Survey

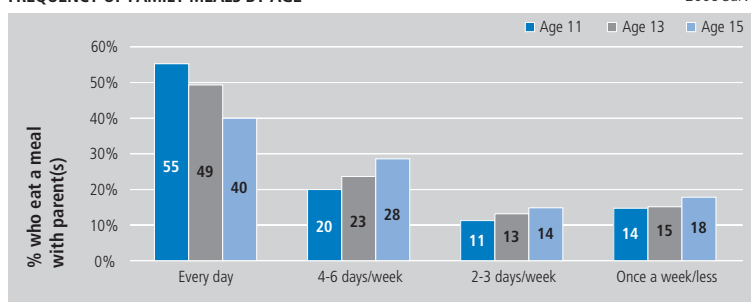


Figure 5.2:
DAILY FAMILY MEALS 1994-2006

HBSC Scotland
1994-2006 Surveys

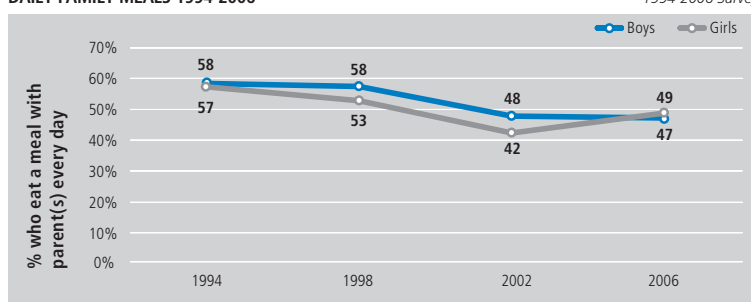


Figure 5.3:
EAT BREAKFAST EVERY MORNING ON SCHOOL DAYS

HBSC Scotland
2006 Survey

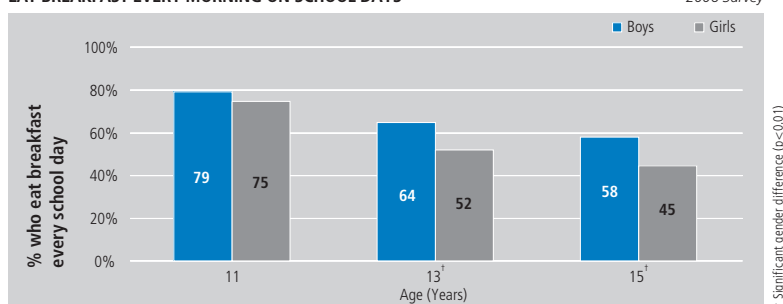


Figure 5.4:
EAT BREAKFAST DAILY 1990-2006

HBSC Scotland
1990-2006 Surveys

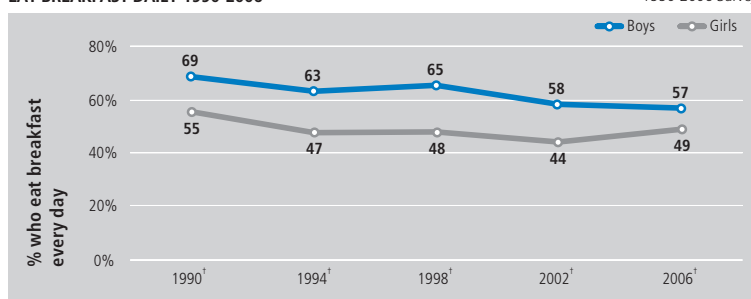
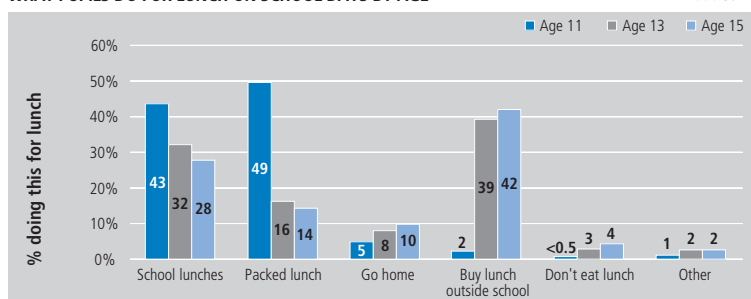


Figure 5.5:
WHAT PUPILS DO FOR LUNCH ON SCHOOL DAYS BY AGE

HBSC Scotland
2006 Survey



LUNCH ON SCHOOL DAYS

Almost all 11-year-olds report that they eat either a packed lunch or a school dinner on school days, while 5% go home for lunch (Figure 5.5). Among 13 and 15-year-olds, the most common option for lunch is buying it outside school from a local shop, café or van (39% and 42% respectively), followed by eating school lunches (32% and 28%). Eating a packed lunch is far less common among secondary pupils (15%). 4% of 15-year-olds report not eating lunch at all and 10% go home for lunch. Girls are more likely than boys to eat a school lunch (38% versus 30%) and boys are more likely to buy their lunch outside school (33% compared with 23% of girls).

FRUIT AND VEGETABLE CONSUMPTION

Overall, 40% of young people eat fruit daily. Daily fruit consumption decreases with age especially between 11 and 13 years (from 51% to 36%). A higher proportion of girls than boys consume fruit daily at all three ages (Figure 5.6). Compared with the 2002 survey results, daily fruit consumption is higher for both boys (36% compared with 31%) and girls (43% compared with 36%). This increase is particularly marked among 11-year-olds; from 37% to 46% for boys and from 45% to 55% for girls.

Similarly, girls are more likely to eat vegetables daily than boys at all three ages. However, daily consumption does not decline with age (Figure 5.7). The proportion of young people eating vegetables daily has increased from 33% in 2002 to 38% in 2006. Among boys, a significant increase in the proportion eating vegetables daily is found at age 11 (from 29% to 35%) but not at ages 13 and 15, while for girls the opposite is true, with increases evident at 13 (from 38% to 46%) and 15 years (from 30% to 41%) but not at 11 years.

CONSUMPTION OF SWEETS, CRISPS AND CHIPS

Approximately one third of young people eat sweets every day with similar proportions of boys and girls at each age (Figure 5.8). There is a slight increase in daily consumption of sweets between ages 11 and 13 but no change between 13 and 15. Daily consumption of sweets has declined significantly since 2002 from 47% to 34% for boys and 43% to 34% for girls.

Twenty-eight percent (28%) of young people eat crisps every day. Crisp consumption is approximately the same for boys and girls and does not change with age (Figure 5.9). Daily consumption of crisps, as with sweets, has decreased significantly since 2002 from 40% to 28% in 2006.

Thirteen percent (13%) of young people eat chips daily and there are no age or gender differences in daily consumption (Figure 5.10). Compared with the 2002 survey results, daily consumption of chips, like sweets and crisps, has decreased from 22% to 14% for boys and 16% to 12% for girls. In 2002, 13- and 15-year-old boys were more likely to eat chips daily than their female peers but this gender difference has now disappeared.

CONSUMPTION OF SUGARY DRINKS AND DIET SOFT DRINKS

Coke or other sugary drinks are consumed daily by 28% of young people (32% of boys; 25% of girls). When split by age, a gender difference is only found among 13-year-olds (Figure 5.11). Daily consumption of sugary soft drinks increases between ages 11 and 13 (23% to 30%) but then remains relatively stable between 13 and 15. The format of the question changed in the 2006 survey, therefore no comparison can be made with 2002 findings.

Figure 5.12 shows daily consumption of diet soft drinks. Nineteen percent (19%) of young people drink diet soft drinks every day with no age or gender differences. No comparisons can be made with 2002 as an item on diet drinks was not included.

WATER CONSUMPTION

Forty seven percent (47%) of boys and 54% of girls drink water every day. At age 13 and 15, young people are less likely to drink water than 11-year-olds (47% and 50% respectively compared with 56%). Overall, girls are more likely to drink water every day than boys. The prevalence of daily water consumption

Figure 5.6:
EAT FRUIT DAILY

HBSC Scotland
2006 Survey

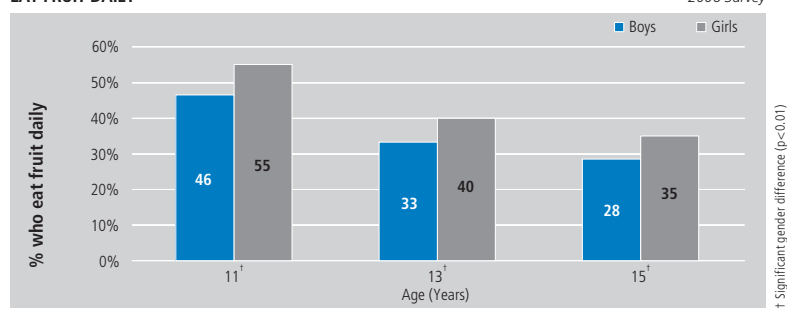


Figure 5.7:
EAT VEGETABLES DAILY

HBSC Scotland
2006 Survey

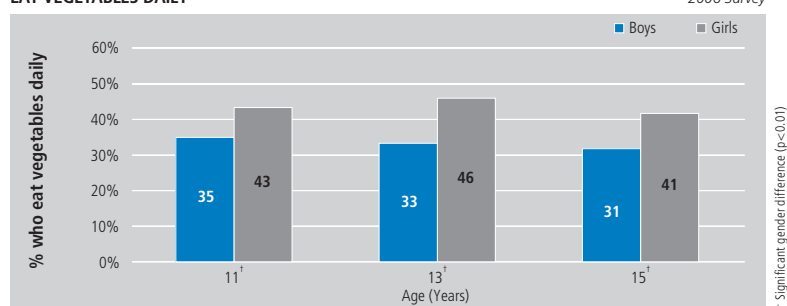


Figure 5.8:
EAT SWEETS DAILY

HBSC Scotland
2006 Survey

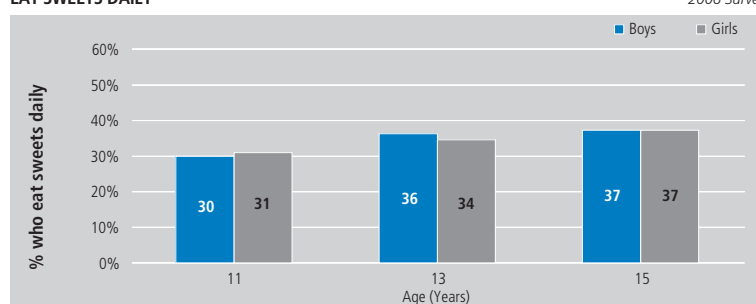


Figure 5.9:
EAT CRISPS DAILY

HBSC Scotland
2006 Survey

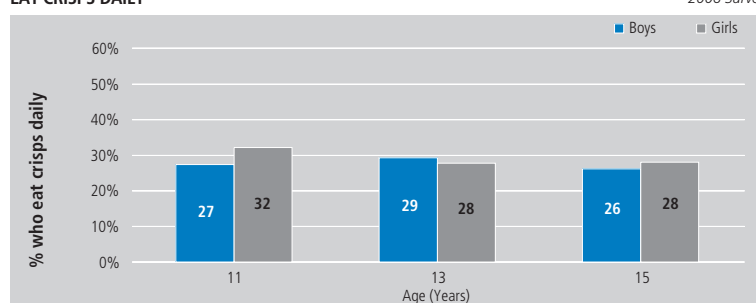
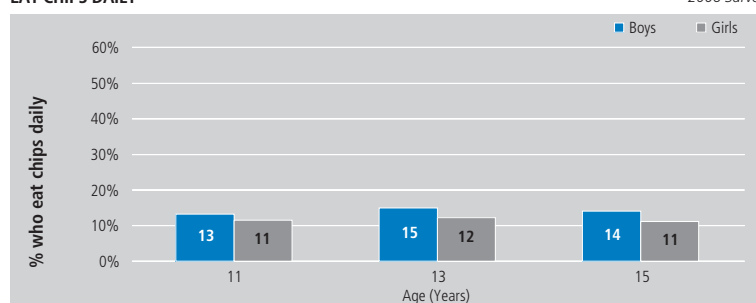


Figure 5.10:
EAT CHIPS DAILY

HBSC Scotland
2006 Survey



is more than double that of diet soft drinks and nearly double the daily consumption of sugary soft drinks. The proportion of young people drinking water every day has increased by a small but significant amount since 2002, from 47% to 51% overall.

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NOTES

- 1 Prior to 2002, the breakfast consumption frequency item made no distinction between weekdays and the weekend. By combining responses to weekday and weekend breakfast eating, the 2002 and 2006 data are compared with 1990, 1994 and 1998.

Figure 5.11:
DRINK COKE/OTHER SUGARY DRINKS DAILY

HBSC Scotland
2006 Survey

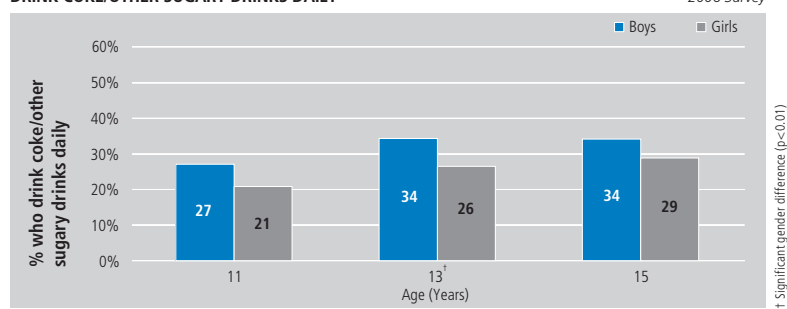


Figure 5.12:
DRINK DIET SOFT DRINKS DAILY

HBSC Scotland
2006 Survey

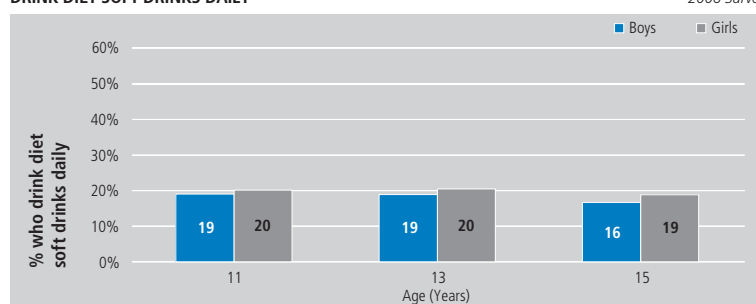
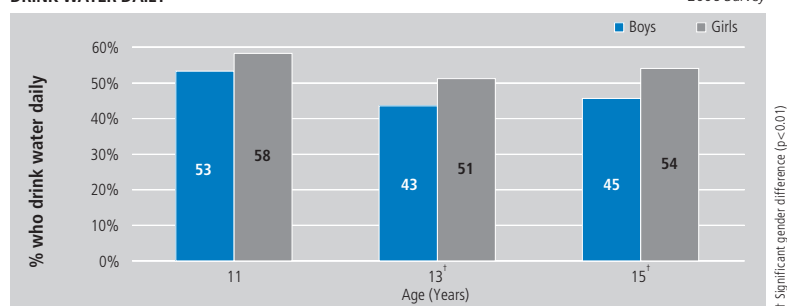


Figure 5.13:
DRINK WATER DAILY

HBSC Scotland
2006 Survey





PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

- 29% of boys and 16% of girls meet the Scottish Government guidelines for moderate to vigorous physical activity
- Older boys take part in vigorous exercise less often but for longer durations than younger boys, while girls take part less frequently as they get older but duration of exercise remains the same across all ages
- Approximately half of young people in Scotland walk to school and walking to school is more common among primary than secondary schoolchildren
- Boys play computer games and watch television more often than girls, and for both boys and girls TV and computer usage is higher at the weekend than during the week



INTRODUCTION

Regular participation in physical activity can contribute to the enhancement of the physical, psychological and social well-being of young people (*Biddle et al., 1998*). Higher levels of physical activity have been associated with lower blood pressure, increased fitness and decreased anxiety and depression (*Riddoch, 1998; Sallis, 1994*). However, research currently shows that participation in physical activity decreases with age, particularly amongst girls (*Inchley and Currie, 2005*). The establishment of an active lifestyle in childhood is also considered important in light of evidence that levels of physical activity track from adolescence to adulthood (*McMurray et al., 2003*), with a consequent reduction in health risks, such as obesity, in the longer term. Obesity is a risk factor for many major chronic conditions including coronary heart disease, cerebrovascular disease and obstructive pulmonary disease. The imbalance between food intake and energy expenditure is the primary mechanism for overweight and obesity.

Currently, the Scottish Government recommends that children and adolescents should participate in physical activity of at least moderate intensity for a minimum of one hour every day. Accordingly, a target has been set for 80% of all children in Scotland aged 16 or under to meet this recommendation by 2022 (*Physical Activity Task Force, 2003*). Persistent inequalities in adolescent physical activity with lower rates among girls and lower socioeconomic groups (*Inchley et al., 2005*) are another challenge for policy makers and practitioners.

Increasingly, concerns are being raised about the amount of time young people are engaged in sedentary activities such as television watching or using computers. Excess sedentary behaviour, along with low levels of physical activity, contributes to overweight among adolescents (*Elgar et al., 2005; Janssen et al., 2005*). In some countries, these concerns have led to recommendations of no more than two hours of television viewing per day (*American Academy of Paediatrics, 2003; Canadian Paediatric Society, 2003*).

HBSC FINDINGS

Different aspects of young people's physical activity and sedentary behaviour have been measured in HBSC. Frequency and duration of vigorous physical activity outside school hours have been reported since 1990 allowing trends over a sixteen-year period to be examined. A measure of moderate to vigorous activity was introduced in 2002. Active travel to school is an important contribution to children's physical activity. Young people who walk or cycle to school are more active during the rest of the day than their counterparts who use motorised forms of transport (*Alexander et al., 2005*). In 2006, data on mode of transport and the time taken to travel to school were collected.

MEETING SCOTTISH GOVERNMENT PHYSICAL ACTIVITY GUIDELINES

In Scotland, 23% of young people take part in moderate-intensity physical activity for at least 60 minutes every day. There is a significant gender difference with 29% of boys compared with 16% of girls reporting this level of physical activity (*Figure 6.1*). However, unlike vigorous activity which is often over-reported in self-report surveys (*Graff-Iversen et al., 2007*), moderate physical activity may be under-reported as it is part of everyday life and therefore more difficult to recall accurately (*Gard and Wright, 2005*). This may be particularly true of children and young people whose physical activity tends to be more ad-hoc and spontaneous than adults. Levels of physical activity decrease with age among both boys and girls and this decline is most marked between age 11 and 13. Boys are more likely than girls to meet the physical activity guideline at all three ages. Since 2002, there has been a small increase in the proportion of young people meeting the physical activity guidelines; from 19% in 2002 to 23% in 2006. This increase is found among both boys (24% to 29%) and girls (13% to 16%).

LEISURE TIME VIGOROUS PHYSICAL ACTIVITY (OUTSIDE OF SCHOOL HOURS)

Participation in vigorous physical activity is also higher among boys than girls. Half of boys (51%) and just over a third of girls (36%) take part in vigorous exercise four times or more per week in their free time (*Figure 6.2*). Frequency of participation is highest at age 11 and declines with age, so that by age 15, 41% of boys and 22% of girls are vigorously active four or more times a week.

Figure 6.1:
MEETING PHYSICAL ACTIVITY GUIDELINES*

HBSC Scotland
2006 Survey

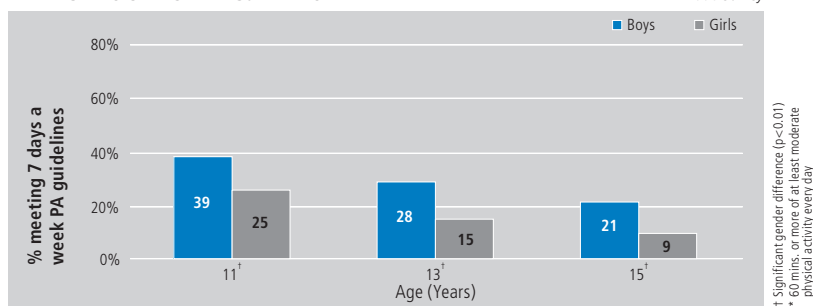


Figure 6.2:
LEISURE TIME VIGOROUS EXERCISE FREQUENCY (4 OR MORE TIMES PER WEEK)

HBSC Scotland
2006 Survey

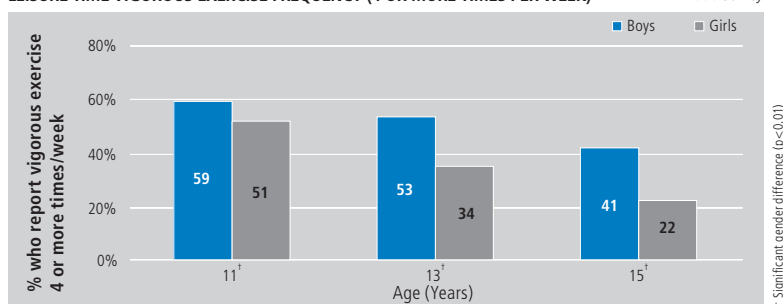


Figure 6.3:
LEISURE TIME VIGOROUS ACTIVITY DURATION (2 OR MORE HOURS PER WEEK)

HBSC Scotland
2006 Survey

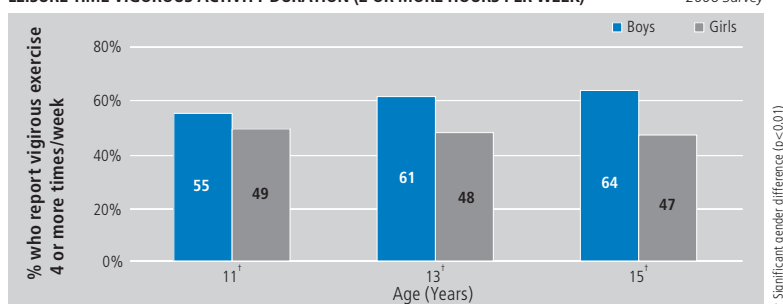


Figure 6.4:
FREQUENCY OF LEISURE TIME VIGOROUS PHYSICAL ACTIVITY 1990-2006

HBSC Scotland
1990-2006 Surveys

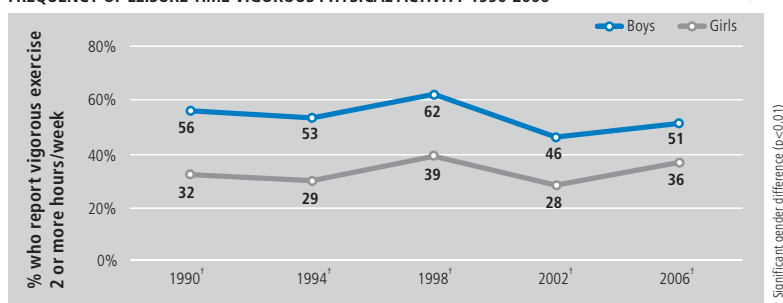
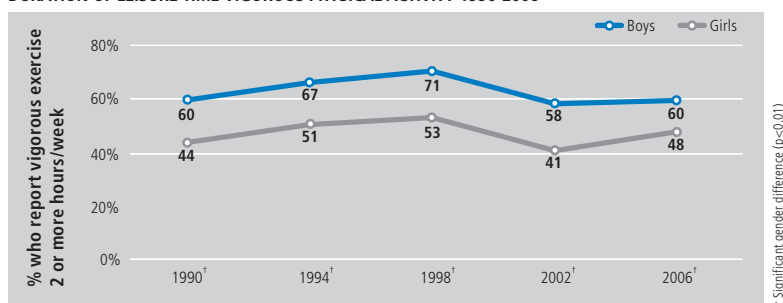


Figure 6.5:
DURATION OF LEISURE TIME VIGOROUS PHYSICAL ACTIVITY 1990-2006

HBSC Scotland
1990-2006 Surveys



Duration of vigorous physical activity shows a different pattern to that of frequency. While frequency of participation decreases with age, duration increases among boys. Older boys are more likely to take part in vigorous exercise for two or more hours a week than younger boys; 64% of 15-year-olds compared with 55% of 11-year-olds. Girls' participation in this duration of vigorous physical activity, however, does not vary with age. Overall, 60% of boys and 48% of girls exercise vigorously for two or more hours a week in their free time (Figure 6.3).

Participation in vigorous physical activity outside of school has fluctuated since 1990 (Figure 6.4 and 6.5). The gender difference in leisure time vigorous physical activity has remained since 1990 with a greater frequency and duration of participation among boys than girls in each survey year. However, the gender gap in frequency appears to be narrowing.

TRAVEL TO SCHOOL

Approximately half of young people in Scotland report that they usually walk to school (Figure 6.6). Cycling is very rare with only 1% reporting that they travel this way and the majority of these are boys. Twenty eight percent (28%) usually travel to school by 'bus or train' and 22% by 'car'.

Walking to school is more common among primary than secondary schoolchildren (Figure 6.7). A higher proportion of primary school pupils travel to school by car whereas secondary pupils are more likely to travel to school by bus or train.

TRAVEL TIME TO SCHOOL

The vast majority of young people (91%) report that it takes 30 minutes or less to travel to school from home (Figure 6.8). One quarter (24%) travel 15-30 minutes to get to school, less than half (45%) travel for 5-15 minutes and about a fifth (22%) travel for less than five minutes. For nearly one in ten pupils, the journey time to school is more than 30 minutes. As would be expected with the increased size of catchment area for secondary schools, pupils aged 13 and 15 years are less likely than those aged 11 to have a journey of less than five minutes and more likely to have a journey of 15 minutes or more.

TIME SPENT WATCHING TELEVISION

Nearly three quarters of young people (70%) watch television for two or more hours daily during the school week and this figure increases between the ages of 11 (66%) and 13 (72%) years (Figure 6.9). Boys watch two or more hours of television on school days (72%) more often than girls (67%).

The proportion of young people watching TV is slightly higher at weekends than on weekdays, with 75% watching two or more hours of TV per day. Weekend viewing is higher among boys, with 79% of boys watching TV for two or more hours a day compared with 72% of girls (Figure 6.10). This gender difference is greatest at age 15.

TV viewing decreased between 2002 and 2006. The proportion of young people watching TV for two hours or more a day fell from 75% to 70% on schooldays and from 79% to 75% at weekends.

PLAYING COMPUTER GAMES

Boys play computer games for at least two hours a day more often than girls. More than half of boys (54%) play computer games during the school week, compared with less than a quarter of girls (22%) (Figure 6.11). This level of game playing remains stable between ages 11 and 13 but then decreases between 13 and 15 for both boys and girls.

The prevalence of those who play two hours or more of computer games a day is greater at the weekend than on weekdays. At the weekend, 64% of boys and 28% of girls play computer games for two or more hours a day (Figure 6.12). The increase in playing computer games at the weekend is observed among boys at all three ages but among girls at ages 11 and 13 only. Among 15-year-old girls, less than one in five play computer games for two or more hours a day on either schooldays or weekends.

Figure 6.6:
MODE OF TRAVEL TO SCHOOL

HBSC Scotland
2006 Survey

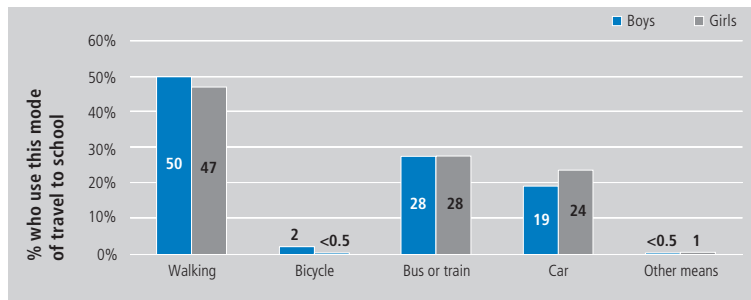


Figure 6.7:
MODE OF TRAVEL TO SCHOOL BY AGE

HBSC Scotland
2006 Survey

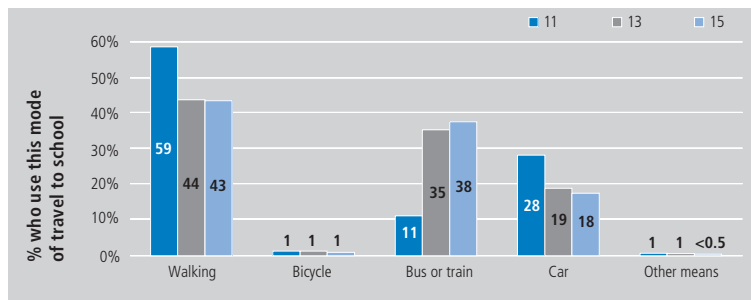


Figure 6.8:
TRAVEL TIME TO SCHOOL BY AGE

HBSC Scotland
2006 Survey

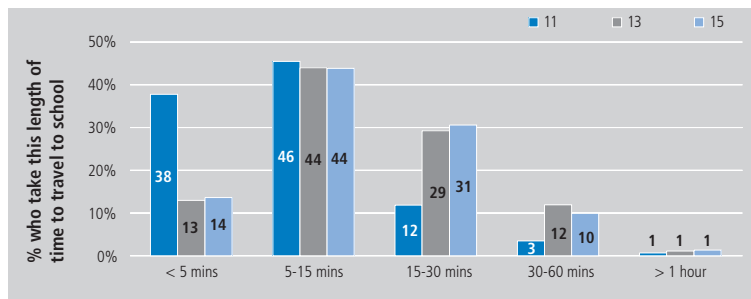


Figure 6.9:
WATCH TV FOR 2 OR MORE HOURS A DAY ON SCHOOL DAYS

HBSC Scotland
2006 Survey

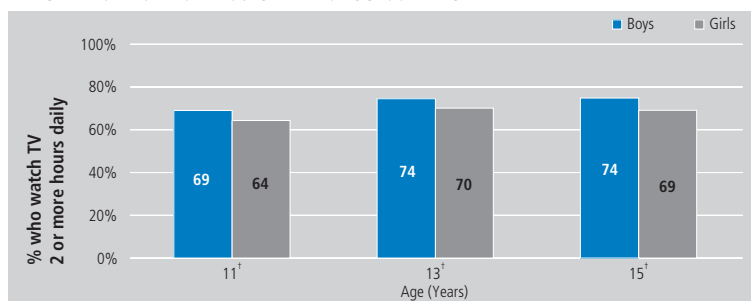
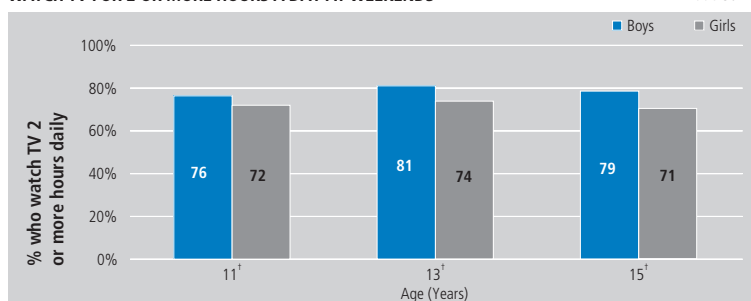


Figure 6.10:
WATCH TV FOR 2 OR MORE HOURS A DAY AT WEEKENDS

HBSC Scotland
2006 Survey



USING A COMPUTER FOR PURPOSES OTHER THAN PLAYING GAMES

Boys and girls are equally likely to use a computer for purposes other than playing games. 43% of young people use a computer for chatting on-line, internet, emailing, homework, etc. for at least two hours every day during the school week (Figure 6.13). There is a significant increase in computer use for boys between ages 11 and 13 and between ages 13 and 15. For girls, there is a large increase between ages 11 and 13 only.

The proportion of boys and girls who use a computer at the weekend (for purposes other than games) for two or more hours is not statistically different from weekday use, with the exception of 15-year-old girls, for whom weekend use (57%) is greater than weekday use (51%). Again, there is no gender difference and for both boys and girls, usage increases between ages 11 and 13 but not between 13 and 15.

It is interesting to note that whilst computer game playing decreases with age, other uses of a computer increase. It is possible that the demands of schoolwork at secondary school limit the time available for playing computer games, but offer more opportunities for using computers as a resource to help with schoolwork.

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NOTES:

- 1 'Moderate activity' is using around five to seven calories a minute – the equivalent of brisk walking.
- 2 The category 'bus or train' also includes those who travel by tram, underground or boat.
- 3 The category 'car' also includes those who travel by motorcycle or moped.
- 4 Includes use of a games console e.g., Playstation, Xbox.

Figure 6.11:
PLAY COMPUTER GAMES FOR 2 OR MORE HOURS A DAY ON SCHOOL DAYS

HBSC Scotland
2006 Survey

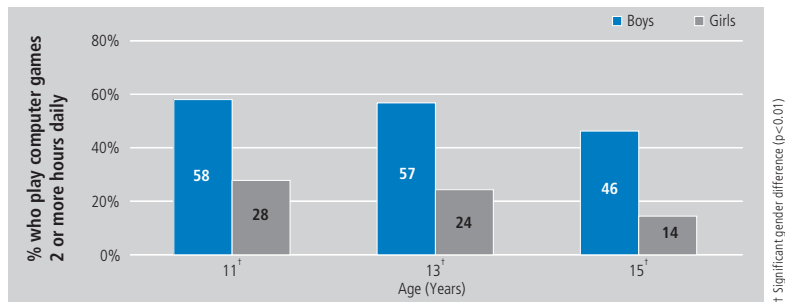


Figure 6.12:
PLAY COMPUTER GAMES FOR 2 OR MORE HOURS A DAY AT THE WEEKEND

HBSC Scotland
2006 Survey

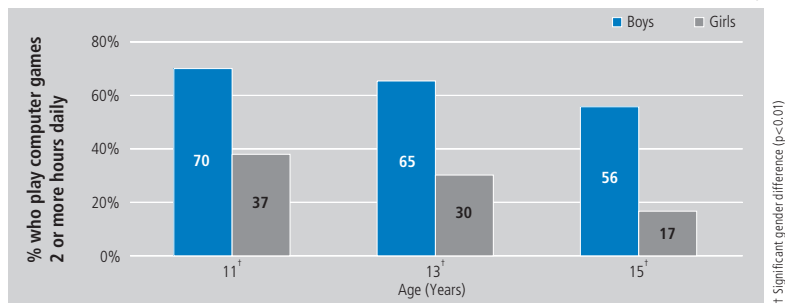


Figure 6.13:
USE COMPUTERS (NOT GAMES) FOR 2 OR MORE HOURS A DAY ON SCHOOL DAYS

HBSC Scotland
2006 Survey

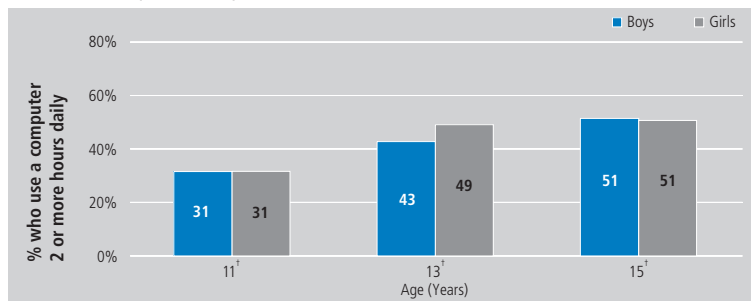
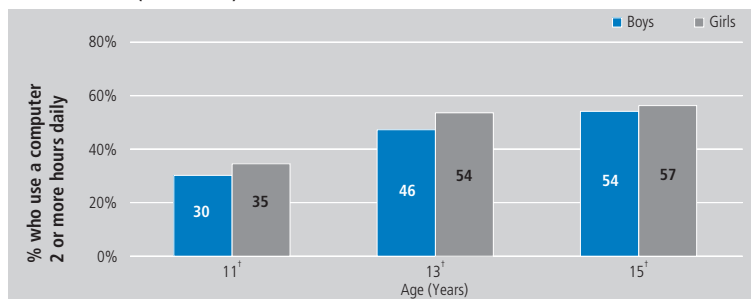


Figure 6.14:
USE COMPUTERS (NOT GAMES) FOR 2 OR MORE HOURS A DAY AT THE WEEKEND

HBSC Scotland
2006 Survey





WEIGHT CONTROL BEHAVIOUR

- Girls are twice as likely as boys to be dieting or doing something else to lose weight (22% and 11% respectively)
- Younger boys are more likely than older boys to try to control their weight, whilst the opposite is true for girls (older girls more likely than younger girls)
- One third of young people report that they have previously been or are currently on a diet
- There has been a 50% increase in reported dieting among boys since 1990



INTRODUCTION

Dieting and other weight control methods are commonplace among adolescents, particularly girls, and co-occur with the tendency for young people to exert more choice over eating habits at this age (Hill, 2002). Dieting itself can be highly variable in duration and strictness, with many young girls engaging in potentially harmful dieting practices from a young age (Roberts *et al.*, 1999). The prevalence of obesity has risen in Scotland over the past 20 years, highlighting the need for a healthy diet. Although often perceived to be a negative practice among young people, sensible weight control behaviour can benefit those who are overweight or obese.

Dieting is not usually associated with adverse physical and psychological outcomes (French and Jeffery, 1994). However, extreme or long-term dieting to lose weight has potentially serious consequences for young girls' physical development, including growth retardation, nutritional deficiencies and delayed sexual maturation (Herbold and Frates, 2000). Dieting is also believed to be associated with poor mental well-being, low self-esteem and sleep disturbances (Pesa, 1999). Previous research has shown a strong relationship between extreme dieting and depression (Crow *et al.*, 2006; Schutz and Paxton, 2007), 'social physique anxiety' (Thomson and Chad, 2002) and suicidal ideation (Rafiroiu *et al.*, 2003). Furthermore, dieting in childhood is a strong risk factor for subsequent eating disorders in young adulthood (Kotler *et al.*, 2001). It is also implicated in adult obesity (Viner and Cole, 2006).

HBSC FINDINGS

Measures of current and previous weight control behaviour have been included in the Scottish HBSC questionnaire since 1990.

Current weight control behaviour in Scotland

Girls are twice as likely as boys to be on a diet or doing something else to lose weight (22% compared with 11% of boys). Among girls, weight control behaviour increases with age, but the opposite is true for boys (Figure 7.1). Consequently, gender differences in dieting behaviour increase with age. Three times as many girls are trying to lose weight at age 15 years (27% compared with 8% of boys).

Current/previous weight control behaviour

One third of young people report that they have 'been on a diet to try to lose weight'¹ at some point (46% of girls compared with 20% of boys). As this measure taps into cumulative experience, it is not surprising that older girls are more likely to report having dieted than younger girls (Figure 7.2). Paradoxically, the pattern across male age groups appears to be counter-intuitive. Boys aged 15 years are less likely to report that they have been on a diet than those aged 11. This may be due to differences in the way dieting is perceived by boys of different ages.

There is a pronounced gender difference in reports of 'ever been on a diet' in each survey year. Since 1990, there has been a 50% increase amongst boys, but no significant change over this time for girls (Figure 7.3).

Figure 7.1:
CURRENTLY TRYING TO LOSE WEIGHT

HBSC Scotland
2006 Survey

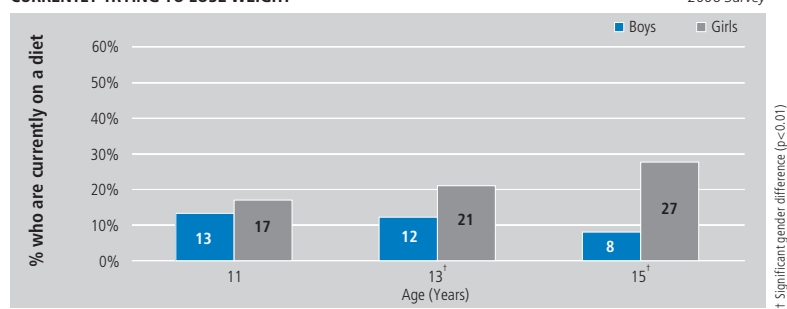


Figure 7.2:
EVER BEEN ON A DIET

HBSC Scotland
2006 Survey

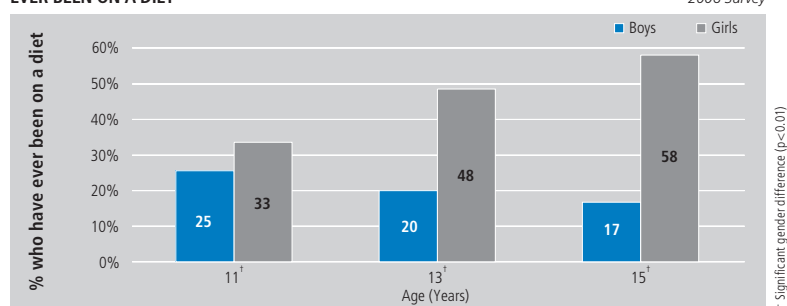
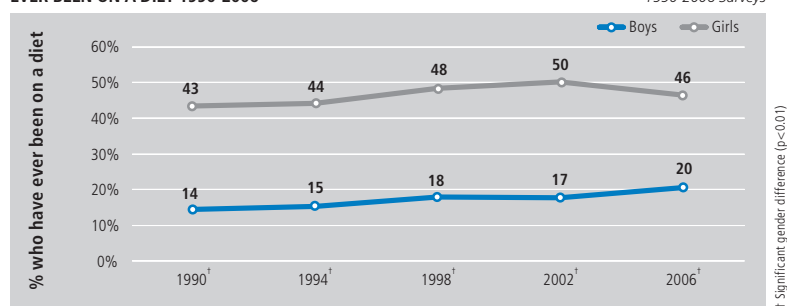


Figure 7.3:
EVER BEEN ON A DIET 1990-2006

HBSC Scotland
1990-2006 Surveys



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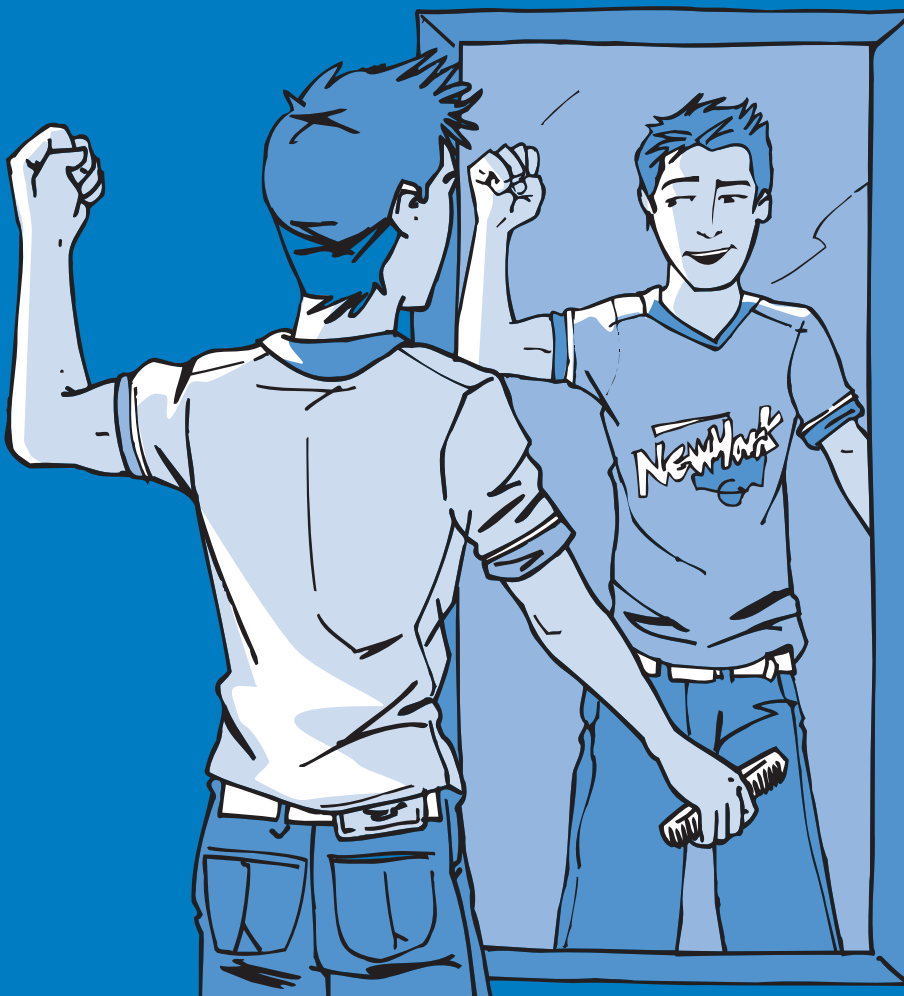
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NOTES

- 1 Young people were asked about both their current dieting behaviour and about dieting they had previously undertaken.

BODY IMAGE AND BODY MASS INDEX

- 25% of boys and 40% of girls report that they feel too fat
- 36% of boys and 26% of girls consider themselves to be good looking
- Young people's views of their physical appearance and body size are less favourable at age 13 than at age 11
- Of those 15 year-olds who reported height and weight, three quarters are classified as having a normal weight according to their BMI and 2% are classified as being obese



INTRODUCTION

Body image plays an important role in shaping young people's self-perceptions, mental health and psychological well-being, especially for girls (*Donnelly, 2006; Ge et al., 2001; Siegel et al., 1999; Williams and Currie, 2000*). High dissatisfaction with the body and body image disturbances are predictors of depressive moods, psychosomatic complaints and disordered eating (*Ge et al., 2001; Siegel, 2002; Stice et al., 2000; Thompson and Chad, 2002*). Healthy body image is achieved when young people receive favourable feedback on their body shape/size and feel accepted by their family and peers (*Barker and Galambos, 2003; Ricciardelli et al., 2000*). Involvement in sport is also associated with a better body image (*Ferron et al., 1999*), while media pressure to reach an ideal body shape acts as a risk factor for poor body image (*McCabe et al., 2002*).

Poor body image is more common among young people with high Body Mass Index (BMI) and this is especially true for girls (*Mendelson et al., 2000*). However, even adolescents whose weight would be classified as 'normal' from a clinical perspective, worry about their weight and body size (*Mulvihill et al., 2004*). Dissatisfaction with body weight increases as girls get older and this is partly due to physical changes at puberty (*Williams and Currie, 2000*). Feeling overweight or dissatisfied with body size are more influential factors in dieting and weight control behaviour than actual weight, particularly amongst girls.

In Scotland, the prevalence of obesity among adults has increased over the past two decades and current levels are among the highest in the Organisation for Economic Co-operation and Development (OECD) countries as measured by BMI (*ScotPHO, 2007*). There is growing concern about obesity among young people, prompting the introduction of public health programmes that address healthy eating and physical activity for this age group. At the same time, consideration of young people's concerns about body image and appearance has been highlighted in recent initiatives in Scotland, such as, 'Growing through Adolescence' (*Cooke et al., 2005*), and internationally (*WHO, 2006*).

HBSC FINDINGS

The HBSC survey asks questions relating to perceived body size and looks and asks for children's height and weight in order to determine BMI.

BODY SIZE

Twenty-five percent (25%) of boys and 40% of girls report that they are too fat. There are considerable differences between 11 and 13-year-olds, particularly among girls, with higher proportions of older adolescents describing themselves as too fat (*Figure 8.1*). At all ages, girls are more likely than boys to report that they are fat and whilst there was little change between 1990 and 2006 in young people's reports of their body size, a persistent gender difference has been apparent over the five survey years (*Figure 8.2*).

REPORTING GOOD LOOKS

Boys are more likely than girls to report that they are 'quite' or 'very good looking' (36% compared with 26%) and this is true at all ages (*Figure 8.3*). Mirroring the findings on reported body size, young people's views of their physical appearance are less favourable at age 13 than at age 11. At age 13, 35% of boys and 21% of girls think they are good looking compared with 44% and 37% at age 11. There is little difference between 13 and 15 year olds.

Across all five surveys between 1990 and 2006, boys consistently reported their looks in more favourable ways than girls. There is some fluctuation over the 16 year period but no definitive increase or decrease in perception of looks. The number of young people reporting that they are good looking declined between 1990 and 1998, but then increased significantly in 2002, remaining at the same level in 2006.

BODY MASS INDEX (BMI)

The Body Mass Index (BMI) of young people is derived from their self-reported height and weight (body weight (kg)/height (m)²) and standardised cut-offs are used to create the following four categories: underweight, normal weight, overweight and obese (*Cole et al., 2000; Cole et al., 2007*). It should be

Figure 8.1:
REPORT BODY IS TOO FAT

HBSC Scotland
2006 Survey

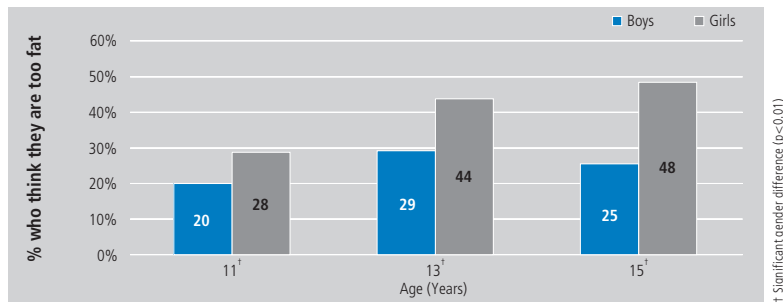


Figure 8.2:
REPORT BODY IS TOO FAT 1990-2006

HBSC Scotland
1990-2006 Surveys

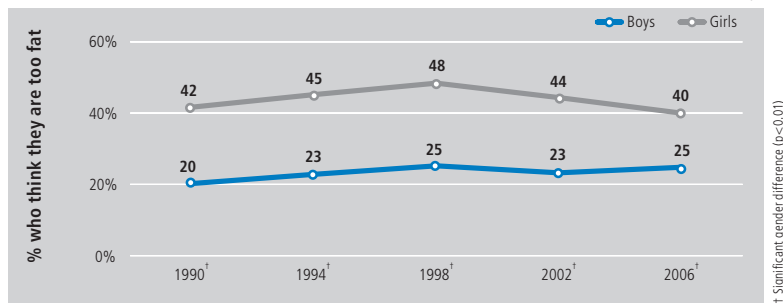


Figure 8.3:
REPORT GOOD LOOKS

HBSC Scotland
2006 Survey

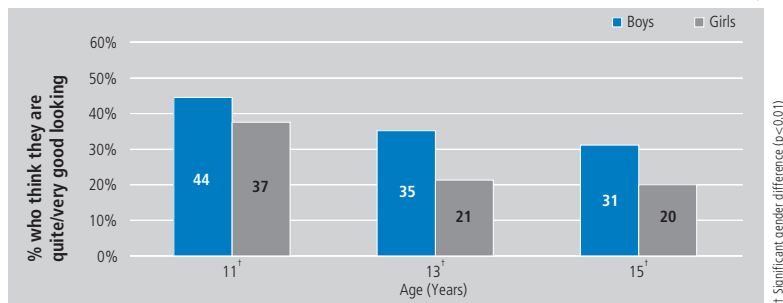


Figure 8.4:
REPORT GOOD LOOKS: 1990-2006

HBSC Scotland
1990-2006 Surveys

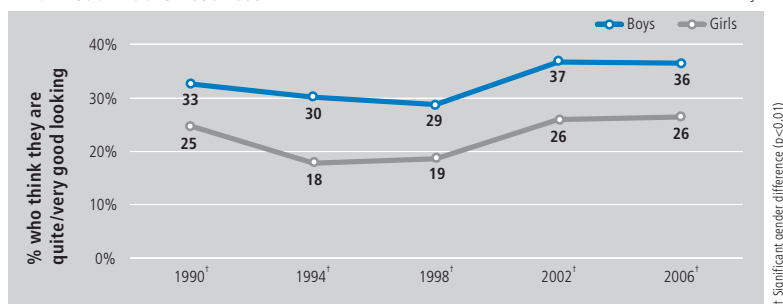
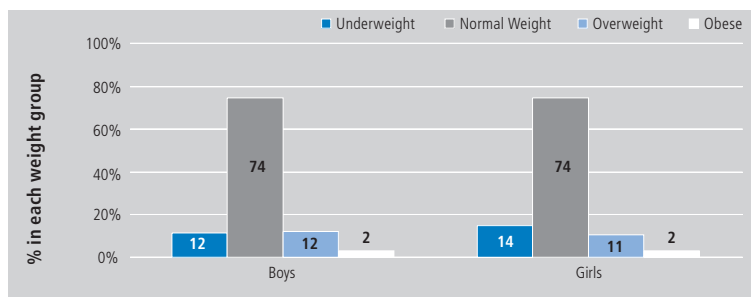


Figure 8.5:
WEIGHT GROUPS ACCORDING TO BMI: 15-YEAR-OLDS

HBSC Scotland
2006 Survey



noted that obesity estimates derived from self-reports tend to be lower than those obtained from health examinations (Elgar et al., 2005). In Scotland, only a minority of young people report both their height and weight (34% of 11-year-olds, 39% of 13-year-olds and 50% of 15-year-olds). Therefore, the results below are based on findings using data from S4 pupils only.

Of those 15 year-olds who reported height and weight data, three out of four are classified as having a normal weight according to their reported height and weight (Figure 8.5). Similar proportions of boys and girls are classified as underweight and overweight, accounting overall for approximately 24% of young people, while 2% are classified as obese. Comparable data were collected in 2002 when 57% of 15-year-olds reported their height and weight. The distribution of weight groups according to the BMI was very similar to that found in 2006 for both boys and girls (data not shown).

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TOOTH BRUSHING

- Girls are more likely than boys to brush their teeth twice a day or more (80% compared with 65%)
- There has been a steady increase from 1990 to 2006 in the proportion of boys and girls who brush their teeth two or more times a day



INTRODUCTION

The dental health of young people has improved in Scotland in recent years (*National Dental Inspection Programme, 2006*), yet it remains a major public health concern (*Scottish Executive, 2002*). The national target to be met by the year 2010, is for 60% of 11-year-olds to be free of 'obvious caries experience'. One of the main reasons for Scotland's high rate of dental disease is lack of oral care, including infrequent tooth brushing (*Scottish Executive, 2002*).

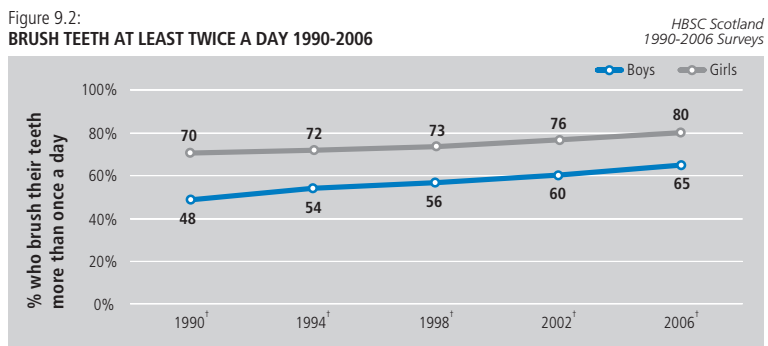
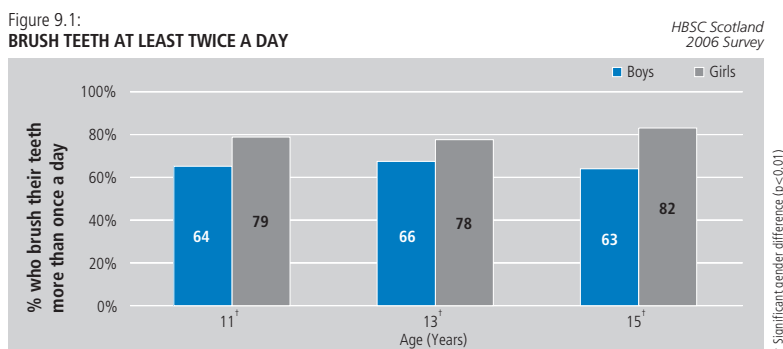
HBSC FINDINGS

HBSC has been collecting data on tooth brushing frequency in Scotland since 1990, allowing for examination of trends across a 16-year period. This study has also investigated socioeconomic and cross-national differences in patterns of tooth brushing (*Levin and Currie, in press; Maes et al., 2006*).

TOOTH BRUSHING AT LEAST TWICE A DAY

The majority (72%) of young people in Scotland brush their teeth at least twice a day. Girls are more likely than boys to brush their teeth this often (80% compared with 65% respectively). Gender differences exist within every age group (*Figure 9.1*). Between the ages of 11 and 15 there is little change in the prevalence of tooth brushing among girls or boys.

There has been a steady increase from 1990 to 2006 in the proportion of boys and girls that brush their teeth two or more times a day. Among boys, the proportion has risen from 48% in 1990 to 65% in 2006. Among girls, the proportion has increased from 70% in 1990 to 80% in 2006 respectively (*Figure 9.2*). Gender differences are apparent across all five survey years.



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MENTAL WELL-BEING

- 84% of young people are satisfied with their life, 49% are very happy, 36% never feel helpless, 22% never feel left out of things, 21% rate their health as excellent and 20% always feel confident
- Boys fare better than girls on all six mental health measures
- Happiness, confidence and never feeling helpless among young people have increased between 1994 and 2006 and the proportion of young people not feeling left out has increased between 1998 and 2006
- Self-rated health, happiness, life satisfaction, confidence, never feeling helpless and never feeling left out all decrease with age and this trend is more pronounced for girls than boys



INTRODUCTION

The mental well-being of young people is affected by experiences of school and learning (*Inchley et al., 2007*), friendships and peer relations (*Settortobulte and Gaspar de Matos, 2004*) and family life and relationships (*Levin et al., 2007; Todd et al., 2007*). Adolescence can also bring emotional problems as a result of biological and psychological changes associated with puberty (*Kaltiala-Heino et al., 2003; Mendle et al., 2006*). These often occur in conjunction with external changes such as school transitions and alterations within peer and friendship networks or family structure and relationships. Parental separation and re-partnering often result in further upheavals in the home environment such as parent-child conflict, economic hardship and family disorganisation. Good emotional and physical health enables young people to deal with these challenges and eases the transition through adolescence (*Petersen et al., 1997*). Promoting young people's health can therefore have long-term benefits for individuals and society.

Previous research has shown that emotional and mental health problems in childhood and adolescence are predictors of risk behaviours such as smoking (*Dierker et al., 2007*), drinking (*Verdurmen et al., 2005*), eating disorders (*Beato-Fernandez et al., 2004*) and violence (*Craig and Harel, 2004*). Mental well-being and behavioural problems during childhood and adolescence may also persist into adulthood (*Aalto-Setälä et al., 2002; Roza et al., 2003*). Early intervention to promote mental well-being and prevent mental health problems among adolescents is therefore beneficial in the long, as well as short, term.

The Scottish Government's National Programme for Improving Mental Health and Well-Being (*Scottish Executive, 2003*) focuses on promotion and prevention, supporting those experiencing problems, reducing inequalities and eliminating the stigma associated with mental ill health. One of its six priority areas is children and young people.

HBSC FINDINGS

Within HBSC there are several indicators of young people's mental well-being. These include happiness, life satisfaction, self-confidence, self-rated health, feelings of helplessness and feeling left out. Self-confidence enables young people to develop friendship networks and positive relationships with adults within the home and school environment. Happiness and high life-satisfaction promote resilience and increase the likelihood of becoming a mentally healthy adult. Young people who are confident in themselves are less likely to be susceptible to peer pressure in their teenage years.

Self-rated health

It has been argued that self-rated health is measuring underlying physiological and/or psychological health complaints. Irrespective of the cause, poor subjective health is associated with depression in adolescence and young adulthood (*Garber et al., 1991; Vasquez and Blanco, 2006*). Within adult populations subjective indicators of health are strongly related to health behaviours such as use of healthcare services, as well as mortality and morbidity (*Kelly and Baker, 2000; Mossey and Shapiro, 1982*).

One in five young people in Scotland report that their health is excellent (26% of boys and 17% of girls). A further 59% describe their health as good. Boys are generally more positive about their health than girls, and both boys and girls are more positive about their health at a younger age ([Figure 10.1](#)).

Life satisfaction

Young people were shown a picture of a ladder and given the following description and question: *Here is a picture of a ladder – the top of the ladder 10 is the best possible life for you and the bottom is the worst possible life – in general where on the ladder do you feel you stand at the moment?* In this adapted version of the Cantril Ladder (*Cantril, 1965*), a score of six or more was defined as high life satisfaction.

Eighty-four percent (84%) of young people are highly satisfied with their life (88% of boys; 81% of girls). Amongst girls, life satisfaction decreases with age, while boys' life satisfaction remains relatively stable, thus the gender gap widens ([Figure 10.2](#)). Life satisfaction was measured in 2002 and 2006 only. No significant change was observed between these two time points.

Figure 10.1:
REPORT EXCELLENT HEALTH

HBSC Scotland
2006 Survey

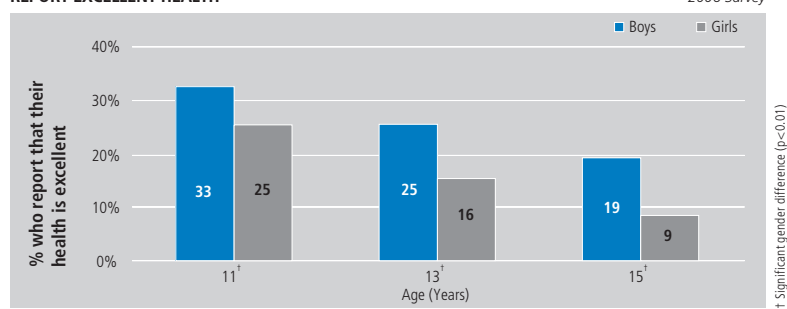


Figure 10.2:
REPORT HIGH LIFE SATISFACTION

HBSC Scotland
2006 Survey

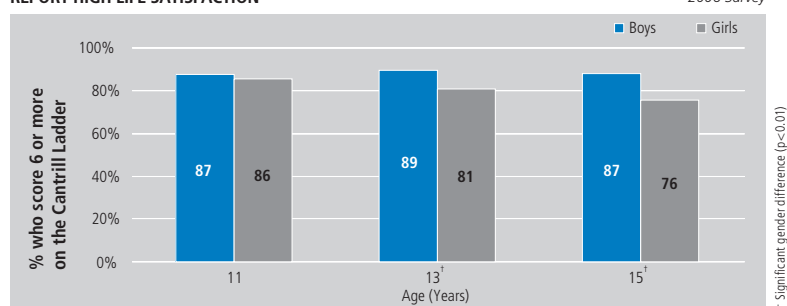


Figure 10.3:
FEEL VERY HAPPY

HBSC Scotland
2006 Survey

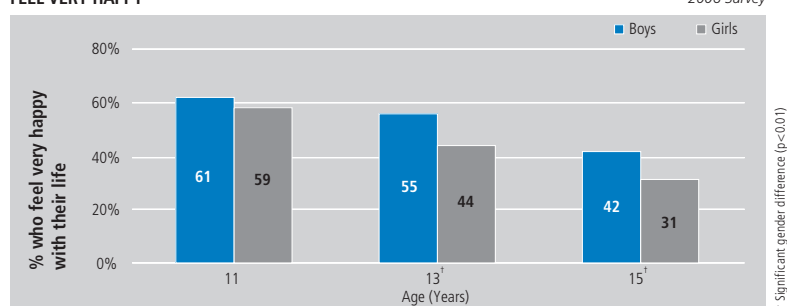


Figure 10.4:
FEEL VERY HAPPY 1994-2006

HBSC Scotland
1994-2006 Surveys

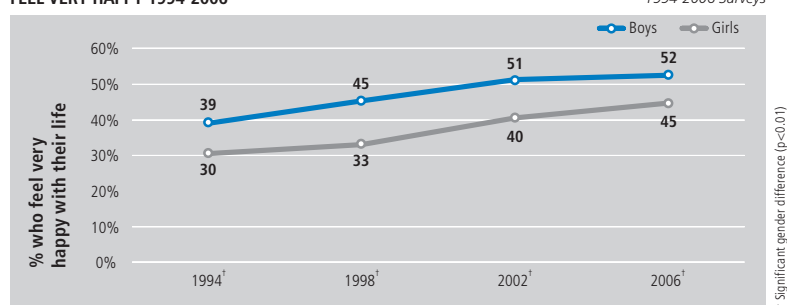
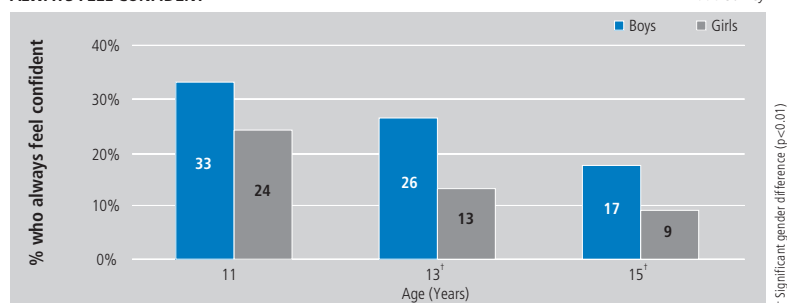


Figure 10.5:
ALWAYS FEEL CONFIDENT

HBSC Scotland
2006 Survey



Happiness

Sixty percent (60%) of 11-year-olds feel very happy about their lives, with a similar proportion of boys and girls responding this way. Mirroring the findings for life satisfaction, girls' happiness decreases with age (Figure 10.3). However, boys' happiness also decreases, albeit at a slower rate than girls.

The HBSC study in Scotland has included a measure of happiness since 1994. Both boys and girls have seen an increase in feeling very happy, from 39% and 30% in 1994 to 52% and 45% in 2006 for boys and girls respectively (Figure 10.4). Of the three year groups, the greatest rise in happiness over time is observed among 13 year old girls and boys.

Self-confidence

Overall, one in five young people always feel confident in themselves. Boys are more likely to report always feeling confident (25% compared with 16% of girls) and confidence is greatest amongst 11-year-olds (28%) and lowest among 15-year-olds (13%). The gender difference is greatest at 13 and 15, with approximately twice as many boys as girls always feeling confident (Figure 10.5). Although only a minority of young people always feel confident, a further 41% report that they *often* feel confident (39% of 11-year-olds, 43% of 13-year-olds and 41% of 15-year-olds).

The HBSC study in Scotland has included a measure of confidence since 1994. Confidence among girls is significantly greater in 2006 than in 1994 (Figure 10.6), whereas the proportion of boys feeling confident in 2006 is the same as that in 1994. The marked gender difference in self confidence is apparent at all time points.

Feeling helpless

Helplessness is an item used in the 'Affectometer 2 Scale', measuring positive mental health in the adult population (Kammann and Flett, 1983). Approximately one third of young people never feel helpless (40% of boys; 32% of girls). Girls are less likely to never feel helpless as they get older, while boys' reporting of helplessness remains approximately the same across all ages (Figure 10.7).

Helplessness was included in the Scottish HBSC questionnaire from 1994. Never feeling helpless has increased over time, from 29% of boys in 1994 to 40% in 2006, and from 19% of girls in 1994 to 32% in 2006 (Figure 10.8).

Never feeling left out

Approximately one in five young people report that they never 'feel left out of things' (27% of boys; 18% of girls) (Figure 10.9). The proportion reporting that they never feel left out decreases with age for both boys and girls. At all ages boys are less likely to feel left out than girls.

'Feeling left out' was first included as an item in the Scottish HBSC questionnaire in 1998. Since then, never feeling left out has increased from 22% of boys to 27% in 2006 and from 14% of girls to 18% in 2006 (Figure 10.10).

Figure 10.6:
ALWAYS FEEL CONFIDENT 1994-2006

HBSC Scotland
1994-2006 Surveys

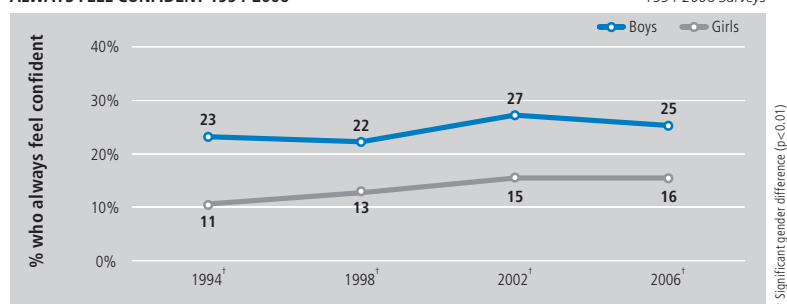


Figure 10.7:
NEVER FEEL HELPLESS

HBSC Scotland
2006 Survey

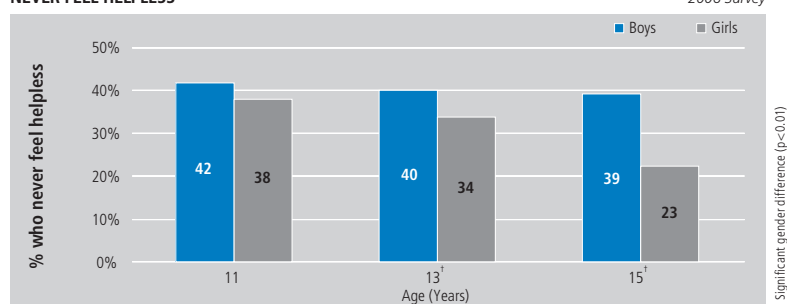


Figure 10.8:
NEVER FEEL HELPLESS 1994-2006

HBSC Scotland
1994-2006 Surveys

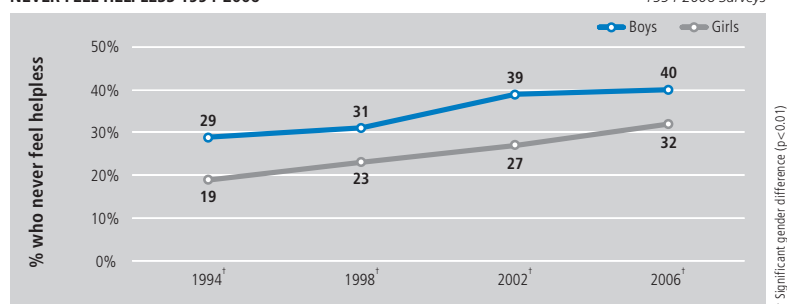


Figure 10.9:
NEVER FEEL LEFT OUT

HBSC Scotland
2006 Survey

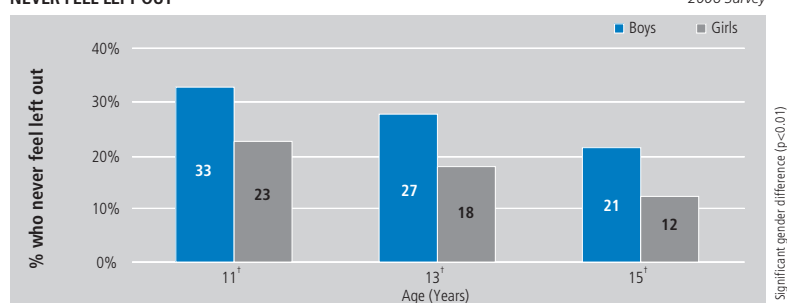
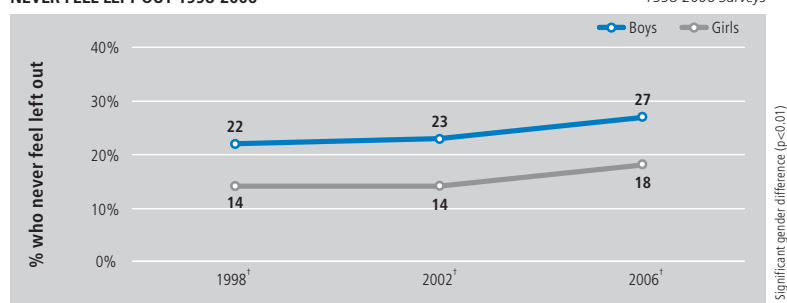


Figure 10.10:
NEVER FEEL LEFT OUT 1998-2006

HBSC Scotland
1998-2006 Surveys



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SUBSTANCE USE

11

- More than one in four young people have tried smoking and at age 15 girls are more likely to have tried smoking than boys
- 13% of girls and 10% of boys report that they are smoking at present. Girls are more likely than boys to be smoking at 13 and the gap widens further at 15
- By age 15 two thirds of current smokers report that they smoke every day
- One in five 13-year-olds and two in five 15-year-olds drink alcohol at least once a week
- Although boys and girls are equally likely to drink alcohol by age 13, the type of drink consumed varies; boys are most likely to drink beer, while girls prefer alcopops and spirits
- 48% of 15-year-old girls and 43% of 15-year-old boys have been drunk on at least two occasions
- 28% of 15-year-olds and 7% of 13-year-olds have used cannabis
- 9% of 15-year-olds have used cannabis once or twice in the past 12 months and 10% have used it more than twice but less than 40 times



INTRODUCTION

Tobacco

Most adult smokers began smoking in their teenage years. Early initiation is linked to a greater risk of addiction (*Center for Disease Control and Prevention, 1994*) and can cause problems such as reduced lung function, increased asthmatic problems, coughing, wheezing and shortness of breath. Smoking among young people is linked to a range of social and developmental factors including family structure, parent-child communication, parental smoking, school experience, early maturation and local area deprivation (*Corbett et al., 2005; Currie et al., 2004*). Smoking is also one of a cluster of risk behaviours which co-occur and include alcohol and drug use (*Currie et al., 2003*) and bullying (*Ravens-Sieberger et al., 2004*). Nevertheless, young people's own accounts suggest that smoking can serve a social function among peers (*Michell, 1997*); friends who spend many evenings out together are more likely to be smokers (*Settortobulte and de Matos, 2004*).

Smoking among young people in Scotland is a continuing major public health concern with national targets set for reducing prevalence among 13 to 15-year-olds (*Scottish Executive, 2006; Scottish Office, 1999a*). HBSC has tracked patterns of smoking among adolescents over the past 16 years as well as gaining a perspective on the extent of the problem from cross-national comparisons. The 2002 HBSC survey indicated that, in common with many countries in Northern and Western Europe, girls had higher rates of smoking than boys (*Godeau et al., 2004*). Boys in Scotland had low weekly smoking rates compared to many other countries in 2002, whereas rates for girls in Scotland were relatively high (*Alexander et al., 2004*).

Alcohol

Scotland's young people have among the highest rates of alcohol use in Europe and North America along with other UK countries (*Schmid and Nic Gabhainn, 2004*). Young people's alcohol consumption is influenced by a number of factors, including cultural and familial norms, peer pressure and personal preferences and advertising that portrays positive images of drinking that denote sexual attraction, romance and adventure (*Petratis et al., 1998*). Although alcohol appeals to many young people, it is known to be associated with other risk behaviours such as consuming other drugs, unprotected sex, underachievement, truancy, injury and alcohol-related deaths (*Advisory Council on Misuse of Drugs, 2006; Corbett et al., 2005; Currie et al., 2003; Murgraff et al., 1999; Weschler et al., 1994*). Adolescent binge drinkers are subsequently more likely to form a dependency on alcohol as adults (*Viner and Taylor, 2007*).

Within Scotland, the Scottish Executive has developed a Plan of Action to reduce harmful drinking by children and young people (*Scottish Executive, 2002*) with implementation to take place at local level by Local Action Teams (*Scottish Executive, 2003*).

Cannabis

Cannabis is the most widely used substance among adolescents after alcohol and tobacco, despite the illegality of its use (*BMRB, 2007*). In the 2002 HBSC survey, 15-year-olds in Scotland were found to have among the highest rates of use along with other UK countries, North America and Switzerland (*ter Bogt et al., 2004*). Factors associated with cannabis use include family structure, parental supervision, drug use by older siblings and truancy. For girls, family and local area deprivation are also associated factors (*Advisory Council on the Misuse of Drugs, 2006; Currie et al., 2003*). There are a number of detrimental health effects of cannabis use including intoxication, lethargy, lung damage, precipitation and exacerbation of psychosis. Furthermore, there are significant financial costs and cannabis use can be a stepping-stone to other harder drugs (*Advisory Council on the Misuse of Drugs, 2006*). Nonetheless, evidence suggests that adolescents who use cannabis in modest doses are well-integrated socially (*Engels and ter Bogt, 2001; Shedler and Block, 1990*). The same argument is made for smoking (see Tobacco above).

Scotland's drugs strategy (*Scottish Office, 1999b*) aims to help young people resist drug misuse and reduce the number using illegal drugs.

Figure 11.1:
EVER SMOKED TOBACCO

HBSC Scotland
2006 Survey

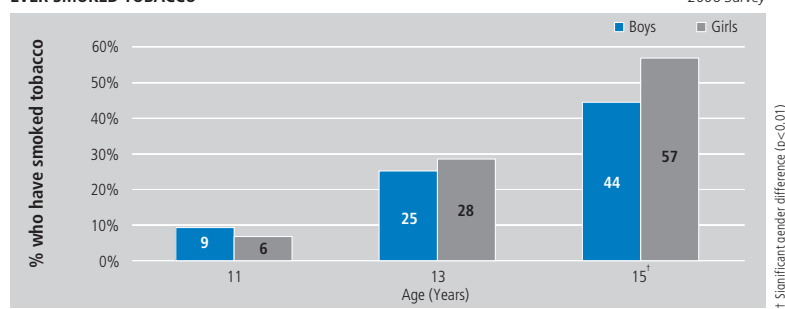


Figure 11.2:
CURRENT SMOKING

HBSC Scotland
2006 Survey

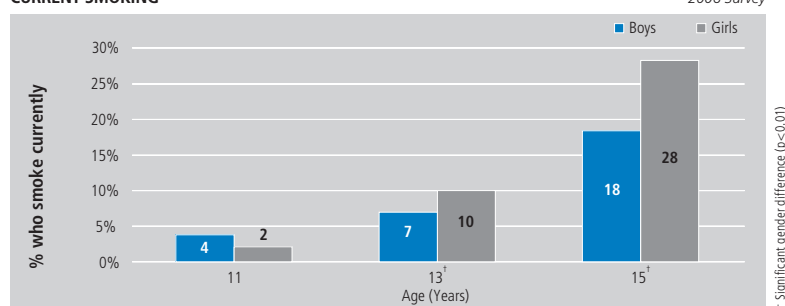


Figure 11.3:
SMOKE TOBACCO DAILY

HBSC Scotland
2006 Survey

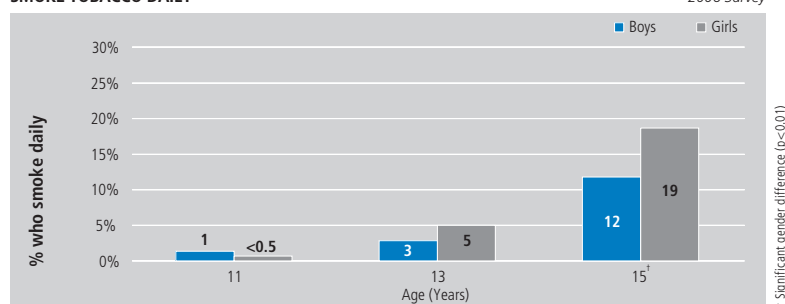


Figure 11.4:
CURRENT SMOKING AMONG 15-YEAR-OLDS 1990-2006

HBSC Scotland
1990-2006 Surveys

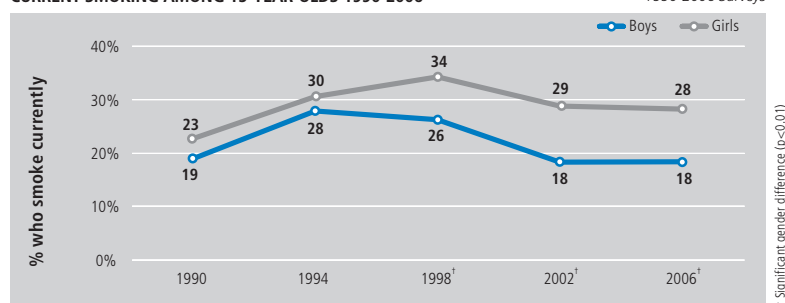
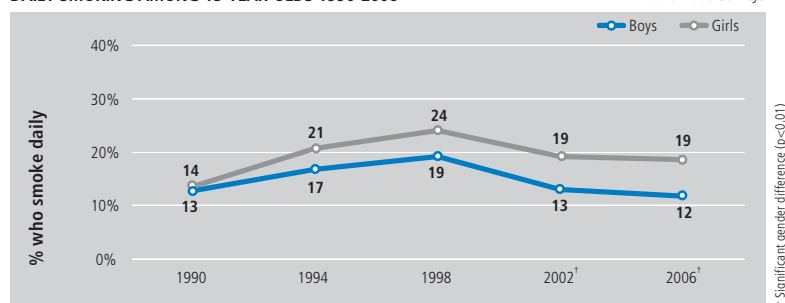


Figure 11.5:
DAILY SMOKING AMONG 15-YEAR-OLDS 1990-2006

HBSC Scotland
1990-2006 Surveys



HBSC FINDINGS

HBSC collects data on whether young people have ever smoked, if they currently smoke¹ and how often. Questions measuring different aspects of alcohol use include frequency and types of alcohol consumed, the age of first drinking alcohol and getting drunk. Young people are also asked if they have used cannabis ever, in the last 30 days and in the last year and if so how often they have used it.

Ever smoked

More than one in four young people have tried smoking (26% of boys and 30% of girls). By age 15, half of young people have tried smoking and a gender difference is apparent with 57% of girls having smoked compared with 44% of boys ([Figure 11.1](#)).

Current smoking

Girls are also more likely to be smoking at present than boys (13% of girls compared with 10% of boys). While a gender difference in 'ever smoking' exists only at age 15, for current smoking this pattern is also found at age 13, increasing at age 15 (28% of girls and 18% of boys) ([Figure 11.2](#)).

Daily smokers

Daily smoking, often used as a definition of regular smoking in adults, increases sharply with age, particularly between age 13 and 15 ([Figure 11.3](#)). Like less regular smoking behaviour, a gender difference is found at age 13 that becomes greater at age 15 when 19% of girls report that they smoke daily compared with 12% of boys. By age 15, this represents two thirds (65%) of young people who are classified as 'current smokers'.

Trends in current smoking and daily smoking among 15-year-olds show an increase since 1990, followed by a decline ([Figure 11.4 and 11.5](#)). The proportion of current smokers in 2006 is not significantly different from the proportions found in 1990 and there is no difference in daily smoking rates among 15-year-old boys between these dates. However, the proportion of girls who smoke daily in 2006 is greater than in 1990. One noticeable feature of smoking trends is the appearance of a gender gap, with more girls reporting that they smoke, or smoke daily than boys towards the end of the time period assessed (from 1998 for current smoking and 2002 for daily smoking).

Weekly drinking

Weekly drinking is found even among the youngest children in the survey. At age 11, 5% of young people report weekly drinking (8% of boys and 3% of girls). Almost one in five 13-year-olds (17%) and two in five 15-year-olds (38%) are weekly drinkers ([Figure 11.6](#)).

In all five surveys since 1990, young people have been asked about their alcohol consumption frequency². The highest rates of weekly drinking were found in 1998 and declined significantly among girls between 2002 and 2006 ([Figure 11.7](#)). More 15-year-old boys (39%) and girls (36%) drink alcohol at least once a week in 2006 than in 1990 (30% and 26%).

Types of alcoholic drinks

Young people were asked to report on how frequently they drink each of seven listed alcoholic drinks. They were instructed to include those times when they only drink a small amount. Beer is the alcoholic drink most commonly consumed at least once a week by 15-year-old boys, whereas, for 15-year-old girls, alcopops and spirits are the preferred drinks ([Figure 11.8](#)). Boys are at least five times more likely to drink beer weekly than girls. Girls are 1.5 times more likely to drink alcopops.

Drunkenness

Overall, a quarter of young people have been drunk on at least two occasions. Relatively few (5%) 11-year-olds report this frequency, compared with 22% of 13-year-olds and 46% of 15-year-olds. Drunkenness is equally prevalent among girls and boys at each age ([Figure 11.9](#)).

Figure 11.6:
DRINK ALCOHOL WEEKLY

HBSC Scotland
2006 Survey

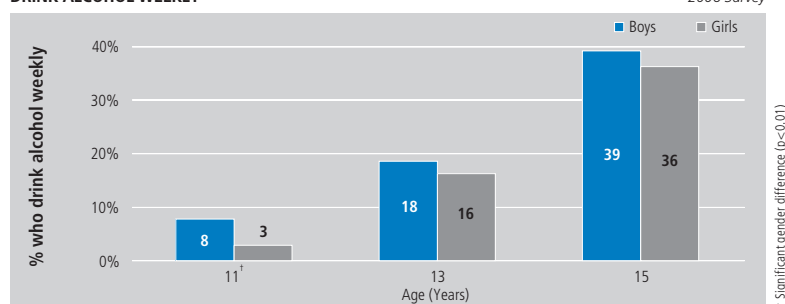


Figure 11.7:
WEEKLY DRINKING AMONG 15-YEAR-OLDS 1990-2006

HBSC Scotland
1990-2006 Surveys

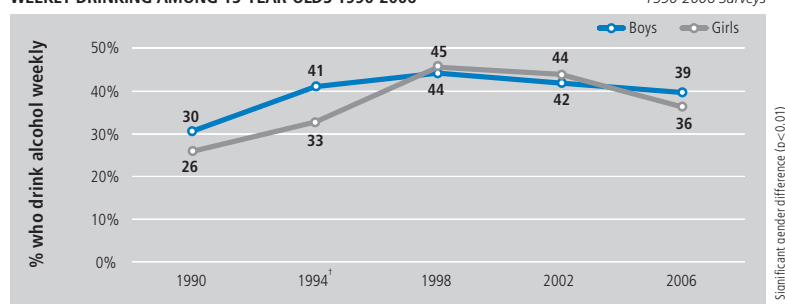


Figure 11.8:
TYPES OF ALCOHOL DRUNK WEEKLY BY 15-YEAR-OLDS[†]

HBSC Scotland
2006 Survey

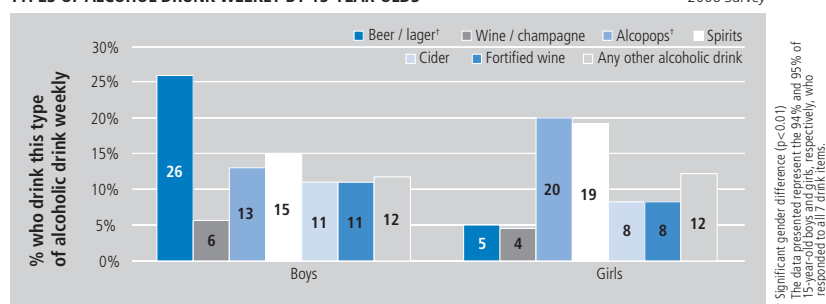


Figure 11.9:
BEEN DRUNK 2 OR MORE TIMES

HBSC Scotland
2006 Survey

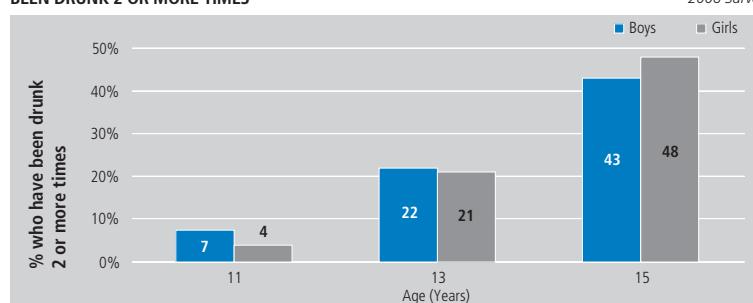
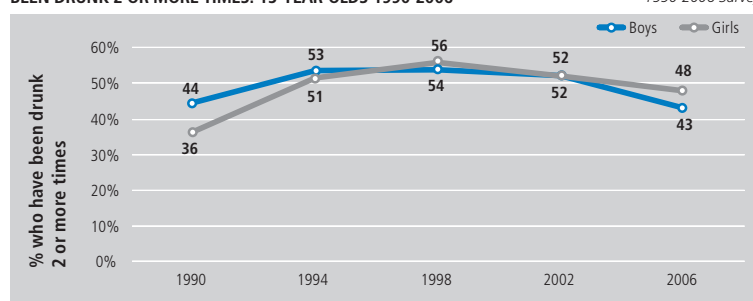


Figure 11.10:
BEEN DRUNK 2 OR MORE TIMES: 15-YEAR-OLDS 1990-2006

HBSC Scotland
1990-2006 Surveys



Drunkenness among 15-year-olds increased across the 1990's and then declined (Figure 11.10). Among boys, prevalence is at the same level in 2006 as in 1990. However, among girls, the prevalence has increased.

Frequency of cannabis use

Only 13 and 15-year-olds participating in the HBSC survey were asked about their use of cannabis. Twenty-eight percent (28%) of 15-year-olds and 7% of 13-year-olds have used cannabis at least once in their lives (Figure 11.11), most of whom report use within the previous year (5% of 13-year-olds and 22% of 15-year-olds) (Figure 11.12). More than one in ten (13%) 15-year-olds used cannabis within the previous month, compared with 3% of 13-year-olds.

Since 2002, there has been a decrease in ever having used cannabis both for 13-year-olds (10% down to 7%) and for 15-year-olds (37% down to 28%). Use of cannabis in the previous year has also declined significantly since 2002 when the proportion of 15-year-olds using cannabis was 30%.

Cannabis user groups among 15-year-olds

Eight percent (8%) of 15-year-olds are classified as 'experimental' cannabis users (once or twice in the past 12 months), 10% as 'regular' users (3-39 times in past 12 months) and 3% as 'heavy' users (40 times or more in past 12 months) (Figure 11.13). A small number (5%) report using cannabis, but not in the previous 12 months and were therefore classified as 'former' users. The proportion of 15-year-old experimental users decreased between 2002 and 2006 (11% down to 8%), as did the proportion of heavy users (6% down to 3%).

Figure 11.11:
EVER USED CANNABIS

HBSC Scotland
2006 Survey

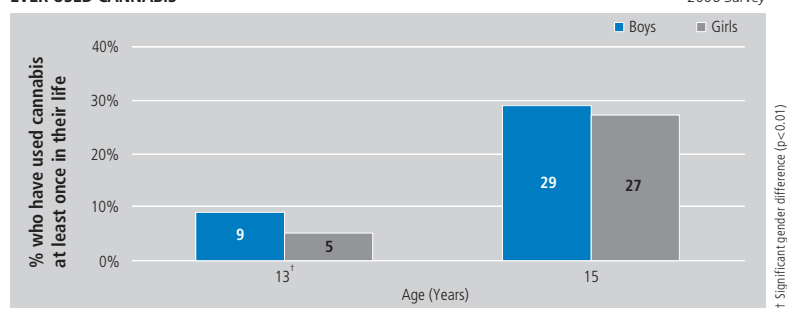


Figure 11.12:
USED CANNABIS IN PAST 12 MONTHS

HBSC Scotland
2006 Survey

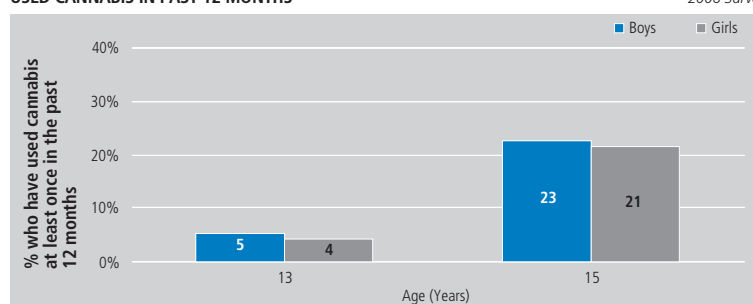
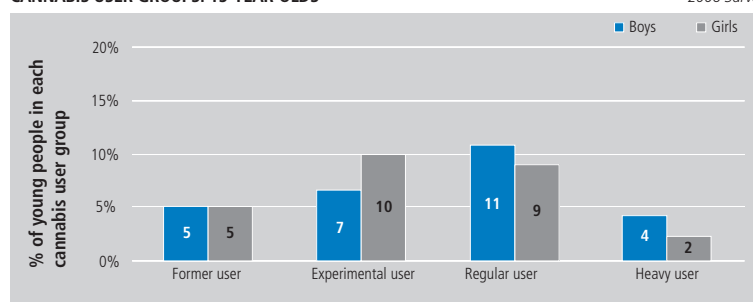


Figure 11.13:
CANNABIS USER GROUPS: 15-YEAR-OLDS

HBSC Scotland
2006 Survey



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NOTES

- 1 Young people were asked "How often do you smoke tobacco at present?" Those who responded 'I do not smoke' were coded as not currently smoking tobacco. All other responses: smoking less than weekly, weekly or daily were coded as current smokers.
- 2 The list of drinks provided has evolved as preferences for different types of alcoholic drink have changed; for example, the introduction of alcopops. For each survey, the proportion who drink weekly corresponds to those young people who consume any alcoholic drink (from the list provided) at least once a week.

SEXUAL HEALTH

12

- Over 80% of 15-year-olds report that eight of ten key sex education topics have been discussed in class
- Schools, friends and parents rank first, second and third respectively as sources of information on sexual matters for both boys and girls
- Approximately three quarters of 15-year-olds say that it is easiest to discuss personal and sexual matters with friends
- Nearly a third of 15-year-olds report that they have had sexual intercourse (30% of boys and 34% of girls)
- 85% of boys and 74% of girls who are sexually active used a condom on the last occasion that they had sexual intercourse



INTRODUCTION

Adolescence is a key stage for the development of personal relationships and sexual behaviour. During this time, it is important that young people learn how to become comfortable with themselves, learn how to deal with their sexual feelings and for those engaging in sexual behaviour, become aware of safe practices. Information available to young people can come from the home, school and peers as well as from mass media, health services and community-based programmes. However, the source and level of support experienced by young people varies.

Early sexual activity can have consequences for young people's health and well-being, especially if it begins before they are sufficiently physically and mentally mature to cope with it (*Godeau et al., 2008*). For example, previous studies have found that sexual intercourse before the age of 16 is often regretted (*Johnson et al., 1994; Wight et al., 2000*) and when associated with inconsistent or non-use of contraception can lead to unwanted pregnancy and sexually transmitted infections (STIs) (*Godeau et al., 2008*).

In 2002, Scotland had one of the highest rates of early sexual activity among 15-year-olds compared with 29 other countries in Europe and Canada (*Ross et al., 2004*). Concern about teenage pregnancy rates in Scotland has led to the development of a range of school and community-based programmes. In addition, national priorities have been identified in the government report 'Respect and Responsibility' (*Scottish Executive, 2005*). These include reducing unintended pregnancies and STIs, enhancing the provision of sexual health services and promoting a broad understanding of sexual health and sexual relationships that encompass emotions, attitudes and social context.

HBSC FINDINGS

HBSC collects data from 15-year-olds (S4) about their experiences of sex education in school, sources of information and with whom they find it easiest to talk to about sexual matters. There are also questions about sexual intercourse, use of condoms and other contraception.

Sex education at school

Young people were asked about the sex education they had received in school. Over 80% of 15-year-olds report that they have discussed eight out of ten key sex education topics in class ([Figure 12.1](#)). Discussion of the remaining two ('personal relationships' and 'menstruation') is reported by 74% of and 73% respectively. Perhaps unsurprisingly, discussion of menstruation shows the strongest gender divide (90% of girls versus 56% of boys).

Source of information about sexual matters

S4 pupils were also asked where they obtained most of their information about sexual matters. School (42%) and friends (30%) are most popular out of the ten suggested sources. There are some gender differences in the proportion accessing each source, although for both boys and girls, school, friends and parents rank first, second and third choice ([Figure 12.2](#)). Girls are equally likely to select school (34%) and friends (32%), whilst boys are more likely to select school (49%) than friends (28%). Other gender differences are found in the selection of parents, magazines and the internet as the principal sources of information about sexual matters. TV/radio, doctor, family planning clinic and books are reported by less than 5% of 15-year-olds as a main source of information.

In 2002, friends (39%) were preferred to school (26%) as the main source of information about sexual matters, and this was true for both boys (friends: 39% compared with school: 29%) and girls (38% compared with 23%). Accordingly, there appears to have been a shift from friends to school as the main source of information in 2006 ([Figure 12.3](#)).

Person with whom sexual matters are discussed

When asked with whom they find it easiest to discuss sexual matters, 74% of 15-year-olds select friends over parents (13%), siblings (8%), teachers (2%) or 'other' (5%) ([Figure 12.4](#)). Boys and girls respond in a similar way to this question and the 2002 survey produced comparable results.

Figure 12.1:
SEX EDUCATION AT SCHOOL

HBSC Scotland
2006 Survey

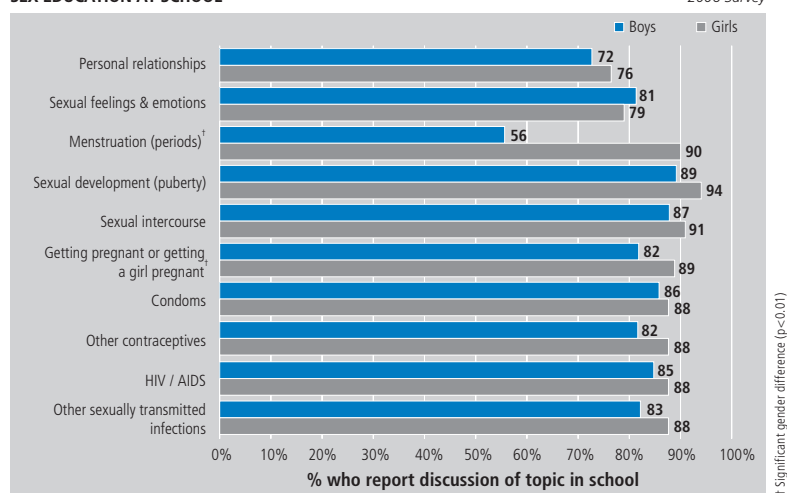


Figure 12.2:
MAIN SOURCE OF INFORMATION ON SEXUAL MATTERS

HBSC Scotland
2006 Survey

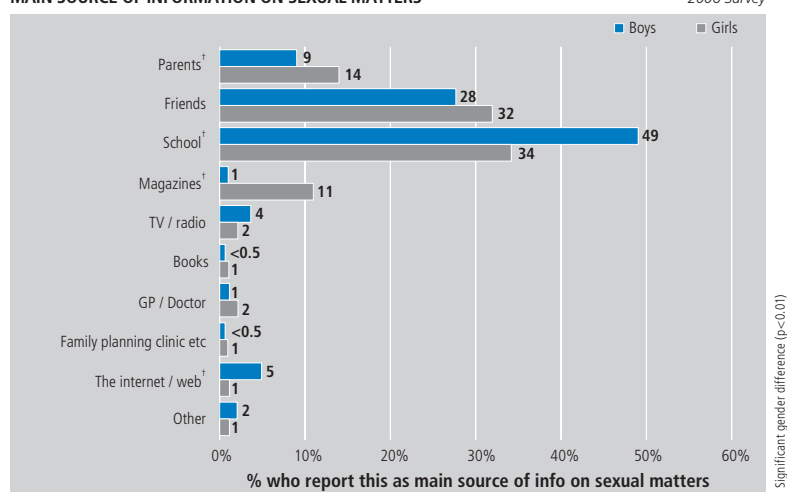
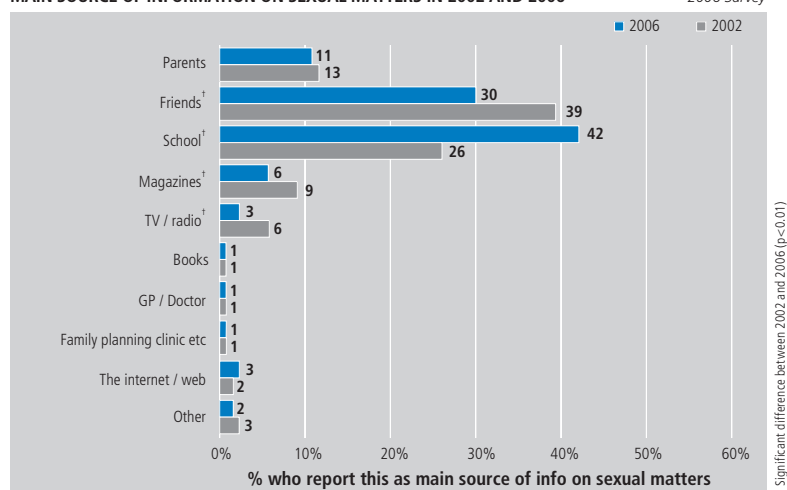


Figure 12.3:
MAIN SOURCE OF INFORMATION ON SEXUAL MATTERS IN 2002 AND 2006

HBSC Scotland
2006 Survey



Sex education in school 1990 – 2006

Classroom discussions of personal relationships and getting pregnant are more commonly reported in 2006 than in 1990 for both boys and girls (Figures 12.5 and 12.6). Girls report classroom discussion of menstruation more often than boys in all years (Figure 12.7). Girls also report that they discuss sexual intercourse more often in 2006 than those completing the survey in 1990 (Figure 12.8).

Sexual intercourse

National data on sexual intercourse have been collected since 1998 and the proportion of 15-year-old boys and girls who are sexually active has changed very little over this period (Figure 12.9). In 2006, approximately a third of 15-year-olds report that they have had sexual intercourse (30% of boys and 34% of girls). No gender differences are apparent in the data from the three survey years.

Contraception

Eighty five percent (85%) of boys and 74% of girls who are sexually active used a condom on the last occasion that they had sexual intercourse (Table 12.1). Twenty seven percent (27%) of sexually active girls and 15% of sexually active boys report the use of birth control pills. More than 10% of these young people report using both a condom and the pill (boys: 12%; girls: 16%). Approximately one in seven young people report using neither a condom nor the contraceptive pill at their last sexual intercourse. However, a small number of these reported using 'other' methods, such as the contraceptive implant.

Fifteen-year-olds in 2006 are more likely to have used a condom during last sexual intercourse than in 2002 when 76% of boys and 64% of girls reported use¹. Figures for pill use and combined use of the pill and a condom are similar in both years. Fifteen-year-olds in 2006 are significantly less likely to report having sexual intercourse without using a condom or the contraceptive pill than in 2002.

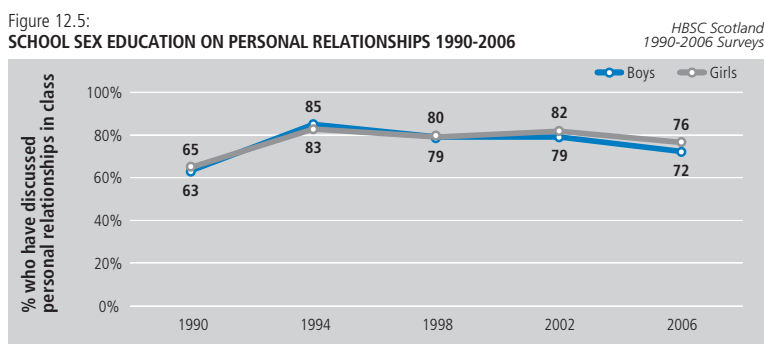
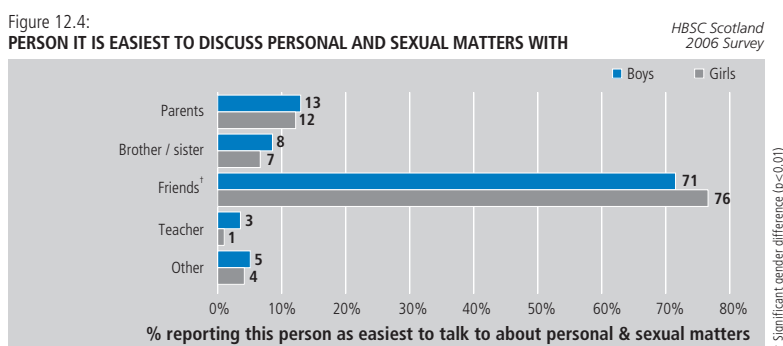


Figure 12.6:
SCHOOL SEX EDUCATION ON GETTING PREGNANT 1990-2006

HBSC Scotland
1990-2006 Surveys

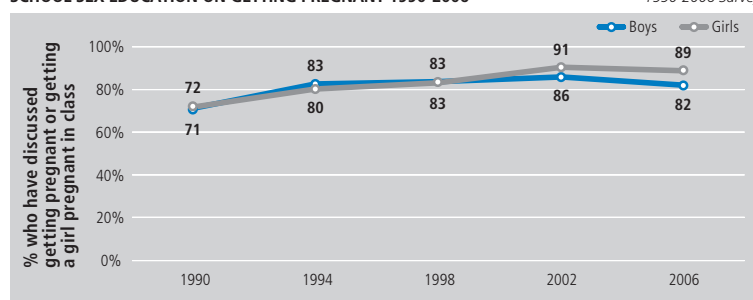


Figure 12.7:
SCHOOL SEX EDUCATION ON MENSTRUATION 1990-2006

HBSC Scotland
1990-2006 Surveys

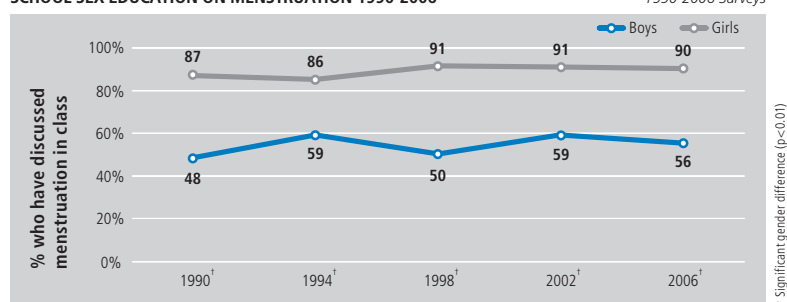


Figure 12.8:
SCHOOL SEX EDUCATION ON SEXUAL INTERCOURSE 1990-2006

HBSC Scotland
1990-2006 Surveys

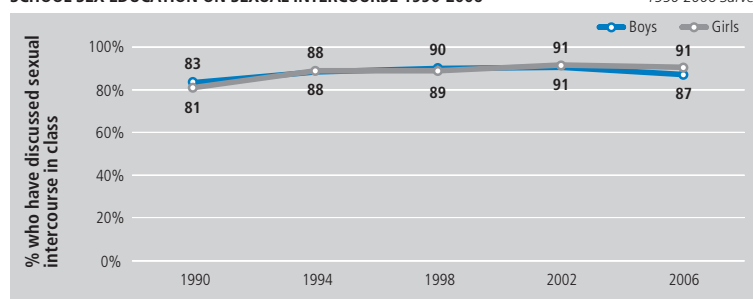


Figure 12.9:
REPORTED SEXUAL INTERCOURSE: 1998-2006

HBSC Scotland
1998-2006 Surveys

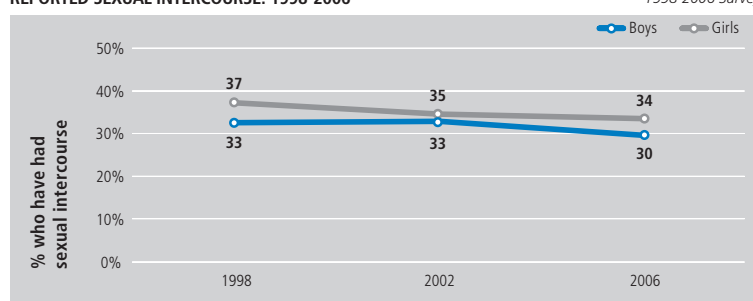


Table 12.1:
CONTRACEPTION USE

*HBSC Scotland 2002
and 2006 Surveys*

Contraceptive used	2002			2006		
	% Boys (n=165)	% Girls (n=178)	% Total (n=343)	% Boys (n=253)	% Girls (n=304)	% Total (n=557)
Condom	65	48	56	73	58	65
Contraceptive pill	4	7	6	2	10	7
Condom & pill	12	16	14	12	16	14
Neither condom nor pill	19	28	24	13	15	14

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NOTES

- 1 This is only significant at the 0.05 level – see Methods Section

BULLYING AND FIGHTING

- Approximately 10% of young people have been bullied at least two or three times a month at school in the previous two months, although by age 15 this has decreased to 7%
- 5% of young people report bullying others (8% of boys; 3% of girls)
- 8% of girls and 22% of boys report that they have been involved in a physical fight three or more times in the previous 12 months
- Among boys, fighting decreases with age



INTRODUCTION

Bullying behaviour is a negative physical or verbal action that has hostile intent, causes distress, is often repeated over time and involves a power differential between bullies and their victims (*Olweus, 1991*). In such a relationship the children who are being bullied become increasingly unable to defend themselves. The immediate effects of bullying can include physical harm, anxiety and lowered self-esteem (*Boulton and Underwood, 1992; Solberg and Olweus, 2003*). Children who are bullied are also more likely to feel depressed and lonely and are more likely to be rejected by their peers (*Craig, 1998*) and experience a range of physical and psychological symptoms (*Due et al., 2005*).

Studies have shown that the school is often the setting in which bullying occurs (*Fekkes et al., 2005; Olweus, 1993*). Victimization during school years has lasting and measurable effects in adulthood including higher levels of loneliness, emotional distress and greater difficulty forming adult relationships (*Alexander et al., 2004; Robson, 2003; Tritt and Duncan, 1997*). Bullies, too, report lower rates of mental well-being when compared with other young people, as well as a greater propensity to engage in risk behaviours such as smoking, alcohol consumption and cannabis use (*Alexander et al., 2004*). Longitudinal studies have also shown that bullies as well as victims suffer long-term effects; childhood bullying is associated with antisocial behaviour in adulthood (*Farrington, 1993*).

While bullying is characterised by an imbalance of power between victim and perpetrator (bullies are often larger, stronger or older than their victims), fighting is an aggressive behaviour where those involved are typically of a similar age and equal strength (*Craig and Harel, 2004*). Previously, HBSC findings have shown that while Scotland ranked low in the international context (29th of 35 countries) for bullying, it ranked high in relation to fighting, particularly for girls. Scottish girls ranked 6th for fighting at least once in the past year (*Craig and Harel, 2004*).

Scotland's low ranking for bullying may be due national and local-level initiatives focusing on tackling bullying in schools and the wider community such as the Anti-Bullying Network (ABN) set up by the Scottish Executive. By contrast, fighting has received less attention, although the health consequences can be severe. Fighting is associated with a range of high risk behaviours (*Sosin et al., 1995*) and often results in injuries requiring medical treatment (*Pickett et al., 2005*).

HBSC FINDINGS

In the HBSC study, bullying is defined as instances when another student, or a group of students, say or do nasty and unpleasant things or when a student is teased repeatedly in a way he or she does not like or when he or she is deliberately left out of things (*Olweus, 1996*). The HBSC survey asks young people to report how often they have been bullied at school and how often they have taken part in bullying others. Fighting is defined within the HBSC survey as being involved in a *physical* fight, but is not restricted to the school setting.

The information collected in 2006 on bullying is comparable only with findings from 2002, as the format of the questions was different in previous surveys. Similarly, fighting prevalence can only be compared with that in 2002 as this was when the question was first introduced in the survey.

Bullying and being bullied

Approximately one in ten 11, 13 and 15-year-olds has been bullied at school at least two or three times a month in the previous two months ([Figure 13.1](#)). Girls and boys report similar exposure to frequent bullying and bullying is least common among the oldest pupils (7%). There has been very little change in the prevalence of being bullied since 2002 when 10% of 11 and 13-year-olds and 6% of 15-year-olds reported being bullied.

The proportion of young people who report bullying others (5%) is half the proportion who report being bullied (9%). More boys (8%) than girls (3%) frequently bully others at each age, and the proportion of bullies does not change with age ([Figure 13.2](#)). Again, there has been no significant change in the prevalence of bullying for either boys or girls since 2002.

Figure 13.1:
BEEN BULLIED AT LEAST 2-3 TIMES A MONTH IN PAST COUPLE OF MONTHS

HBSC Scotland
2006 Survey

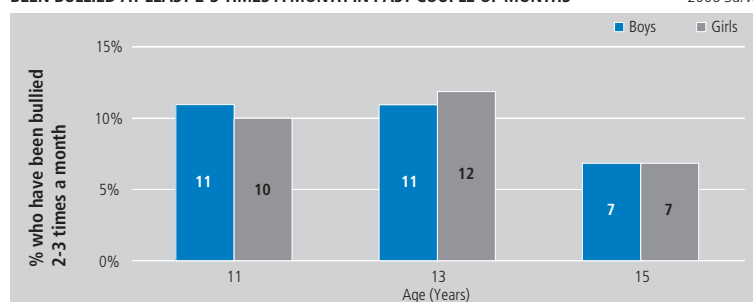


Figure 13.2:
BULLIED OTHERS AT LEAST 2-3 TIMES A MONTH IN PAST COUPLE OF MONTHS

HBSC Scotland
2006 Survey

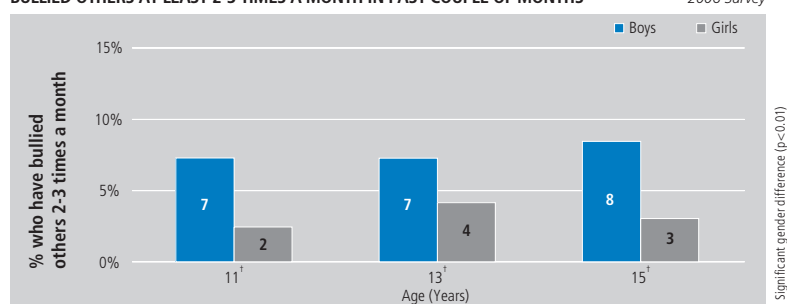
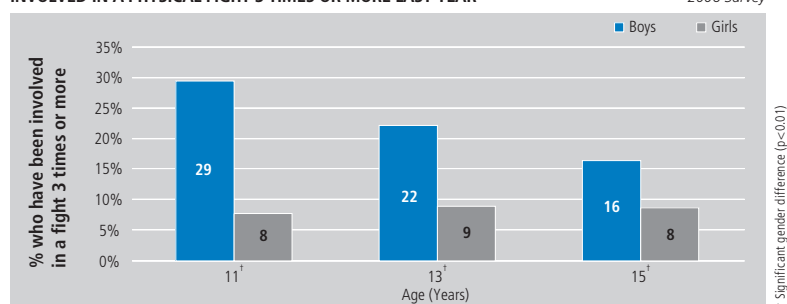


Figure 13.3:
INVOLVED IN A PHYSICAL FIGHT 3 TIMES OR MORE LAST YEAR

HBSC Scotland
2006 Survey



Fighting

Eight percent (8%) of girls and 22% of boys report that they have been involved in a physical fight three or more times in the previous 12 months. The proportion of girls involved in a fight remains constant across all three age groups but for boys this decreases with age from 29% at age 11 to 16% at age 15 (Figure 13.3). Fighting prevalence was approximately the same in 2002 and 2006 for both boys and girls.

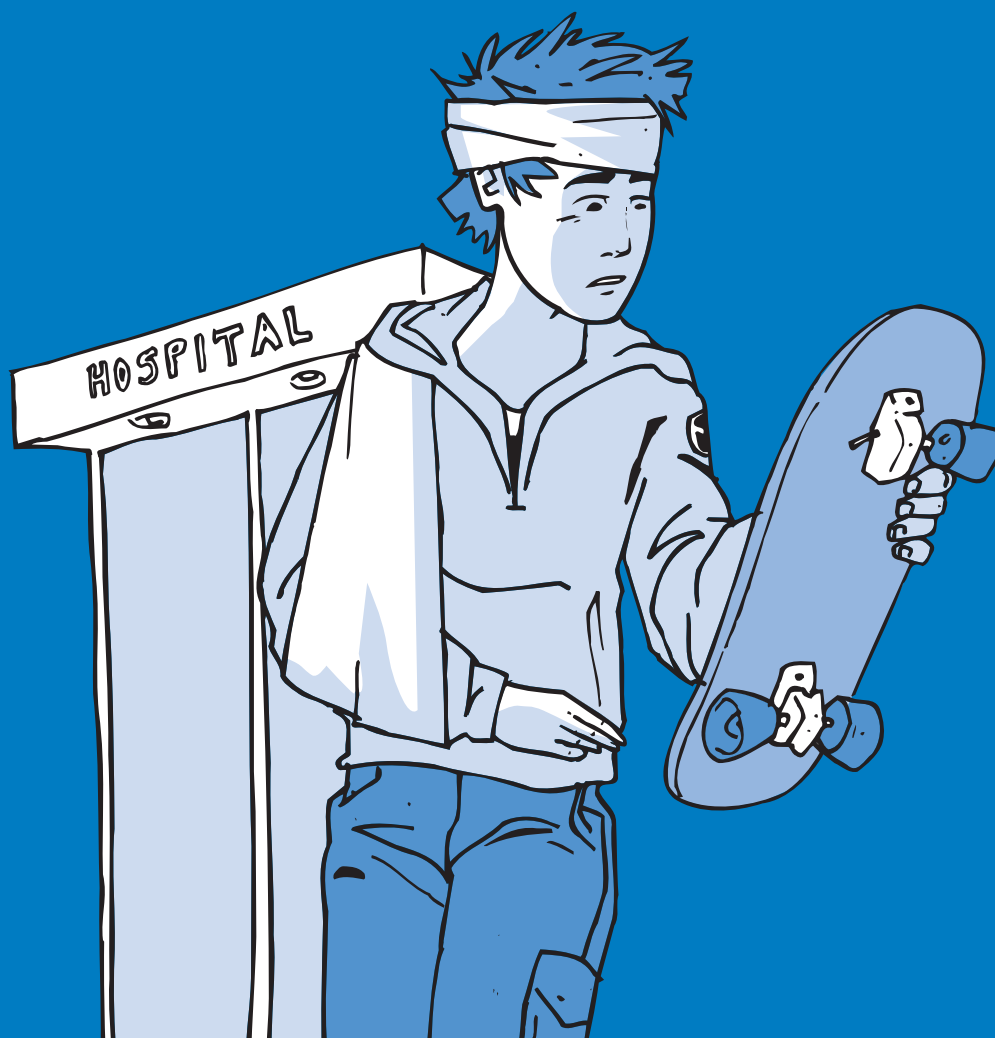
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INJURIES

14

- Almost half of young people have received an injury requiring medical attention in the past 12 months
- Boys are more likely to be injured than girls



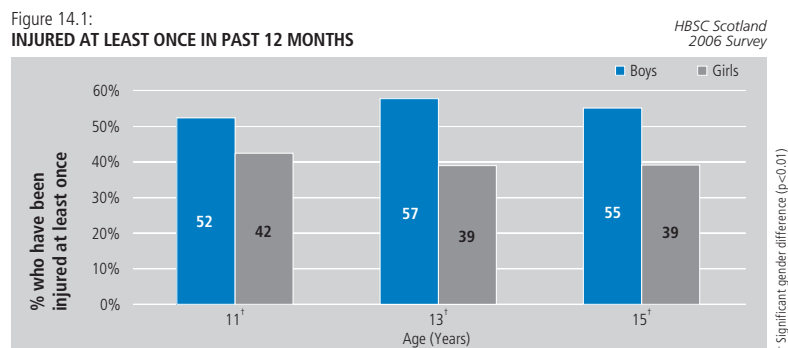
INTRODUCTION

During the latter half of the 20th century, injuries replaced infectious disease as the primary cause of death in children and adolescents in parts of Europe and North America (*Krug et al., 2000*). Injuries are not only costly to individuals in terms of pain, or in more severe cases, death, but also in terms of longer-term economic loss at a population level (*Max et al., 1990*). The most common locations where young people report being injured are at home, school and sport facilities (*Molcho et al., 2006; Pickett et al., 2005*).

HBSC FINDINGS

The HBSC study asks young people about their experience of being injured in the previous 12 months where they have received medical attention.

Nearly half of young people suffered at least one medically treated injury in the past 12 months (55% of boys and 40% of girls). There is little variation in reported injuries across the three age groups ([Figure 14.1](#)). More boys than girls, however, have been injured at all three ages. There has been no change in the prevalence of injuries between 2002 and 2006.



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APPENDIX

CHAPTER 2: FAMILY LIFE

FAMILY STRUCTURE

All families are different (for example, not everyone lives with both their parents, sometimes people live with just one parent, or they have two homes or live with two families) and we would like to know about yours. Please answer this first question for the home **where you live all or most of the time** and tick the people who live there. (*Mother / Father / Stepmother (or father's partner) / Stepfather (or mother's partner) / Grandmother / Grandfather / I live in a foster home or children's home / Someone or somewhere else*)

PARENTAL EMPLOYMENT AND FAMILY SOCIO-ECONOMIC STATUS

Does your father have a job? (*Yes / No / Don't know / Don't have or don't see father*)

If **YES** please say in what sort of a place he works....

Please write down exactly what job he does there....

If **NO**, why does your father not have a job? (Please tick the circle that best describes the situation) (*He is sick, or retired, or a student / He is unemployed / He takes care of others, or is full-time in the home / I don't know*)

Does your mother have a job? (*Yes / No / Don't know / Don't have or don't see mother*)

If **YES** please say in what sort of a place she works....

Please write down exactly what job she does there....

If **NO**, why does your mother not have a job? (Please tick the circle that best describes the situation) (*She is sick, or retired, or a student / She is unemployed / She takes care of others, or is full-time in the home / I don't know*)

From these responses paternal and maternal SES were coded and a family SES was created, using whichever of mother and father SES was highest.

FAMILY AFFLUENCE

Scores were calculated by summing the responses to the following survey items:

Does your family own a car, van or truck? (*No (=0) / Yes, one (=1), Yes, two or more (=2)*).

Do you have your own bedroom for yourself? (*No (=0) / Yes (=1)*).

During the past 12 months, how many times did you travel away on holiday with your family? (*Not at all (=0) / Once (=1) / Twice (=2) / More than twice (=2)*).

How many computers does your family own? (*None (=0) / One (=1) / Two (=2) / More than two (=2)*).

The children surveyed were assigned low, medium or high FAS classification where FAS 1 (score = 0–3) indicates low affluence; FAS 2 (score = 4, 5) indicates middle affluence; and FAS 3 (score = 6, 7) indicates high affluence.

PERCEIVED WEALTH

How well off do you think your family is? (*Very well off / Quite well off / Average / Not very well off / Not at all well off*)

COMMUNICATION BETWEEN PARENTS AND ADOLESCENTS

How easy is it for you to talk to the following persons about things that really bother you? Father/Mother. (*Very easy / Easy / Difficult / Very difficult / Don't have or don't see this person*)

CHAPTER 3: THE SCHOOL ENVIRONMENT

SATISFACTION WITH SCHOOL

How do you feel about school at present? (*I like it a lot / I like it a bit / I don't like it very much / I don't like it at all*)

ACADEMIC ACHIEVEMENT

In your opinion, what does your class teacher(s) think about your school performance compared to your classmates? (*Very good / Good / Average / Below average*)

PRESSURE OF SCHOOLWORK

How pressured (stressed) do you feel by the schoolwork you have to do? (*Not at all / A little / Some / A lot*)

CLASSMATE SUPPORT

Most of the pupils in my class(es) are kind and helpful. (*Agree a lot / Agree a bit / Neither agree nor disagree / Disagree a bit / Disagree a lot*)

ASPIRATIONS ON LEAVING SCHOOL

What do you think you will be doing when you leave school? (*University / Further Education College / Apprenticeship or Trade / Youth Training or Skill Seekers / Working / Unemployed / Don't know*)

CHAPTER 4: PEER RELATIONS

NUMBER OF CLOSE FRIENDS

At present, how many **close** male and female friends do you have? Males/Females. (*None / One / Two / Three or more*)

PEER CONTACT FREQUENCY

How many days a week do you usually spend time with friends right after school? (*0 days / 1 day / 2 days / 3 days / 4 days / 5 days*)

How many evenings a week do you usually spend out with your friends? (*0 evenings / 1 evening / 2 evenings / 3 evenings / 4 evenings / 5 evenings / 6 evenings / 7 evenings*)

COMMUNICATION WITH BEST FRIEND

How easy is it for you to talk to the following person about things that really bother you? Best friend. (*Very easy / Easy / Difficult / Very difficult / Don't have or don't see this person*)

ELECTRONIC MEDIA CONTACT

How often do you talk to your friend(s) on the phone or send them text messages or have contact through the internet? (*Hardly ever or never / 1 or 2 days a week / 3 or 4 days a week / 5 or 6 days a week / Every day*)

CHAPTER 5: EATING HABITS

FAMILY MEALS

How many **days a week** do you usually eat a meal with one or both of your parents? (*Every day / 4 to 6 days a week / 2 to 3 days a week / Once a week / Hardly ever or Never*)

BREAKFAST CONSUMPTION

How often do you usually have **breakfast** (more than a glass of milk or fruit juice)? Weekdays. (*I never have breakfast during weekdays / One day / Two days / Three days / Four days / Five days*)

LUNCH ON SCHOOLDAYS

On **most** school days, what do you do for lunch? (*School lunches in the dining room or canteen / Packed lunch in school / Go home for lunch / Buy lunch from local shop, café or van / I don't eat lunch / Other*)

Consumption of foods How many **times a week** do you usually eat the following things? Fruit/Vegetables/Sweets/Crisps /Chips. (*Never / Less than once a week / Once a week / 2-4 days a week / 5-6 days a week / Once a day, every day / Every day, more than once*)

How many **times a week** do you usually drink the following things? Coke or other soft drinks that contain sugar/Diet coke or diet soft drinks/Water. (*Never / Less than once a week / Once a week / 2-4 days a week / 5-6 days a week / Once a day, every day / Every day, more than once*)

CHAPTER 6: PHYSICAL ACTIVITY AND SEDENTARY BEHAVIOUR

MODERATE TO VIGOROUS PHYSICAL ACTIVITY

Physical activity is any activity that increases your heart rate and makes you get out of breath some of the time.

Physical activity can be done in sports, school activities, playing with friends, or walking to school.

Some examples of physical activity are running, walking quickly, cycling, dancing, skateboarding, swimming, football, and gymnastics.

For the next question, add up all the time you spend in physical activity each day.

MEETING SCOTTISH GOVERNMENT PHYSICAL ACTIVITY GUIDELINES

Over the **past 7 days**, on how many days were you physically active for a total of at least **60 minutes** per day? (*0 days / 1 day / 2 days / 3 days / 4 days / 5 days / 6 days / 7 days*)

LEISURE TIME VIGOROUS PHYSICAL ACTIVITY

OUTSIDE SCHOOL HOURS: How **often** do you usually exercise in your free time so much that you get out of breath or sweat? (*Every day / 4-6 times a week / 2 to 3 times a week / Once a week / Once a month / Less than once a month / Never*)

OUTSIDE SCHOOL HOURS: How many **hours a week** do you usually exercise in your free time so much that you get out of breath or sweat? (*None / About half an hour / About 1 hour / About 2 to 3 hours / About 4 to 6 hours / 7 hours or more*)

TRAVEL TO SCHOOL

On a typical day is the **main** part of your journey **to** school made by..... (*Walking / Bicycle / Bus, train, tram, underground or boat / Car, motorcycle or moped / Other means*)

TRAVEL TIME TO SCHOOL

How long does it usually take you to travel to school from your home? (*Less than 5 minutes / 5-15 minutes / 15-30 minutes / 30 minutes to 1 hour / More than 1 hour*)

TIME SPENT WATCHING TELEVISION

About how many **hours a day** do you usually watch television (including videos and DVDs) in your free time? Weekdays/Weekend. (*None at all / About half an hour a day / About 1 hour a day / About 2 hours a day / About 3 hours a day / About 4 hours a day / About 5 hours a day / About 6 hours a day / About 7 or more hours a day*)

PLAYING COMPUTER GAMES

About how many **hours a day** do you usually play games on a computer or games console (Playstation, Xbox, GameCube etc.) in your free time? Weekdays/Weekend. (*None at all / About half an hour a day / About 1 hour a day / About 2 hours a day / About 3 hours a day / About 4 hours a day / About 5 hours a day / About 6 hours a day / About 7 or more hours a day*)

Using a computer for purposes other than playing games

About how many **hours a day** do you usually use a computer for chatting on-line, internet, emailing, homework etc. in your free time? Weekdays/Weekend. (*None at all / About half an hour a day / About 1 hour a day / About 2 hours a day / About 3 hours a day / About 4 hours a day / About 5 hours a day / About 6 hours a day / About 7 or more hours a day*)

CHAPTER 7 WEIGHT CONTROL BEHAVIOUR

At present are you on a diet or doing something else to lose weight? (*No, my weight is fine / No, but I should lose some weight / No, because I need to put on weight / Yes*)

Have you ever been on a diet to try to lose weight? (*Yes/No*)

CHAPTER 8 BODY IMAGE AND BODY MASS INDEX

BODY SIZE

Do you think your body is..... (*Much too thin / A bit too thin / About the right size / A bit too fat / Much too fat*)

REPORTING GOOD LOOKS

Do you think you are..... (*Very good looking / Quite good looking / About average / Not very good looking / Not at all good looking / I don't think about my looks*)

BODY MASS INDEX (BMI)

How much do you weigh? (*I weighkilograms / I weighstonespounds / I don't know what I weigh*)

How tall are you? (*I ammetrecentimetres tall / I amfeetinches tall / I don't know what height I am*)

CHAPTER 9 TOOTH BRUSHING

TOOTH BRUSHING AT LEAST TWICE A DAY

How often do you brush your teeth? (*More than once a day / Once a day / At least once a week but not daily / Less than once a week / Never*)

CHAPTER 10 MENTAL WELL-BEING

SELF-RATED HEALTH

Would you say your health is.....? (*Excellent / Good / Fair/ Poor*)

LIFE SATISFACTION

Young people were shown a picture of a ladder and given the following description and question: *Here is a picture of a ladder – the top of the ladder 10 is the best possible life for you and the bottom is the worst possible life – in general where on the ladder do you feel you stand at the moment?* In this adapted version of the Cantril Ladder, a score of six or more was defined as high life satisfaction.

HAPPINESS

In general, how do you feel about your life at present? (*I feel very happy / I feel quite happy / I don't feel very happy / I am not happy at all*)

SELF CONFIDENCE

How often do you feel confident in yourself? (*Never / Hardly ever / Sometimes / Often / Always*)

FEELING HELPLESS

How often do you feel helpless? (*Never / Hardly ever / Sometimes / Often / Always*)

FEELING LEFT OUT

How often do you feel left out of things? (*Never / Hardly ever / Sometimes / Often / Always*)

CHAPTER 11 SUBSTANCE USE

TOBACCO

Ever smoked

Have you ever smoked tobacco? (At least one cigarette, cigar or pipe) (*Yes/No*)

Current smoking and daily smokers

How often do you smoke tobacco at present? (*Every day / At least once a week, but not every day / Less than once a week / I do not smoke*)

ALCOHOL

Weekly drinking and types of alcoholic drinks

At present, how often do you drink anything alcoholic, such as beer, wine or spirits? Try to include even those times when you only drink a small amount. Beer or lager/Wine or champagne/Alcopops (like Smirnoff Ice, Bacardi Breezer, WKD) / Spirits (like whisky, vodka) / Cider/Fortified (strong) wine like sherry, martini, port, Buckfast/Any other drink that contains alcohol. (*Every day / Every week / Every month / Hardly ever / Never*)

Drunkenness

Have you ever had so much alcohol that you were really drunk? (*No, never / Yes, once / Yes, 2-3 times / Yes, 4-10 times / Yes, more than 10 times*)

CANNABIS

Frequency of cannabis use

Have you ever taken cannabis.... In your life/In the last 12 months/In the last 30 days. (*Never / Once or twice / 3 to 5 times / 6 to 9 times / 10 to 19 times / 20 to 39 times / 40 times or more*)

Cannabis user groups among 15 year olds

'Experimental users' had used cannabis once or twice in the past 12 months. 'Regular users' had used cannabis 3-39 times in past 12 months. 'Heavy users' had used cannabis 40 times or more in past 12 months. 'Former users' reported having used cannabis before but not in the previous 12 months.

CHAPTER 12 SEXUAL HEALTH

SEX EDUCATION AT SCHOOL

Have you had any classes at school that have given information or discussed the following topics? Personal relationships with boyfriends or girlfriends / Sexual feelings and emotions / Menstruation (periods) / Sexual development (puberty) / Sexual intercourse / Getting pregnant or getting a girl pregnant / Condoms / Other contraceptives / HIV or AIDS / Other sexually transmitted infections (*No / Yes, once / Yes, a few times / Yes, many times*)

SOURCE OF INFORMATION ABOUT SEXUAL MATTERS

Where do you get most of your information about sexual matters? (*Parents / Friends / School / Magazines / TV or Radio / Books / GP or Doctor / Brook Advisory or Family Planning or other such clinics or centres / The internet or web/Other*)

PERSON WITH WHOM SEXUAL MATTERS ARE DISCUSSED

It is easiest to discuss personal and sexual matters with my.... (*Parents / Brother or sister / Friends / Teacher / Other*)

SEXUAL INTERCOURSE

Have you ever had sexual intercourse (sometimes this is called "making love", "having sex", or "going all the way")? (*Yes / No*)

CONTRACEPTION

The last time you had sexual intercourse, what method(s) did you or your partner use to prevent pregnancy? I have never had sexual intercourse / No method was used to prevent pregnancy/Birth control pills (the pill) / Condoms / Withdrawal / Emergency contraception ('morning after' pill) / Some other method / Not sure. (*Yes / No*)

The last time you had sexual intercourse, did you or your partner use a condom? (*I have never had sexual intercourse / Yes / No*)

CHAPTER 13 BULLYING AND FIGHTING

BULLYING AND BEING BULLIED

We say a pupil is BEING BULLIED when another pupil, or group of pupils, say or do nasty and unpleasant things to him or her. It is also bullying when a pupil is teased repeatedly in a way he or she does not like or when he or she is deliberately left out of things. But it is NOT BULLYING when two pupils of about the same strength or power argue or fight. It is also not bullying when a pupil is teased in a friendly and playful way.

How often have you been bullied at school in the past couple of months? (*I haven't been bullied at school in the past couple of months / It has only happened once or twice / 2 or 3 times a month / About once a week / Several times a week*)

How often have you taken part in bullying another pupil(s) at school in the past couple of months? (*I haven't bullied another pupil(s) at school in the past couple of months / It has only happened once or twice / 2 or 3 times a month / About once a week / Several times a week*)

FIGHTING

During the past 12 months, how many times were you in a physical fight? (*I have not been in a physical fight in the past 12 months / 1 time / 2 times / 3 times / 4 times or more*)

CHAPTER 14 INJURIES

MEDICALLY ATTENDED INJURY

Many young people get hurt or injured from activities such as playing sports or fighting with others at different places such as the street or home. Injuries can include being poisoned or burned. Injuries **do not** include illnesses such as Measles or the Flu. The following question is about injuries you may have had during the past 12 months.

During the past 12 months, how many times were you injured and had to be treated by a doctor or nurse? (*I was not injured in the past 12 months / 1 time / 2 times / 3 times / 4 times or more*)



CHILD AND ADOLESCENT HEALTH RESEARCH UNIT (CAHRU)

THE MORAY HOUSE SCHOOL OF EDUCATION

The University of Edinburgh

St Leonard's Land, Holyrood Road

Edinburgh EH8 8AQ

Tel: 0131 651 6520 Fax: 0131 651 6271

www.education.ed.ac.uk/cahru/



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child and adolescent health research unit