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HBSC is the Health Behaviour in School-Aged Children: WHO Collaborative Cross-National Study

Mental well-being of young people in Scotland: 1994 – 2006

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Introduction

Mental well-being of young people is affected by many aspects of their lives including school experience (HBSC Briefing Paper 13, 2007), friendships and peer relations (Settertobulte and Gaspar de Matos, 2004), as well as family life and family relationships (HBSC Briefing papers 11 & 12, 2007). Adolescence can be a time of emotional distress for a number of young people, brought on by biological and psychological changes occurring through puberty, in conjunction with external changes such as school transitions, changing peer and friendship networks and changes in 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 societies.

In a previous Briefing Paper (HBSC Briefing Paper 2, 2003) age and gender patterns and trends in mental well-being were presented using 1994-2002 HBSC survey data. In line with other academic research findings (West and Sweeting, 2003; Bergman and Scott, 2001), the mental well-being of boys was found to be better than that of girls and children in primary school had better mental well-being than those in secondary. Trend data showed some improvement in happiness and confidence between 1994 and 2002.

This *fourteenth* Briefing Paper in the HBSC series aims to examine the personal and social environmental factors known to affect mental well-being of 11-15 year-olds in Scotland and presents findings from the Scottish 2006 Health Behaviour in School-Aged Children: WHO Collaborative Cross-National Survey (HBSC). Trends in mental well-being between 1994 and 2006 are presented using data from previous HBSC surveys. The survey methodology is described in the Technical Appendix.

Summary of main findings

- Gender differences and age differences from earlier surveys persist in 2006 with higher levels of happiness, life satisfaction, perceived health and confidence among boys and younger adolescents
- Young people living with both parents are more likely to report excellent health, high life satisfaction and happiness and less likely to report multiple health complaints than those living in single parent or step families
- The small proportion of young people who live in remote rural Scotland have high life satisfaction but those living in urban areas and accessible towns are more likely to feel confident. Levels of happiness are highest among girls living in remote rural Scotland and among boys living in urban areas and accessible towns
- Young people from high affluence families are more likely to report feeling happy and having excellent health than those from low affluence families and average life satisfaction increases with family affluence
- Between 1994 and 2006 young people's happiness and confidence has increased and the proportion of young people reporting multiple health complaints has fallen

This paper examines happiness, life satisfaction, perceived health, confidence and their association with gender, age, family affluence, family structure and geography. The purpose of the paper is to increase knowledge and understanding of the mental well-being of young people in Scotland with a focus on inequalities and to create a picture of those most at risk of adverse outcomes; to provide evidence for policy makers and practitioners; and to inform actions aimed at health improvement among adolescents.

Table 1: **Social and demographic characteristics of the 2006 Scottish HBSC sample**

Measure	% Boys			% Girls		
	P7	S2	S4	P7	S2	S4
(N)	(827)	(1129)	(1107)	(900)	(1137)	(1090)
Average Age	11.5 years	13.5 years	15.5 years	11.5 years	13.5 years	15.5 years
Family Structure:						
Both Parents	72	68	69	68	68	67
Step Family	7	12	12	12	13	14
Single Parent	20	19	19	20	19	19
Family Affluence Scale (FAS):						
High FAS	25	28	25	25	27	25
Medium FAS	54	51	53	52	51	57
Low FAS	21	21	21	23	22	18
Geography:						
Large Urban	43	35	31	48	35	33
Other Urban	35	37	32	32	37	33
Accessible Towns	14	13	14	11	10	12
Accessible Rural	3	6	13	3	8	11
Remote Towns	4	6	9	5	6	10
Remote Rural	2	4	1	2	4	1

Where percentages do not add up to 100 this is due to rounding.

A demographic breakdown of young people in Scotland

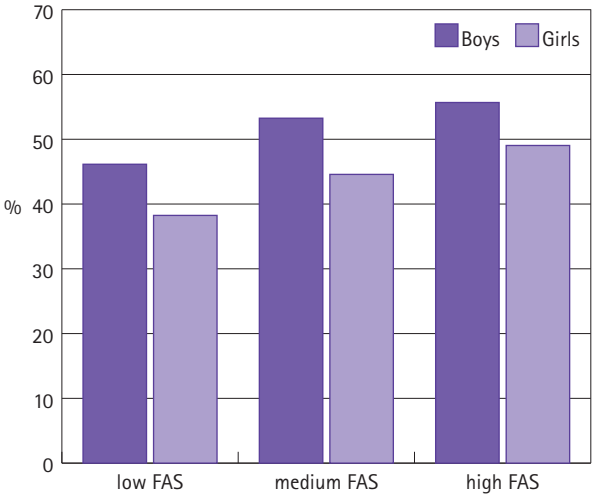
Table 1 gives a breakdown of the percentage of Primary 7 (P7), Secondary 2 (S2) and Secondary 4 (S4) boys and girls living in different family structures, geographies and at levels of low, medium and high family affluence according to the data collected in the 2006 HBSC survey.

Happiness

Young people were asked to rate how happy they feel about their life at present. Overall, 49% of respondents report being very happy, 52% of boys and 45% of girls. The proportion of young people who report that they are very happy is highest in P7, approximately 60% for boys and girls. In S2 this falls to 55% for boys and 44% for girls, and in S4 to 42% and 31% respectively. Gender differences exist in S2 and S4 with a higher proportion of 'very happy' boys than girls.

Figure 1 presents happiness by family affluence, split into low, medium and high family affluence *(see Appendix)*. The proportion of young people who report feeling very happy increases as family affluence increases. Girls from high affluence families are more likely to report feeling very happy than those from low affluence families while there is no significant difference for boys.

Figure 1: **Proportion of boys and girls who are very happy by FAS**



The proportion of 'very happy' boys is higher in urban areas and accessible towns than in the rest of Scotland (Figure 2). For girls, the opposite is true with the highest rates of happiness in remote rural areas, 61% compared with 44% in the rest of Scotland.

Figure 2: **Proportion of boys and girls who are very happy by geography**

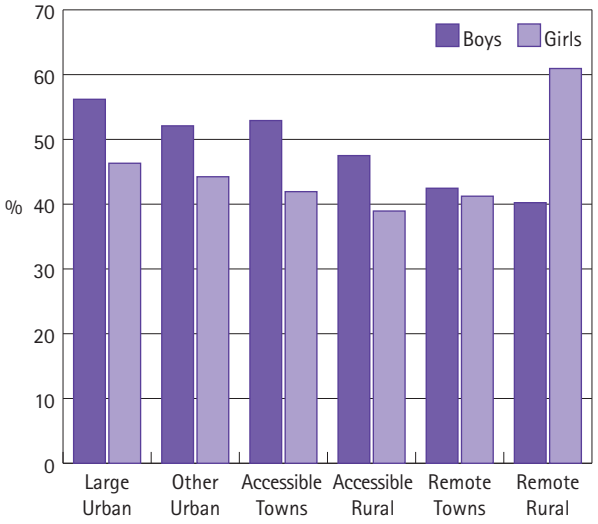


Figure 3: **Trends in the proportion of boys and girls who are very happy**

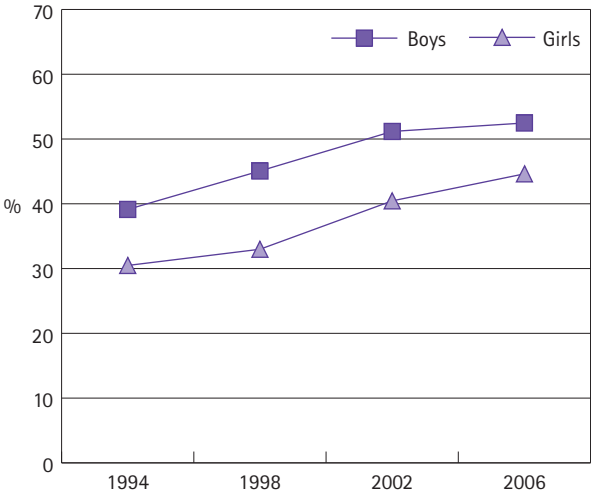


Figure 4: **Average life satisfaction score by age and gender**

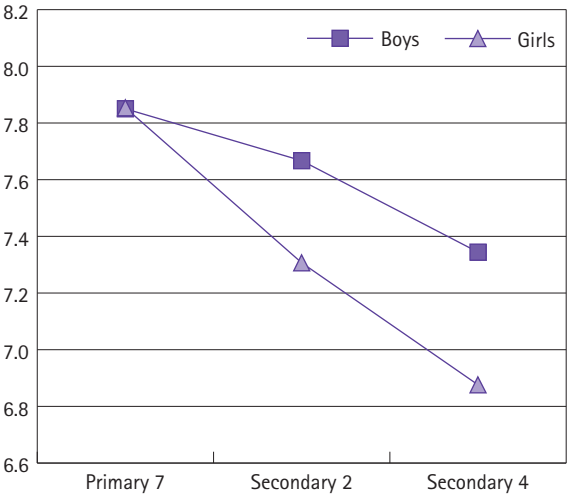


Figure 5: **Average life satisfaction score by FAS**

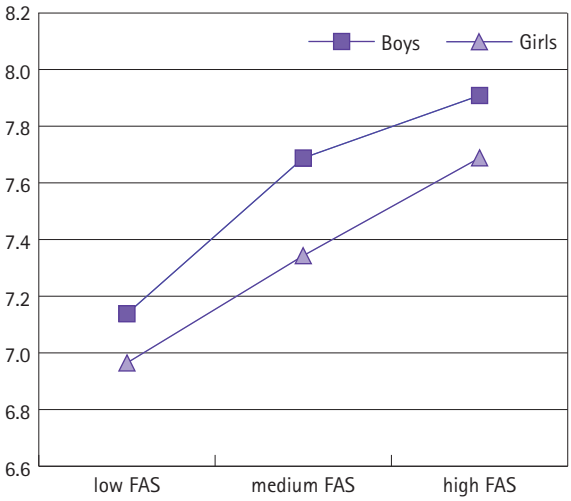


Figure 3 shows the trend in the proportion of 'very happy' boys and girls over time. Both boys and girls have seen an increase in happiness, from 39% and 30% in 1994 to 52% and 45% in 2006 for boys and girls respectively. Of the three year groups, the greatest rise in happiness over time is observed among S2 girls and boys.

In 2006 a higher proportion of young people living with both parents report being very happy compared with those from single parent or step families.

Life satisfaction

Young people were asked to rate their life satisfaction (see Appendix). Boys and girls rate their life satisfaction equally in P7 (Figure 4), but in S2 gender differences emerge and by S4 these are larger still, with an average life satisfaction score of 7.34 for boys and 6.88 for girls.

Figure 5 presents average life satisfaction scores by family affluence. Girls and boys with low family affluence have lower average life satisfaction than those who have medium or high family affluence. Life satisfaction rises with family affluence and this rise is particularly great amongst S2 girls and S4 boys.

Life satisfaction is higher for boys and girls living with both parents and among young people living in remote rural Scotland. Life satisfaction was measured only in 2002 and 2006 surveys so it is not possible to report trends. There is no change in the life satisfaction of young people in Scotland between 2002 and 2006.

Subjective indicators of health

Subjective indicators of health are a way of assessing perceived levels of mental well-being. The two indicators presented here are in response to questions asking young people to rate their health. The first relates to general health, while the second provides a list of symptoms from which the young person may select and note frequency. Subjective health complaints may be physiological, psychological or a combination of the two, and many are associated with depression in young adulthood and adolescence (Vasquez and Blanco, 2006; Garber et al, 1991). Previous research has shown that depressive symptoms like sleeping problems in adolescence predict future depression in adulthood (van Lang et al, 2007).

Perceived health

Boys are more likely to rate their health as excellent than girls, 26% compared with 17%. This gender difference is smallest at P7 and greatest at S4 (Figure 6), where more than twice as many boys than girls rate their health as excellent. This is consistent with all HBSC countries (Cavallo et al, 2006).

Figure 7 presents the proportion of boys and girls who perceive their health to be excellent within different family structures. Young people living with both parents are more likely to report having excellent health, compared with those living in single parent or step families. Approximately 20% of boys and 14% of girls from step and single parent families describe their health as excellent, compared with 28% and 18% of boys and girls respectively who live with both parents.

Young people from high affluence families are more likely to report excellent health than those from low affluence families. Perceived health as measured here was reported only in 2002 and 2006 so it is not possible to report trends. There are no differences in reported health between 2002 and 2006.

Multiple health complaints

Young people are described as having multiple health complaints if they report having two or more common symptoms (see Appendix), each at least twice a week. Twenty two percent of boys and 31% of girls have multiple health complaints. The breakdown by age group is shown in Figure 8. The gender difference is largest for S4 pupils of whom 37% of girls and 21% of boys have multiple health complaints.

The proportion of young people reporting multiple health complaints has fallen over time from 27% and 37% in 1994 to 22% and 31% in 2006 for boys and girls respectively (Figure 9).

Examination of 2006 data shows that the proportion of girls and boys reporting multiple health complaints falls as family affluence rises. Young people living with both parents are less likely to have multiple health complaints than those living in other family types.

Figure 6: **Proportion of young people with excellent health**

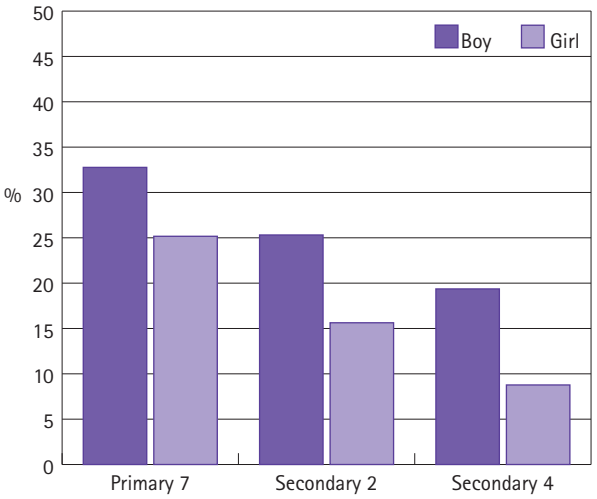


Figure 7: **Proportion of young people with excellent health by family structure**

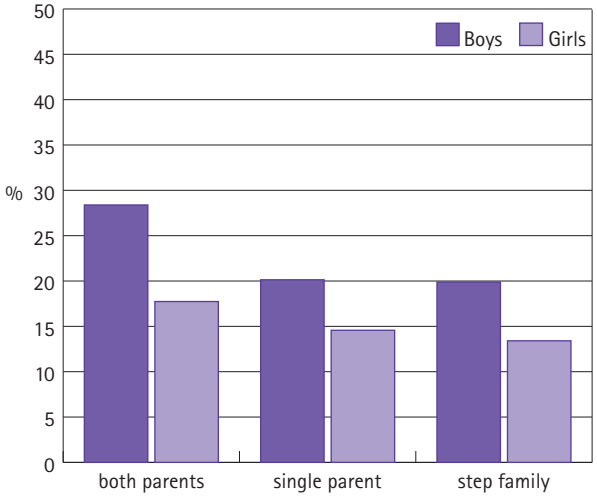


Figure 8: **Proportion of young people with multiple health complaints**

Confidence

When asked how often they feel confident in themselves, 20% of young people in Scotland respond that they always feel confident. Boys are more likely to report always feeling confident (25% compared with 16% of girls) and confidence is greatest amongst P7s (28%) and lowest among S4s (13%). The gender difference is greatest at the older age groups with approximately twice as many boys than girls always feeling confident.

Boys living in urban areas and accessible towns feel more confident than their rural contemporaries (Figure 10). Remote rural Scotland has the lowest rates of confidence for boys (13%) and girls (10%).

Among girls in Scotland the proportion always feeling confident has risen from 11% in 1994 to 16% in 2006 (Figure 11). Boys' confidence has also increased slightly during this period, from 23% to 25%, but this rise is not statistically significant.

Discussion

Previous research has shown that emotional and mental health problems in childhood and adolescence are predictors of risk behaviours such as smoking (Dierker LC et al, 2007), drinking (Verdurmen et al, 2005), eating disorders (Beato-Fenrnadez et al, 2004) and violence (Craig & Harel, 2004). Mental well-being and behavioural problems during childhood and adolescence may predict these problems in adulthood (Roza et al, 2003; Aalto-setala et al, 2002). Early intervention to ensure mental well-being and to prevent mental health problems among adolescents is therefore not only beneficial during the teenage years but also in the longer term.

The Scottish Executive's National Programme for Improving Mental Health and Well-Being (Scottish Executive, 2003) focuses on promoting mental well-being, preventing mental health problems, supporting those experiencing mental health problems, reducing inequalities in mental health and eliminating the stigma attached to mental health problems. One of its six priority areas is children and young people. 'The Mental Health of Children and Young People: a framework for promotion, prevention and care' proposes to invest in supporting mental health services for young people and eliminating mental illness, as well as promoting mental well-being among young people in Scotland.

Historically mental health has been assessed using indicators of psychiatric morbidity. However, in taking a broader view of mental health it is important to assess the level of mental well-being and track it over time. Health Scotland's Indicator Programme plans are underway to develop national indicators for this age group. The Scottish HBSC study is currently one of the only national sources of information on young people's mental well-being.

This briefing paper has shown that a number of HBSC indicators of mental well-being have improved over time and there has been a narrowing of gender differences in happiness and confidence, as well as in feeling left out and helplessness (not shown here).

Figure 9: Trends in the proportion of boys and girls with multiple health complaints

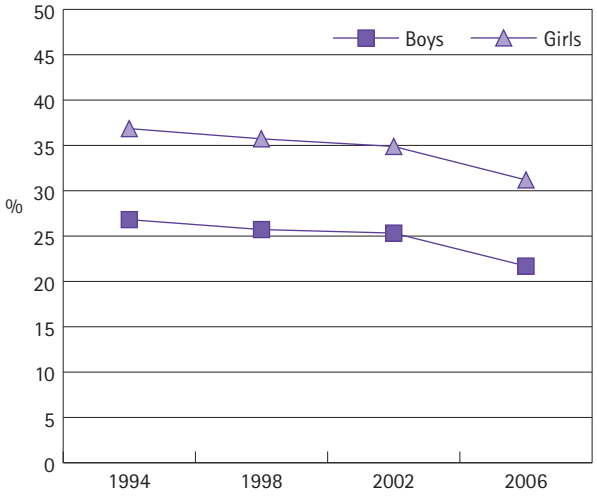


Figure 10: Proportion of boys and girls always confident by geography

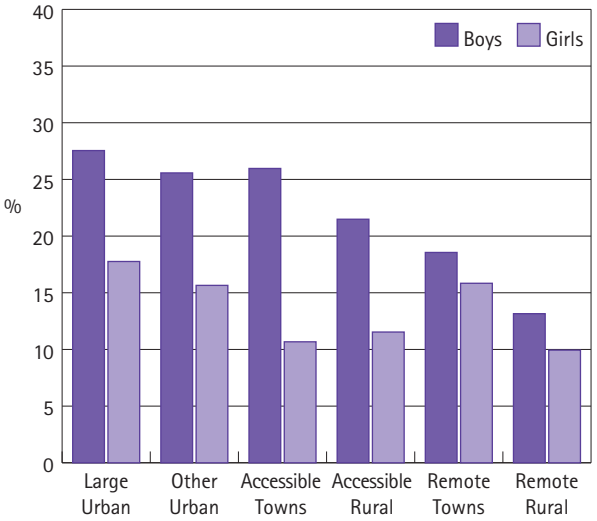
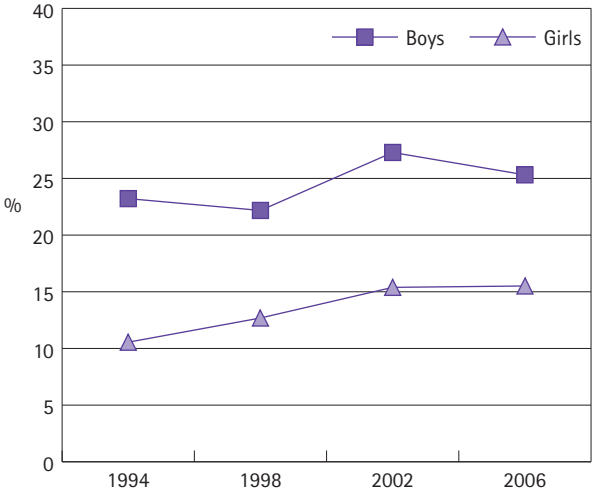


Figure 11: Proportion of boys and girls who are always confident



Nevertheless, boys have higher rates of mental well-being compared with girls and mental well-being of 11 year olds is better than that of 15 year olds. This paper has shown that the environment in which young people grow up is associated with various indicators of mental well-being. Specifically, family structure, family affluence and geography of residence are all associated with mental well-being of young people. The protective effect of good parent-child communication was shown in a previous briefing paper (HBSC Briefing Paper 12, 2007). Parents, teachers and health professionals all play a role in supporting young people and promoting mental well-being among adolescents in Scotland. Earlier briefing papers have shown the importance of the school environment and interpersonal relationships on the mental well-being of adolescents, (HBSC Briefing Paper 10, 2004; HBSC Briefing Papers 12 & 13, 2007). Future work will investigate whether the improvement in mental well-being observed between 1994 and 2006 has been experienced equally across social groups.

TECHNICAL APPENDIX

Scotland, along with 41 other countries in Europe and North America, participated in the 2005/2006 Health Behaviour in School-Aged Children (HBSC): WHO Collaborative Cross-National Survey. Previous surveys were conducted in 1989/90, 1993/94, 1997/98 and 2001/02 and findings from these have been published in a series of international and Scottish reports and briefing papers listed at the end of this document which can be found at www.education.ed.ac.uk/cahru/.

The 2006 HBSC survey in Scotland

The 2006 HBSC survey was carried out in 198 schools across Scotland. Pupils from mixed ability classes anonymously completed questionnaires in the classroom. The sample was nationally representative and included pupils from Primary 7 (11-year-olds, n=1727), Secondary 2 (13-year-olds, n=2266) and Secondary 4 (15-year-olds, n=2197) giving a total sample of 6,190. On completion of fieldwork, national data files were prepared using the standard documentation procedures of the HBSC International Protocol and submitted to the HBSC International Data Bank at the University of Bergen, Norway.

Notes on statistics

When differences between proportions are specifically commented on in this briefing paper these differences are statistically significant at 95% unless otherwise stated.

HBSC items reported in this briefing paper

Family Affluence Scale

The schoolchildren 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. Scores were calculated using the following survey items:

Does your family own a car, van or truck? Response categories were: No (= 0), Yes, one (= 1), Yes, two or more (= 2). This item is a component of a Scottish deprivation index developed by Carstairs and Morris (Carstairs & Morris, 1991), which is used widely in research on health inequalities.

Do you have your own bedroom for yourself? Response categories were: No (= 0), Yes (= 1). This item is a simple proxy for overcrowding, classified by Townsend (Townsend, 1987) as housing deprivation; it is also a component of the Scottish deprivation index.

During the past 12 months, how many times did you travel away on holiday with your family? Response categories were: Not at all (= 0), Once (= 1), Twice (= 2), More than twice (= 2). This item is a measure of deprivation in home facilities (Townsend, 1987).

How many computers does your family own? Response categories were: None (= 0), One (= 1), Two (= 2), More than two (= 2). This item has been added to the questionnaire since the 2001/2002 survey to identify families with higher socioeconomic status in affluent countries.

Family Structure

Young people were asked to describe which adults they lived with in their main home (where they live most of the time) and given options from which they could tick as many as they wished: Mother, Father, Stepmother (or father's partner), Stepfather (or mother's partner), Grandmother, Grandfather, I live in a foster or children's home, Someone or somewhere else. Only the first four categories were included in this paper.

Urban-Rural Classification

The Urban-Rural classification was assigned by school postcode. Young people were classified as living in one of the following: Large urban areas (the four cities: Glasgow, Edinburgh, Aberdeen and Dundee), other urban areas (settlements with population 10,000-125,000), accessible towns (settlements of 3-10,000 people within a 30 minute drive of a settlement of 10,000 or more), accessible rural (settlements of less than 3,000 people within a 30 minute drive of a settlement of 10,000 or more), remote towns (settlements of 3-10,000 people more than a 30 minute drive of a settlement of 10,000), remote rural (settlements of less than 3,000 people more than a 30 minute drive of a settlement of 10,000).

Happiness

Young people were asked: In general, how do you feel about your life at present? ...Response options were: I feel very happy, I feel quite happy, I don't feel very happy, I'm not happy at all.

Life satisfaction

Life satisfaction was measured using the following question accompanying a picture of a ladder: 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? A score of 6 or more was defined as a high life satisfaction.

Perceived health

The question used was: Would you say your health is...Response options were: Excellent, Good, Fair, Poor.

Health complaints

Young people were given a checklist and asked: In the last 6 months how often have you had the following: Headache, Stomach-ache, Back-ache, Feeling low, Irritability or bad temper, Feeling nervous, Difficulties in getting to sleep, Feeling dizzy. Response options were: About every day/More than once a week/ About every week/About every month/Rarely or never. Young people were described as having multiple health complaints if they reported having two or more health complaints at least twice a week.

Acknowledgements

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HBSC publications and HBSC Information

Further information on the international report from the 2005/06 survey can be obtained from the International Study website www.hbsc.org. The International Coordinating Centre of the HBSC Study is the Child and Adolescent Health Research Unit (CAHRU), The University of Edinburgh.

HBSC Briefing Papers from earlier surveys include:

Briefing Paper 1: Introduction, background and dissemination of the 2002 HBSC survey in Scotland.

Briefing Paper 2: Mental well-being among schoolchildren in Scotland: age and gender patterns, trends and cross-national comparisons.

Briefing Paper 3: Gender Matters: Physical activity patterns of schoolchildren in Scotland.

Briefing Paper 4: Mental-health and well-being in the context of school: Young people in Scotland.

Briefing Paper 5: How are Scotland's young people doing? A cross-national perspective on physical and emotional well-being.

Briefing Paper 6: How are Scotland's young people doing? A cross-national perspective on health-related risk.

Briefing Paper 7: How are Scotland's young people doing? A cross-national perspective on physical activity, TV viewing, eating habits, body image and oral hygiene.

Briefing Paper 8: Bullying and fighting among schoolchildren in Scotland: age and gender patterns, trends and cross-national comparisons.

Briefing Paper 9: Social Context of Bullying Behaviours.

Briefing Paper 10: Bullying: Health, Well-being and Risk Behaviours.

Briefing Paper 11: Family affluence and health among schoolchildren.

Briefing Paper 12: Family structure and relationships and health among schoolchildren.

Briefing Paper 13: Perceptions of school and health of schoolchildren.

References

Aalto-Setala T, Marttunen M, Tuulio-Henriksson A, Poikolainen K, Lonnqvist J (2002). Depressive symptoms in adolescence as predictors of early adulthood depressive disorders and maladjustment. American Journal of Psychiatry, 159; 1235-1237.

Beato-Fernandez L, Rodriguez-Cano T, Belmonte-Llario A, Martinez-Delgado C (2004). Risk factors for eating disorders in adolescents – a Spanish community-based longitudinal study. European Child & Adolescent Psychiatry, 13; 287-294.

Bergman MM and Scott J (2001). Young adolescents' well-being and health risk behaviours: gender and socioeconomic differences. Journal of Adolescence, 24; 183-197.

Carstairs, V. and Morris R (1991) Deprivation and Health in Scotland, Aberdeen University Press.

Cavallo F, Zambon A, Borraccino A, Ravens-Sieberer U, Torsheim T, Lemma P (2006). Girls growing through adolescence have a higher risk of poor health. Quality of Life Research, 15; 1577-1585.

Craig W and Harel Y. Bullying, physical fighting and victimization. In: Currie et al Young People's Health in Context; Health Behaviour in School-Aged Children: WHO Cross-National Study (HBSC), International Report from the 2001/02 survey, WHO, Copenhagen.

Dierker LC, Vesel F, Sledjeski EM, Costello D, Perinne N (2007). Testing the dual pathway hypothesis to substance use in adolescence and young adulthood. Drug and Alcohol Dependence, 87; 83-93.

Garber J. Walker LS, Zeman J (1991). Somatization symptoms in a community sample of children and adolescents: further validation of the children's somatization inventory. Psychological Assessment, 3; 588-595.

Petersen AC, Leffert N, Graham B, Alwin J and Ding S (1997). Promoting mental health during the transition into adolescence. In: Schulenberg J, Maggs JL, Hurrelmann K. Health Risks and Developmental Transitions During Adolescence. New York: Cambridge University Press.

Roza SJ, Hofstra MB, van der Ende J, Verhulst FC (2003). Stable prediction of mood and anxiety disorders based on behavioural and emotional problems in childhood: a 14-year follow-up during childhood, adolescence and young adulthood. American Journal of Psychiatry, 160; 2116-2121.

Settertobulte W and Gaspar de Matos M. Peers. In: Currie et al Young People's Health in Context; Health Behaviour in School-Aged Children: WHO Cross-National Study (HBSC), International Report from the 2001/02 survey, WHO, Copenhagen.

Scottish Executive (2003). National programme for improving mental health and well-being: Action Plan 2003-2006.

Townsend, P. (1987) Deprivation. Journal of Social Policy, 16; 125-46.

van Lang NDJ, Ferdinand RF, Verhulst FC (2007). Predictors of future depression in early and late adolescence. Journal of Affective Disorders, 97; 137-144.

Vazquez FL and Blanco V (2006). Symptoms of depression and related factors among Spanish university students. Psychological Reports, 99; 583-590.

Verdurmen J, Monshouwer K, van Dorsselaer S, Ter Bogt T, Vollebergh W (2005). Alcohol use and mental health in adolescents: interactions with age and gender- findings from the Dutch 2001 Health Behaviour in School-Aged Children survey. Journal of Studies on Alcohol, 66; 605-609.

West P and Sweeting H (2003) Fifteen, female and stressed: changing patterns of psychological distress over time. Journal of Child Psychology and Psychiatry, 44; 399-411.

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