

Health Behaviour in School-aged Children (HBSC) survey 2001/02



ORAL
health **EATING**
habits

HBSC Briefing Series: 4

Eating Habits and Oral Health

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Introduction

Growing concern over the long-term effects of unhealthy eating habits and poor oral health among children and young people has highlighted the need to monitor young people's health behaviours.

The *Young People's Health in Context* report presents international findings from the 2001/02 Health Behaviour in School-aged Children (HBSC) survey.¹ The HBSC is a cross-national research study conducted in collaboration with the World Health Organization (WHO) Regional Office for Europe.

This short report is the fourth in a series of HBSC briefings aimed at highlighting findings related to key policies and programmes of the Welsh Assembly Government which address adolescent health. Based on chapters from *Young People's Health in Context*¹, this report compares data from Wales with that from selected HBSC countries on meal patterns, nutrition and oral health. Data are presented for the three UK countries participating in the study and contrasted with countries reporting the highest/lowest rates of behaviours.

Background

In health terms, childhood and adolescence are particularly important times of life. Certain behaviours are initiated during the adolescent years, while others, such as eating habits, can become established even earlier in childhood.² Given this, research into young people's health and health behaviours – and the factors that influence them – is essential for the development of evidence-based policy and practice in Wales.

The HBSC study collects cross-national data every four years to help measure and track aspects of adolescent health and health-related behaviours and their developmental and social contexts.³ The study was first undertaken in 1983-1984 and Wales first participated in 1986. Interim surveys are also conducted in Wales every two years.

The cross-national and national data provide a unique opportunity to develop the evidence base for policy and practice. They contribute to particular areas of adolescent health highlighted in, for example, the *Children and Young People's Action Plan*,⁴ and *Food and Well Being*.⁵ The findings also contribute to the wider strategic aims of the Welsh Assembly Government outlined in the 'better health' dimension of *Wales: A Better Country*⁶ and to the health improvement recommendations of *The Review of Health and Social Care in Wales* (the Wanless report).⁷

Methods

In 2001/02, some 35 countries drew national samples of 11-, 13- and 15-year-olds in accordance with the study protocol.³ In the main, fieldwork took place between autumn 2001 and spring 2002. More than 160,000 young people took part, with approximately 1,500 respondents in each age group targeted in every country; pupils were sampled from schools and/or school classes. Pupils who were absent on the day of the survey were not followed up.

Data were collected by self-administered questionnaire. On completion of fieldwork, national data files were prepared using standard documentation and submitted to the HBSC International Data Bank at the University of Bergen, Norway. Data files were checked, cleaned and returned to countries for approval before being put in the international file. Full details of the methods used can be found in *Young People's Health in Context*.¹

The Welsh context

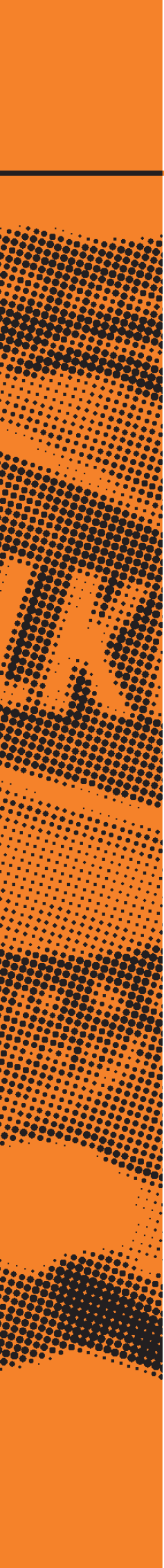
The main aim of this briefing is to present information on eating habits and oral health in Wales compared to young people within the UK overall. Data from selected HBSC countries allow international comparisons.

Eating habits and oral health are priority health areas for the Welsh Assembly Government. A previous HBSC report on trends in Wales 1986 - 2000⁸ showed that significant proportions of young people did not eat fruit every day or eat breakfast on a regular basis and that around a third of boys did not brush their teeth more than once a day. In recent years dental caries have declined among young people⁹, although the rate of decline in Wales has been described as disappointing.¹⁰

Eating habits

It is recognised that those who develop healthy eating habits early in life are likely to maintain them into adulthood, and have a reduced risk of chronic diseases such as cardiovascular disease, certain cancers, diabetes and osteoporosis.¹¹ A balanced diet in adolescence is also likely to reduce the risk of more immediate health problems, such as dental caries, overweight and obesity. Patterns of eating are also important; those skipping breakfast are most likely to have difficulty in concentrating by mid-morning¹² and are more likely to consume snacks high in fat, salt and sugar at other times during the day.¹³

Encouraging a healthy and balanced diet in young people is a priority aim of the Welsh Assembly Government and a Food and Fitness Task Group for Children and Young People chaired by the



Minister for Health and Social Services has been established to consider the issue in some detail.^{4, 5} Further policies and programmes will follow from this but there are many ongoing initiatives nationally and locally. School-based initiatives include the incremental introduction of free breakfasts to primary schools in Wales, a pilot healthy vending machine programme, provision of water coolers to schools in Communities First areas, fruit tuck shops (through the *Welsh Network of Healthy School Schemes*) and the 'Gimme 5' computer games and screen savers developed by the Food Standards Agency (Wales). Other initiatives targeting young people, and particularly those in disadvantaged communities, include the development of a pilot *Food Co-operatives* programme and the *Food and Fitness Health Promotion Grant Scheme*.

Measuring food habits among adolescents is difficult, particularly in the context of a broad health study, where space is not available for food diaries or detailed food frequency questions. Moreover, there are differences in climate and culture among HBSC countries. In the 2001/02 HBSC survey¹, meal patterns were assessed by questions on the frequency of consuming breakfast, lunch (midday meal) and dinner (evening meal), with young people asked to respond separately for weekdays and weekends. Data are only presented here only for breakfast, as this is the meal that is skipped most often.

How often do you usually have breakfast (more than a glass of milk or fruit juice)?

Response categories for weekday: *I never have breakfast during the week, One day, Two days, Three days, Four days, Five days.*

Response categories for weekend: *I never have breakfast during the weekend, I usually have breakfast only one day of the weekend (Saturday or Sunday), I usually have breakfast on both weekend days (Saturday and Sunday).*

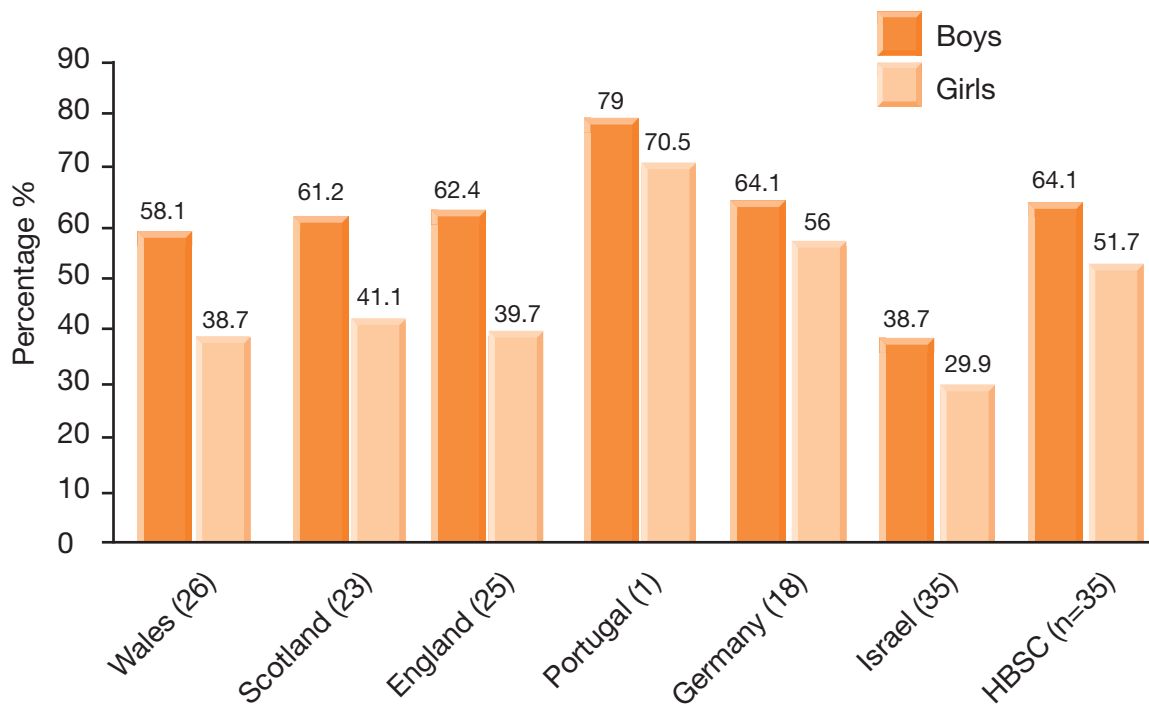


Figure 1: Percentage of 15-year-olds eating breakfast every school day

Figure 1 presents the proportion of 15-year-olds eating breakfast every school day. Wales is ranked twenty-sixth (of 35 countries) overall, with the proportions of boys and girls similar to Scotland and England. Portugal has the highest proportion of 15-year-olds eating breakfast every school day; Israel has the lowest.

Between the ages of 11 and 15, the proportion of young people eating breakfast every school day declined across HBSC countries. The decline was greater for girls (69 per cent at age 11 and 52 per cent at age 15) compared to boys (73 per cent at age 11 and 64 per cent at age 15).

In Wales, for both sexes together, eating breakfast every school day is highest for 11-year-olds (63 per cent) compared to 13-year-olds (55 per cent) and 15-year-olds (49 per cent). Among 11-year-old girls, 60 per cent eat breakfast every school day, compared to 44 per cent of 13-year-olds and 39 per cent of 15-year-olds. There is a smaller decline with age for boys in Wales; 66 per cent of 11-year-olds eat breakfast every school day, compared to 65 per cent of 13-year-olds and 58 per cent of 15-year-olds.

Food consumption was assessed through a question covering a range of foods, with data presented here on fruit, vegetables and soft drinks containing sugar. The response categories were revised for the 2001/02 survey and are not directly comparable with previous HBSC data.

How many times a week do you usually eat or drink... fruits/vegetables/sweets/chips or fried potatoes/potato crisps/skimmed or semi-skimmed milk/ordinary (full fat) Coke or other soft drinks that contain sugar/water.

Response categories: *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.*

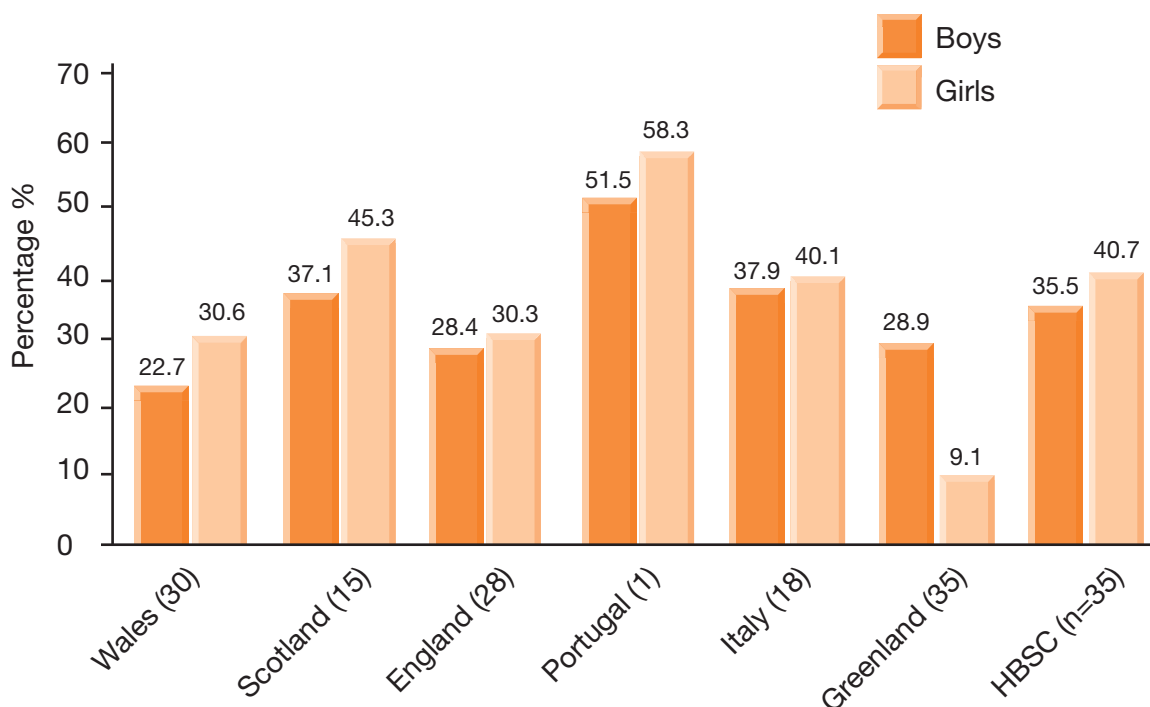


Figure 2: Percentage of 11-year-olds eating fruit every day

Figure 2 shows the proportion of 11-year-olds eating fruit every day. Wales is ranked 30th (of 35 countries) overall, the proportions being slightly lower than those in England and considerably lower than those in Scotland. Portugal has the highest levels of daily fruit consumption at 55 per cent overall; Greenland has the lowest at 23 per cent.

Across all HBSC countries the proportion of young people reporting eating fruit every day tends to decline with age; an average of 38 per cent of 11-year-olds eat fruit daily compared to 29 per cent of 15-year-olds. Daily consumption is also consistently lower for boys than for girls. In Wales, 31 per cent of girls and 23 per cent of boys report eating fruit every day at the age of 11, declining to 24 per cent and 19 per cent, respectively, at age 15.

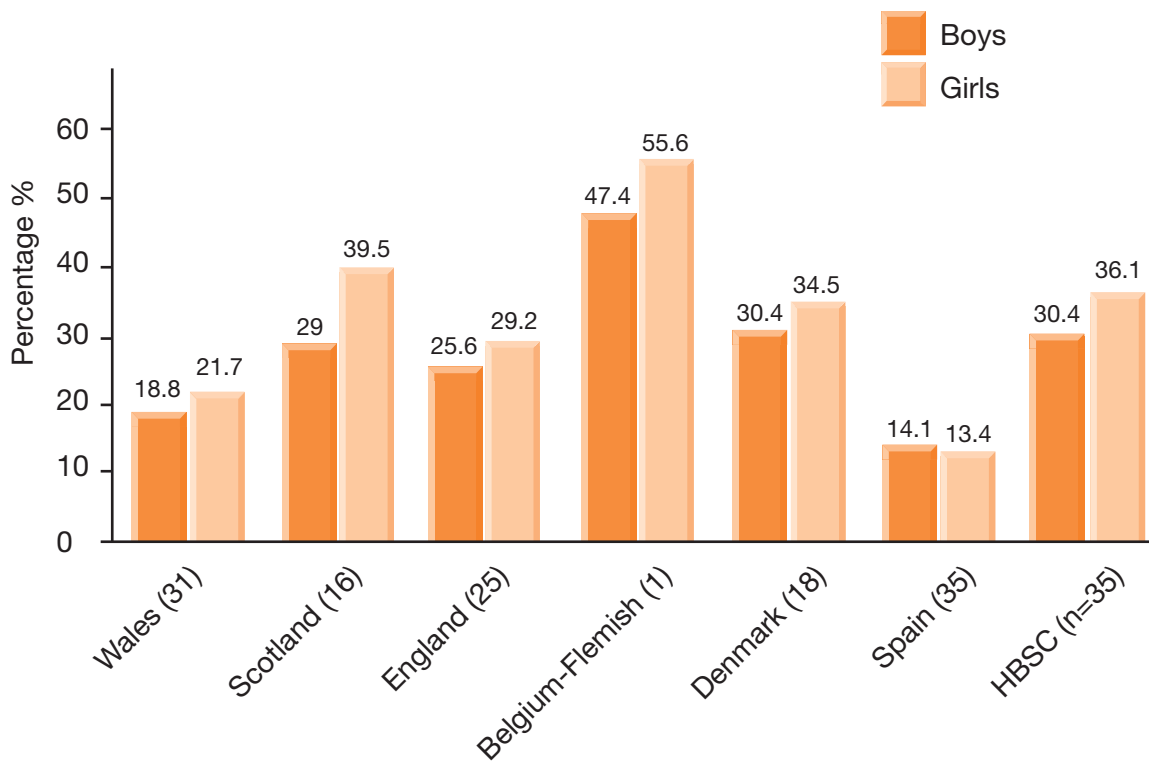


Figure 3: Percentage of 11-year-olds eating vegetables every day

Figure 3 presents information on the proportion of 11-year-olds who report eating vegetables every day. Young people in the Flemish speaking region of Belgium are ranked the highest with 52 per cent eating vegetables daily compared to a low of 14 per cent in Spain. Wales is ranked 31st out of the 35 HBSC countries, with 20 per cent of 11-year-olds reporting that they eat vegetables every day. As with frequency of fruit consumption, far fewer young people in Wales report eating vegetables every day than their counterparts in England and Scotland.

Girls were more likely to report eating vegetables every day in all HBSC countries. In Wales, daily vegetable consumption increases slightly between the ages of 11 and 15 for both sexes (19 per cent to 22 per cent for boys and 22 per cent to 26 per cent for girls).

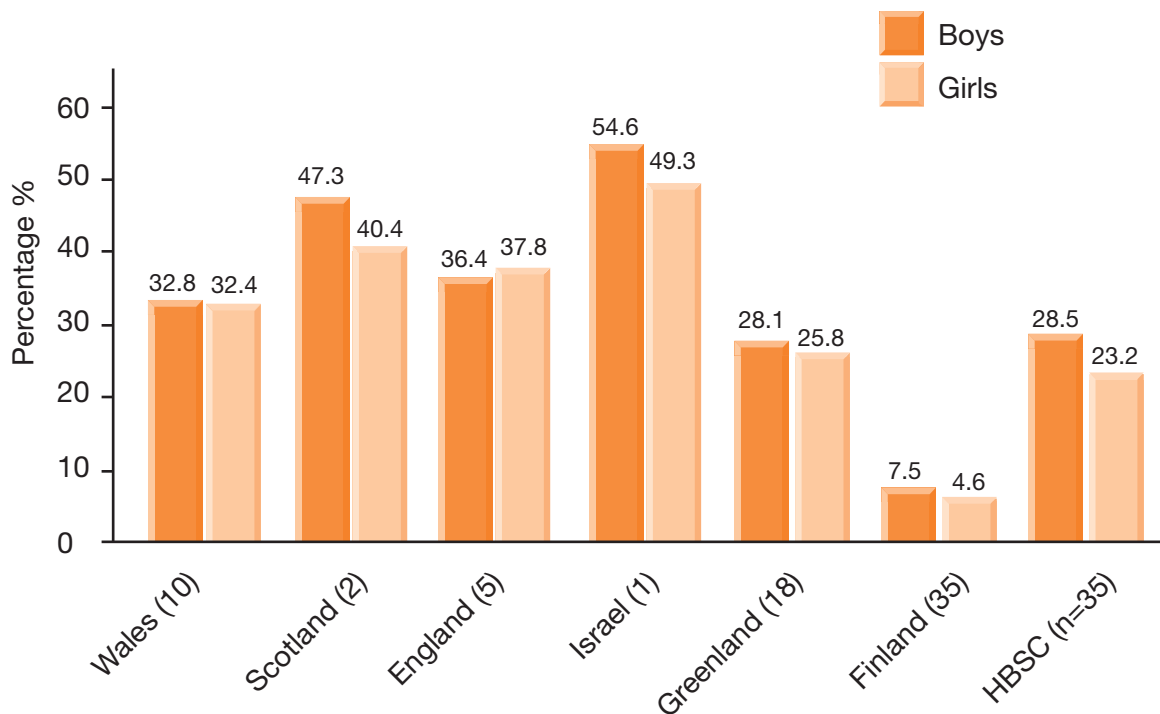


Figure 4: Percentage of 11-year-olds consuming soft drinks every day

Figure 4 displays the proportion of 11-year-olds drinking soft drinks every day. Wales is ranked tenth, with proportions similar to those in England but lower than those in Scotland. Israel has the highest proportion of young people reporting drinking soft drinks every day at 52 per cent, compared with a low of 6 per cent in Finland.

In Wales, the proportion of young people drinking sugary soft drinks rises with age for boys from 33 per cent at age 11, to 39 per cent at age 13 and 41 per cent at age 15. For girls, consumption increases from 32 per cent at age 11 to 39 per cent at age 13 and then drops to 35 per cent at age 15. A similar pattern emerges in England and Scotland.

Oral health

Dental decay is a widespread cause of pain and infection that impacts on life satisfaction in much the same way as other diseases. While the prevalence of dental caries may have declined in recent years it remains an extremely common disease that is strongly related to socio-economic status and lifestyle, resulting in oral health inequalities throughout Wales. Over 50 per cent of five-year-old children in Wales suffer dental decay and there is evidence that the reduction in tooth decay has now stopped.¹⁴ Further improvement in the levels of oral health is unlikely without additional preventive action.

The Assembly Government's consultation document *Routes to Reform – A Strategy for Primary Dental Care in Wales*,¹⁰ published in 2002, highlighted the need for preventively orientated dental health services, and for integrating oral health into health promotion programmes where appropriate. All dental services have an essential role to play in the promotion of good oral health. The Community Dental Service makes an important contribution through its work in schools, including the *Fissure Sealant Programme* established under the *Inequalities in Health Fund*.¹⁵ The introduction of new contractual arrangements for the general dental services in April 2006 will facilitate a greater emphasis upon prevention based dental care.

Tooth brushing is a key preventive measure for reducing tooth decay and the universally recommended frequency is twice a day, in the morning and the evening.¹⁶ The following question was used to measure tooth-brushing in 2001/02, as well as in previous HBSC surveys:

How often do you brush your teeth?

Response categories: *More than once a day, Once a day, At least once a week but not daily, Less than once a week, Never.*

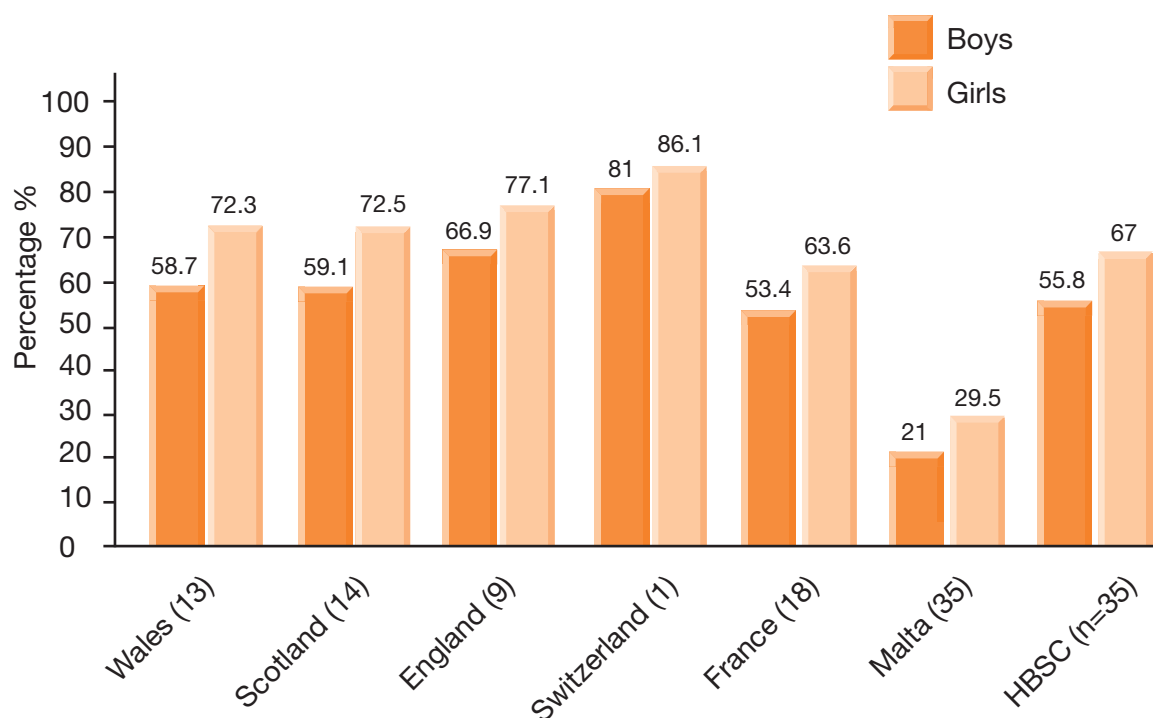


Figure 5: Percentage of 11-year-olds brushing their teeth more than once a day

Figure 5 presents the proportion of 11-year-olds brushing their teeth more than once a day. The average for all the HBSC countries is 56 per cent for boys and 67 per cent for girls. Wales is ranked 13th overall (66 per cent), with levels similar to Scotland (65 per cent) but less than in England (72 per cent). Switzerland has the highest proportion of 11-year-olds brushing their teeth more than once a day at 84 per cent and Malta has the lowest at 26 per cent.

Overall, across HBSC countries, the difference between age groups is slight (62 per cent at age 11 to 63 per cent at age 15). However, girls were considerably more likely than boys to brush their teeth more than once a day. In Wales, 72 per cent of 11-year-old girls brush their teeth more than once a day, increasing to 78 per cent at age 13 and 81 per cent at age 15, compared to 59 per cent of boys across all three age groups.

The way forward

The international data from the HBSC study clearly demonstrate that eating habits and oral health in young people are of concern across the United Kingdom, Europe and beyond. This short report has highlighted a number of factors influencing young people's health in this area. These findings will contribute to collaborative initiatives focusing on joint responsibility for health as set out in *Health Challenge Wales*.¹⁷ Key findings for policy from this report, such as higher levels of breakfast skipping for girls and a lower proportion of boys brushing their teeth more than once a day, may also suggest gender specific initiatives.

Targeted policies and programmes address concerns over the relatively poor eating habits and oral health of young people in Wales. The health of children and young people is a priority for the Welsh Assembly Government as demonstrated through the appointment of the Children's Commissioner for Wales, the development of a *National Service Framework for Children, Young People and Maternity Services*¹⁸ and the setting up of the *Food and Fitness Taskforce*. Importantly, children's health is one of the priority health areas in the new *National Health Targets for Wales*.¹⁹

The HBSC surveys will continue to track and monitor health behaviour and to inform the development of policies and initiatives for young people. In addition to these briefings on 2001/02 data,²⁰⁻²⁴ a series of research reports based on data from the 2004 HBSC survey in Wales will follow.

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Contact for information

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References

1. Currie, C., Roberts, C., Morgan, A., Smith, R., Settertobulte, W., Samdal, O. and Barnekow Rasmussen, V. (Eds.) (2004). *Young People's Health, In Context; Health Behaviour in School-aged Children: a WHO Cross-National Collaborative Study (HBSC), International Report from the 2001/2002 survey*. Copenhagen: WHO.
2. Holland, P., Berney, L., Blane, D. and Davey-Smith, G. (2000). *Life Course Influences on Health in Early Old Age. Research Findings 6 from the Health Variations Programme*. Lancaster: ESRC.
3. Currie, C., Samdal, O., Boyce, W. and Smith, B. (2001). *Health Behaviour in School-Aged Children: a World Health Organisation Cross- National Study: Research Protocol for the 2001/02 Survey*. Child and Adolescent Health Research Unit. Scotland: University of Edinburgh.
4. Welsh Assembly Government (2003). *Health and Well Being for Children and Young People: Action in Response to the Issues Raised by the Health Behaviour in School-aged Children (HBSC) Study 1986-2000*. Health Promotion Division, Office of the Chief Medical Officer. Cardiff: Welsh Assembly Government.
5. Food Standards Agency and the Welsh Assembly Government (2003). *Food and Well Being: Reducing Inequalities Through a Nutrition Strategy for Wales*. Cardiff: Food Standards Agency Wales.
6. Welsh Assembly Government (2003). *Wales: A Better Country*. Cardiff: Welsh Assembly Government.
7. Wanless, D. (2003). *The Review of Health and Social Care in Wales*. Cardiff: Welsh Assembly Government.
8. Roberts, C., Kingdon, A., Parry-Langdon, N. and Bunce, J. (2002). *Young people in Wales: Findings from the Health Behaviour in School-aged Children (HBSC) Study 1986 - 2000*. Research and Evaluation Branch, Health Promotion Division. Cardiff: Welsh Assembly Government.
9. National Statistics (2004). *Decline in obvious decay in children's permanent teeth. Children's Dental Health Survey 2003. Preliminary Findings*. London: National Statistics.
10. Welsh Assembly Government (2002). *Routes to reform. A strategy for primary dental care in Wales. A consultation document*. Cardiff: Welsh Assembly Government.
11. World Health Organization (2003). *Diet, nutrition and the prevention of chronic diseases*. Report of a Joint World Health Organization/Food and Agriculture Organization of the United Nations Expert Consultation. WHO Technical Report Series, No. 916. Geneva: WHO. Available at http://whqlibdoc.who.int/trs/WHO_TRS_916.pdf.
12. Pollitt, E. and Mathews, R. (1998). Breakfast and cognition: an integrative summary. *American Journal of Clinical Nutrition*. 67: 804S-813S.

13. Resnicow, K. (1991). The relationship between breakfast habits and plasma cholesterol levels in schoolchildren. *Journal of School Health*. 61:81-85.
14. Pitts, N., Boyles, J., Nugent, Z., Thomas, N. and Pine, C. (2004). The Dental Caries Experience of 5-year-old Children in England and Wales 2001/2002. British Association for the Study of Community Dentistry.
15. National Assembly for Wales (2001). *NHS Dental Services. Fissure sealant programme: Health Inequalities Fund. Welsh Health Circular*. WHC (2001) 104. Cardiff: National Assembly for Wales.
16. Frandsen, A. (1986). Mechanical oral hygiene practices. State of the science review. In Loe, H. and Kleinman, D.V. (Eds.) *Dental plaque control measures and oral hygiene practices*. Oxford: IRL Press.
17. Welsh Assembly Government (2004). *Health Challenge Wales*.
www.healthchallenge.wales.gov.uk
18. Welsh Assembly Government (2004). *National Service Framework for Children, Young People and Maternity Services in Wales*. Cardiff: Welsh Assembly Government.
19. Welsh Assembly Government (2004). *Targeting Health Improvement for All: Health Gain Targets National High-level Targets and Indicators for Wales*. Health Promotion Division, Office of the Chief Medical Officer. Cardiff: Welsh Assembly Government.
20. Parry-Langdon, N. and Roberts, C. (2004). *HBSC briefing series: 1 Physical Activity, Sedentary Behaviour and Obesity*. Health Promotion Division, Office of the Chief Medical Officer. Cardiff: Welsh Assembly Government.
21. Clements, A., Gordon, C., Harris, L., Parry-Langdon, N. and Roberts, C. (2004). *HBSC briefing series: 2 Tobacco Smoking, Cannabis use and Alcohol Use*. Health Promotion Division, Office of the Chief Medical Officer. Cardiff: Welsh Assembly Government.
22. Clements, A., Parry-Langdon, N. and Roberts, C. (2004). *HBSC briefing series: 3 Sexual Health*. Health Promotion Division, Office of the Chief Medical Officer. Cardiff: Welsh Assembly Government.
23. Clements, A. and Harris, L. (2005). *HBSC briefing series: 5 Bullying, Fighting and Injury*. Health Promotion Division, Office of the Chief Medical Officer. Cardiff: Welsh Assembly Government.
24. Parry-Langdon, N. and Roberts, C. (2005). *HBSC briefing series: 6 Socio-economic Inequalities and health*. Health Promotion Division, Office of the Chief Medical Officer. Cardiff: Welsh Assembly Government.