Int J Public Health 54 (2009) S1–S7

DOI 10.1007/s00038-009-5419-3


**Original article**

# The HBSC study in Scotland: can the study influence policy and practice in schools?

**Ian Young[1] and Candace Currie[2]**

[1] *Health promotion consultant, Edinburgh (Formerly Head of International Development, NHS Health Scotland), Scotland*
[2] *Director of the Child and Adolescent Health Research Unit, University of Edinburgh, Scotland*

Submitted: 10 November 2008; revised: 04 May 2009; accepted: 04 June 2009

**Abstract**

This paper reviews the role of the HBSC study in Scotland and suggests that the HBSC study has growing status and relevance in Scotland for a number of reasons as it continues to provide insights for politicians, policy makers, education professionals and health promotion practitioners. The paper will set out the historical background to the HBSC study and the associated research and health promoting school developments in Scotland. It will explore the factors that have been important in its influential role in contributing to health promotion policy developments in the education and health sectors in Scotland. It is suggested that this role has been shaped by:

- The changing political context and the developing political will to improve Scotland's health.
- The close practical links between the HBSC study and the national agency for health promotion.
- The growing credibility of the study in the education sector in Scotland as well as the health sector.
- The growing evidence of the study's influence through:
- references to the study in government reports;
- representation of HBSC researchers on government policy and strategy committees;
- deputy chief medical Officer being on HBSC committee;
- increased use of HBSC outputs in schools and education authorities;
- linked developments in the health promoting schools movement in Scotland.
- The development of a training and capacity building resource for teachers which draws extensively on data from the HBSC study.
- The continuity of the study over nineteen years resulting in a unique and valued data set.
- The development of good communication strategies which has resulted in high awareness of the data in the education and health sectors and the Scottish media.
- The growing understanding that HBSC is an important international study and that Scotland has played a significant role in co-ordinating the international dimension of the study and the close links between Scotland and the European Regional Office of The World Health Organization (WHO).

**Keywords: HBSC study – Scotland – Health promotion – Schools – Policy.**

## Introduction

*The context in Scotland*

Scotland is part of the United Kingdom and for the last five years Scotland's population has been increasing, reaching 5.144 million in the year to 30 June 2007[1], which is the highest figure since 1983. Although the birth rate exceeds the death rate, immigration was the biggest contributor to the increase. There were net gains of around 8,800 from the rest of the UK and 16,800 from the rest of the world. Glasgow is Scotland's largest city with a population of 577,000 and Edinburgh has 448,300. The largest concentrations of social deprivation are associated with the cities. Scotland also has large rural areas, particularly in the north, with very low population densities.

Scotland's health problems have been well documented with high mortality and morbidity statistics in areas such as coro-

nary heart disease, specific cancers, obesity, alcohol-related problems and mental health. There is a significant link between these problems and socio-economic status. Health inequalities within Scotland appear to be widening. The gap in male life expectancy between highest and lowest of the 74 parliamentary constituencies in Scotland increased from 7.8 years in 1991 to 13.7 years in 2001[2].

The second half of the twentieth century saw a growth of political interest in Scotland with Scotland eventually having more control over its own affairs through the re-birth of the Scottish Parliament, which was convened in 1999. Certain powers such as defence are still controlled for all of the United Kingdom by the Westminster Parliament in London, but other powers such as health and education are devolved to the Scottish Government and this is significant in the context of this paper. There are 32 local authorities which are responsible for the provision of the education service. Over 95 % of young people attend local authority schools, funded by the state, from the age of 5 to 16 years and over 50 % of young people remain at school post 16 years.

## Links between the Health Behaviour in School-Aged Children Study and the Health Promoting Schools movement in Scotland

*History*

Although the Health Behaviour in School-Aged Children Study (HBSC) is not directly related to the health promoting schools movement, the European Office of WHO from the outset has had an important role in both developments and in Scotland these developments have come closer together over their respective developing periods. In 1986, 150 delegates from 28 of the 32 member states of WHO Europe (at that time) attended the first Health Promoting Schools conference hosted by The Scottish Health Education Group. The discussions and debates from this formed the basis of the Healthy Schools Report[3]. Therefore there has been an interest in developing the school as a health promoting setting for over 20 years in Scotland[4].

Scotland's commitment to health promotion in schools was formalised in 1993 when it became a member of the European Network of Health Promoting Schools (ENHPS). The ENHPS was a partnership between participants in over 40 European countries, with international support from: The European Commission, The Council of Europe and the World Health Organization Regional Office for Europe. With the United Kingdom joining initially in 1993, the Health Education Board for Scotland (HEBS) became the networking agent for Scotland[5], separate programmes were set up for Wales, Northern Ireland, Scotland and England. Close links developed between the national agency for health promotion and associated research work focussed on school age young people at the University of Edinburgh.

To strengthen the evidence base for health promotion in schools, formal links were established from 1993 between the national agency for health promotion, which had a national leadership role in health promoting school developments, and The University of Edinburgh which led the work on the evaluation of health promoting school case studies[6]. The links were originally with the Research Unit in Health and Behavioural Change in the Dept of Public Health and later key personnel moved to set up The Child and Adolescent Health Research Unit (CAHRU) also at the University of Edinburgh, but significantly this was within the (Moray House) School of Education. This centre has also played an increasing role for the co-ordination of the HBSC international study which now has 43 countries fully involved in the research. This meant that there was an important practical connection between the HBSC study and the case study work on health promotion in schools and this link was later more fully exploited in various ways which influenced policy and practice in Scottish schools. These have been manifest in the areas of nutrition and eating behaviour of schoolchildren[7] and physical activity of schoolchildren in particular[8].

The HBSC study developed a unique data set on the health of adolescents in Scotland over a twenty year period. The study takes a broad approach to examining young people's health in the context of social factors including family, peers, school and socio-economic status and the developmental process of puberty. As an example of the kinds of intelligence supplied one could consider the example of gender. Gender and socio-economic inequalities are evident in many aspects of health behaviour and well-being and in general, girls are less positive about their own health and well-being, suffering more frequently from self-reported health complaints including feeling low. These findings and other relevant trends are presented in Scottish HBSC Briefing Papers[9] and in the HBSC international reports 'Young People's Health in Context'[10] and 'Inequalities in Young People's Health'[11]. This research has played a part in the identification of the particular needs for health promotion among young people in Scotland leading to specific developments in practice, policy and legislation. Although the research looks at many aspects of health behaviours in all social contexts, it is in the arena of schools and the education sector that the study has had its greatest impact in Scotland.

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## Research and policy developments in Scotland

By the mid 1990's there was a supportive base for health promotion of young people in Scotland but in the education sector the number of schools which were actively working from the health promotion principles set out in the WHO documents was still relatively small among Scotland's 2 000 plus primary schools and 500 secondary schools. As referred to earlier there had been a number of case-studies on health promotion in schools. There were also other research initiatives which added to the growing research base provided by the HBSC study.

One such initiative was an important longitudinal study[12] of over 2,000 young people in the West of Scotland who were followed from the end of primary school (age 12) to age 15, and this investigated possible school effects on smoking, drinking, drug use, and 'unhealthy diet' at two time-points in secondary school (age 13 and 15). The results showed considerable variation in the rates of these health behaviours between 43 secondary schools. The authors concluded that these results were compatible with the attention given to school ethos in the health promoting school model and this along with the evidence emerging from the HBSC study on aspects of health behaviours provided support to those working in health promotion with young people.

Experimental or comparative studies on school health promotion such as randomised controlled trials have not always been seen as appropriate in complex social settings such as schools for a variety of reasons[13,14]. However one randomised controlled trial on the impact of an innovative curriculum and associated staff development on sexual health and relationships was undertaken and positive outcomes from this have impacted on both curriculum and subsequent staff development in Scotland[15].

In addition to this active schools health research agenda which was broadly supportive of the health promoting school approach in Scotland, there were also positive features about the infrastructure in Scotland which facilitated change in Scotland. Colleagues in health promotion posts in the health service and in educational adviser posts in the education service at a regional or area level were in place to act as advocates and capacity builders at regional level. The National agency for health promotion at that time had actively supported collaboration between the education and health sectors by giving preferential funding to initiatives that both sectors agreed to at regional level. However to some extent all of these players could have been viewed as 'early innovators'[16] rather than mainstream practitioners at that time.

It could be argued that what was missing until the second half of the 1990's was unequivocal support and formal commitment from government at a national level to promote the health of young people. The importance of the wider context of the health promoting school was fully acknowledged in an education sector curriculum document for the first time in Scotland in 1999 produced by the education sector. This was evidence of the education sector taking the ideas of the health sector and utilising them. It stated:

"The wellbeing of both pupils and staff is promoted by taking a coherent approach to every aspect of school life. The health promoting school encourages healthy behaviour and, at the same time, recognises that responsibility for improving health does not lie solely with the individual. It is a responsibility shared among all members of the health promoting school community."[17]

Increasing concern about Scotland's health status and the impact of health inequalities produced a formal commitment from government in February 1999 when a major policy white paper on health entitled "Towards a healthier Scotland"[18] was published with support from all government ministers in Scotland. This document looked at improving the health of Scots of all ages and in relation to young people it stated:

''The government recognises the concept of the health promoting school as important in ensuring not only that health education is integral to the curriculum but also that the school ethos, policies, services and extra-curricular activities foster mental, physical and social well-being and healthy development.''

In addition to this recognition a ministerial commitment was made to take action and set up a specialist unit for the further development of health promotion in schools. The responsibility for setting this up was given to the national health promotion agency in the health service in Scotland, but after negotiation this unit was set up within the education service with support from both the health and education ministries and the national health promotion agency. The growing influence and status of the HBSC study was recognised by the director of the HBSC study being invited to serve on the partnership steering group for this work as mentioned later.

This was an important first step forward in mainstreaming and establishing health promoting schools in the education service rather than being seen as an experimental time-limited 'project' initiated by health professionals. Health promoting schools in Scotland are now relatively well established as mainstream in the education sector, which has to an extent taken ownership of it. For example, policy statements on specific school initiatives are now always placed in the context of the health promoting schools policy framework[19]. This is also true of curriculum policy statements and food provision policy in schools such as "Hungry for Success"[20] which also acknowledged fully the context of health promoting schools

in relation to young people's health. The government set a formal target in 2003 that all schools should be health promoting schools by the year 2008, and this again was an indicator of government publicly acknowledging the extent to which it was starting to take the issue seriously. This target has also focused the minds of stakeholders in schools and education authorities on how they would measure and monitor the status of a school in this regard.

Another piece of evidence supporting mainstreaming of health promotion in schools in Scotland is that government school inspectors now also are required to report routinely on wider aspects of school life influencing health such as the quality of food in the dining areas and in the past this was not seen as part of their core work as they concentrated on curriculum issues as their main focus on quality.

The most important piece of evidence of government commitment and mainstreaming however was in the passing of an act of parliament in Scotland[21]. The 'Schools (Health Promotion and Nutrition) (Scotland) Bill' was introduced in the Scottish Parliament on 8th September 2006 and became law in summer 2007. This places specific duties on education authorities to build health promotion into their improvement plans and to make it clear what they plan to do to fulfill their duties in relation to this. This is a major step forward as Scotland does not have a tradition of bringing about such changes through legislation, usually offering national guidance rather than statutory change in the education system. Therefore such change is taken seriously when it happens and government inspectors will have a central role in monitoring implementation at education authority and school level.

## The factors involved in the development of HBSC in Scotland

*Utilising the political will to improve health*

An important driver that has accelerated this commitment to the HBSC study and to promoting the health of young people has been the political will to change Scotland's poor health record. There is now a comprehensive policy framework in education, health, environment and social justice to provide the support for tackling health inequalities and improving the health of all. The support for the HBSC study should be viewed in this context and in the context of health promotion having a higher priority in schools in Scotland. Clearly HBSC is involved in all aspects of young peoples' lives but the school context has been particularly important for the development of HBSC in Scotland.

The devolution of political power in matters relating to both health and education and the changing political landscape of proportional representation and coalition government have been positive forces supportive of innovation in Scotland. There has been an acceleration of activity in research and associated policy development which has in our judgement come from being closer to the source of political power in Scotland. An illustration of this is the fact that the Deputy Chief Medical Officer and the national agency for health promotion serve on the Liaison (advisory and support) Group of the HBSC International Coordinating Centre (ICC) which is based at CAHRU, University of Edinburgh. The ICC has been funded by the national agency and the government health department for the past 14 years with renewal of funding support for three years to 2012.

In trying to summarise we are sensitive to the complexity of the change process and all we can do is to make tentative suggestions at this stage from our experience which we think are true. It is now recognised that reform in sectors such as education frequently includes unpredictable shifts and fragmented initiatives[22]. It would be misleading to suggest that progress usually occurs in a simple linear way and in steady increments. It is of course highly political and rapid progress can in theory be possible when a strong political will exists. When the political priorities change the process can stall or go into reverse.

One dimension of the complexity of the change is in the different levels of the system which have to play a part if a study such as HBSC has to become established. For example, national government (education, health and other government departments), university departments, area health boards, local education authorities, individual schools, school managers, teachers, parents and young people.) There is evidence of HBSC influencing partners at these various levels in the system. The national HBSC study in Scotland has received continuous funding from the national health promotion agency for over twenty years and this funding has grown to support a well-resourced expert team with survey management, statistical, scientific and policy expertise. The University has provided support for this team for the same period. In addition these organisations have also provided financial and advisory support for the establishment and development of a specialist centre to support the entire international network and study – the HBSC International Coordinating Centre. The national study has benefited from close liaison with health and education departments at both local and national level. This has come about through the necessary discussions about access to school for conducting the survey; through seminars and events to feedback the study's findings; through tailored dissemination products to reach practitioners and policy makers; through the medium of advisory groups and discussions on the study's development in Scotland.

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Good working relations have been built up with schools over many years with close cooperation on pilot studies and national survey administration. Dialogue around sensitive issues such as questions on drug use and sexual behaviour have been conducted with mutual respect and resulted in considered outcomes. Feedback of survey findings to schools in the form of reports and briefing papers has been well-received and evaluation of these dissemination products has led to their further refinement and specification to meet end-user needs. Schools use the research findings to develop their health promotion programmes and in some cases teachers have used them as a source of up to date scientific information on young people's health in Scotland (and internationally). The briefing papers are also used as tools for stimulating classroom discussion and debate as well as for health education material on. They are short 4-6 page documents written in accessible style and available from CAHRU's web-site (www.education.ed.ac.uk/cahru) as well as being distributed to schools throughout the country. To date HBSC has not produced materials for specifically for young people or parents but this is part of the future dissemination strategy for the international study.

It has become evident that partnerships between two sectors such as health and education require time, commitment and persistence to become effective as they involve processes such as:

– the building of trust;
– the development of mutual understanding on language, concepts and values;
– reaching agreement on budget commitments and responsibilities;
– accepting challenges to traditional professional roles.

*Partnership working*

If one attempts to summarise the historical development of partnership working in Scotland, it is clear that in the 1980's and early 1990's early development work in health promotion in schools was initiated by the health sector in what has been termed as the 'Initial Experimental Phase'[4] and the early case study work referred to earlier would be an example of this. This was followed by a strategic development phase where the education sector started to perceive the benefits of health promotion in schools, underpinned by research such as HBSC, in understanding and meeting the social and educational needs in their schools and communities. A third 'Establishment phase' may be reached where the innovations become embedded in the normal ways of working of the school. It is important to note that these phases are not always completely separate or discrete but it is our view that Scotland has reached the early establishment stage perhaps because it has had the benefit of up to twenty years of development. To some extent the HBSC study is now viewed as an established part of the health promotion infrastructure in Scotland, however this depends on continual political and financial support and this establishment stage cannot be seen as guaranteed in any way.

*Building continuity, capacity and the evidence base*

As mentioned, there has been continuity of funding for the HBSC study by the national health promotion agency over the last 20 years. The HBSC team in Scotland has been effective in advocacy by addressing health behaviour trends in Scotland and has been actively involved in working with the health promoting schools movement. As noted earlier, evidence for the research agenda being influential includes the invitation to the HBSC Principal Investigator in Scotland (and International Coordinator) onto the partnership group for the Scottish Health Promoting Schools Unit, as well as onto various government policy advisory groups over recent years. These have been dealing with such issues as young people's sexual health, smoking, alcohol and drug use, physical activity and mental health. There is also a good record of other quality research relating to the health of young people, this research also includes qualitative studies where the voices and views of young people have been heard. One such example of research stemming from evidence provided by HBSC is the PASS (Physical Activity in Scottish Schoolchildren) Study which sought to understand the role that school might play in promoting physical activity among young people[23]. This research was developed in the context of the HBSC findings that there was a steep decline with age in physical activity especially among adolescent girls in Scotland[24].

There has been considerable continuity in Scotland in relation to the key partner organizations and many of the key personnel and this has been very important in a relatively small country where it may be easier to develop capacity for change. For example there has been a national health education/promotion agency funded by government in the National Health Service for over 35 years and the education authority structure has only changed once in the last 30 years. There are individuals who have been involved in this work for over twenty years as practitioners and researchers both at national level and at area level; this continuity of experience and commitment is probably very important, but difficult to quantify.

When it has been identified from research[6] that there is a lack of confidence or capacity in the system to respond to innovation in health promotion in schools, then action has followed to develop appropriate training resources for teachers. For example, "Growing Through Adolescence" was developed in Scotland when teachers made it clear that they required support in dealing with the complex mental health and social health issues concerning young people, body image,

self esteem, dieting and eating behaviours which the HBSC study and other research had highlighted. This is a training and capacity-building resource designed for trainers working with teachers of children particularly within the age range of 8 to 14. "Growing Through Adolescence" also serves to bring HBSC research data into an easily accessible format for practitioners wishing to develop health promoting school strategies, and a European version of this has been developed with WHO support[25]. An adapted version of this will be used as part of a new European programme being funded by the European Commission and led by NiGZ the national health promotion agency in the Netherlands.

## Conclusion

In conclusion, there is evidence that the HBSC study has been influential in policy development and practice relating to health promotion in schools. This is manifested in a range of ways including:

- the close links between the HBSC study and health promotion policy-making in schools;
- the high level of government representation on steering committees and continued sustained funding over 20 years;
- the references to HBSC in government policy papers;
- the development of training and capacity building resource for teachers which draws extensively on data from the HBSC study;
- the high level of coverage of the data in the Scottish media.

All of the above have been possible because of a developing political will to improve Scotland's health. In addition there has been a growing understanding that HBSC is an important international study and that Scotland has played a significant role in co-ordinating the international dimension of the study. The close links between Scotland and the European Regional Office of The World Health Organization (WHO) have provided the context for this.

While the primary purpose of the HBSC study is to monitor trends in health behaviour of young people and understand these in the broad social context of young people's lives, it is also a key objective to influence policy and practice agendas at national and international levels in order to effect young people's health improvement. It is encouraging therefore that its role in Scotland has been so influential in the schools health promotion agenda. Although the specific contextual and political factors outlined above have been important, it is suggested that the influence of HBSC is to some extent a product of the sustained and productive partnership between the research study and the national agency for health promotion in Scotland.

*Acknowledgement*

HBSC is an international study carried out in collaboration with WHO/EURO. A complete list of the participating researchers can be found on the HBSC website (www.HBSC.org).

### References

**1.** Registrar General for Scotland. Scotland's Population 2007: The Registrar General's annual review of demographic trends. Edinburgh: The Stationery Office, 2008.

**2.** Whyte B, Walsh D. Scottish constituency profiles, 2004. (Accessed April 30, 2009, at www.phis.org.uk)

**3.** Young I, Williams T. The healthy school. Scottish Health Education Group. Copenhagen: WHO Regional Office for Europe, 1989.

**4.** Young I. Health promotion in schools: a historical perspective. Promot Educ 2005;12:112–7.

**5.** Crosswaite C, Currie C, Young I. The European Network of Health Promoting Schools: development and evaluation in Scotland. Health Educ J 1996;55:450–6.

**6.** Inchley J, Currie C, Young I. Evaluating the health promoting school: a Case study approach. Health Educ 2000;5:200–6.

**7.** Inchley J, Currie C. Promoting healthy eating in schools using a health promoting school approach. Final report of the ENHPS Healthy Eating Project. Edinburgh: Child and Adolescent Health Research Unit, University of Edinburgh, 2003.

**8.** Inchley J, Kirby J, Currie C. Physical Activity in Scottish Schoolchildren (PASS) Project: physical activity among adolescents in Scotland: final report of the PASS study. Edinburgh: Child and Adolescent Health Research Unit, University of Edinburgh, 2008.

**9.** Alexander L, Currie C, Todd J, Smith R. How are Scotland's young people doing? A cross-national perspective on physical activity, TV viewing, eating habits, body image and oral hygiene. HBSC Briefing Paper 7. Edinburgh: Child and Adolescent Health Research Unit, University of Edinburgh, 2004.

**10.** Currie C, Roberts C, Morgan A, et al. Young people's health in context. Health Behaviour in School-aged Children (HBSC) study: International report from the 2001/2002 Survey. Health policy for children and adolescents, No.4. Copenhagen: WHO Regional Office for Europe, 2004.

**11.** Currie C, Nic Gabhainn S, Godeau E, et al., eds. Inequalities in young people's health: HBSC international report from the 2005/2006 Survey. Health policy for children and adolescents, No.5. Copenhagen: WHO Regional Office for Europe, 2008.

**12.** West P, Sweeting H, Leyland A. School effects on pupils' health behaviours: evidence in support of the health promoting school. Res Paper Educ 2004; 19:261–91.

**13.** Tones K, Green J. Health Promotion: planning and strategies. London: Sage, 2004.

**14.** St Leger L, Kolbe L, Lee A, McCall D, Young I. School Health Promotion: achievements, challenges and priorities. In: McQueen D, Jones C, eds. Global perspectives on health promotion effectiveness. New York, New York: Springer, 2007:107–24.

**15.** Henderson M, Wight D, Raab G., et al. The impact of a theoretically based sex education programme (SHARE) delivered by teachers on NHS registered conceptions and terminations: final results of cluster randomised trial. Br Med J 2007;334:133–5.

**16.** Rogers E. Diffusion of innovation. New York: Free Press, 1962.

**17.** Learning and Teaching Scotland. Health Education 5–14. Dundee, Scotland: Learning and Teaching Scotland, 1999. (Accessed April 30 2009 at http://www.ltscotland.org.uk/5to14/healthsubjectpage.asp)

**18.** The Scottish Executive. Towards a healthier Scotland: a White Paper on health. Edinburgh: The Stationary Office, 1999.

**19.** The Scottish Health Promoting Schools Unit. Being well doing well: a framework for health promoting schools in Scotland. Edinburgh: The Stationery Office, 2004.

**20.** The Scottish Executive. Hungry for success: a whole school approach to school meals in Scotland. The final report of the expert panel on school meals. Edinburgh: The Stationery Office, 2003.

**21.** Schools (Health Promotion and Nutrition) (Scotland) Bill. Edinburgh, Scotland: The Scottish Executive, 2006. (Accessed April 30 2009 at http://www.scottish.parliament.uk/business/bills/68-schoolsHN/.)

**22.** Fullan M. Changing forces: probing the depths of educational reform. New York, New York: Taylor and Francis, 1994.

**23.** Inchley J, Muldoon J, Currie C. Becoming a health promoting school: evaluating the process of effective implementation in Scotland. Health Promot Int 2007;22:65–71.

**24.** Inchley J, Currie DB, Todd JM, Akhtar PC, Currie CE. Persistent socio-demographic differences in physical activity among Scottish schoolchildren 1990–2002. Eur J Public Health 2005;15:386–8.

**25.** Young I, ed. Growing through adolescence. Copenhagen: WHO Regional Office for Europe, 2005.

**Address for correspondence**

**Ian Young**
**16 Frogston Avenue**
**Edinburgh, EH10 7AQ**
**Scotland**
**Great Britain**
**E-mail: imyoung@blueyonder.co.uk**