Smoking and schoolchildren in Wales: a new programme

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Results of the Welsh Youth Health Survey, which was conducted in 1986, are being used to plan 'a unique and innovative programme to promote the health of young people in Wales'. This article describes the background to the survey and some of the implications it has for smoking education strategies.

The Welsh Heart Programme (Heartbeat Wales) is a national demonstration project to promote good health in the Welsh population of three million people. It is particularly concerned with reducing the risks of cardiovascular disease throughout the Principality – encouraging non-smoking, healthy nutrition, regular exercise, hypertension control, stress management, and First Aid for heart attacks.

A multi-risk factor approach has been adopted, based on the recommendations of the World Health Organisation which emphasise the importance of a multi-dimensional programme and the positive benefits of a healthy lifestyle (WHO, 1982 & 1986). Previous heart disease prevention programmes have demonstrated the feasibility of achieving cardiovascular risk reduction using a combination of intervention techniques, and a balanced programme has been organized, combining national and media based initiatives with locally organized and managed projects (Puska, 1985). Strong emphasis is given to community participation and partnership so that the numerous community networks in Wales can be built on (Parish, 1987; Nutbeam, 1988a).

A programme designed to promote the health of young people in Wales has been included as an important element to Heartbeat Wales. Many of the elements of lifestyle associated with an increased risk of cardiovascular disease have their roots in childhood and adolescence. Cigarette smoking is initiated primarily between the ages of 9 and 13, and progresses to regular use within a few years of initiation. The vast majority of children who leave school as smokers continue with the habit into adult life. Similarly, other lifestyle factors including patterns of diet and physical activity, and alcohol and other substance abuse are primarily social behaviours learned in childhood and adolescence which, when adopted, are typically maintained into adulthood. Such evidence strongly points to the logic of working with young people to promote health and specifically to reduce the risks of cardiovascular disease in adult life.

The questionnaire and the sample

To establish a base of information for planning, monitoring change and evaluating the impact of a youth health programme, a survey of health behaviour and associated factors was undertaken among secondary school pupils aged 11-16 in Wales. The questionnaire used in the survey was based on a World Health Organization protocol designed for use in a cross national study of children's health behaviour (WHO, 1985). The Welsh version included additional questions on smoking to meet the specific needs of the Programme.

A stratified random sample of 86 secondary schools was drawn to ensure representation from each of the eight Local Education Authorities in Wales. In total 81 schools took part in the survey; the other five were unable to participate due to industrial action. Thirty pupils were then randomly selected from Year 1 (11-12 years), Year 3 (13-14 years) and Year 5 (15-16 years) in each of the participating schools. The questionnaires were administered to pupils in class size groups by teachers who had previously attended a full briefing session on the administration procedure. The questionnaires were anonymous and pupils placed and sealed them in envelopes after completion. A total of 6,555 questionnaires were returned and used in the analysis.

The questions relating to smoking concerned present and previous experiences of smoking, consideration of the smoking environment (where, when and who children smoke with, where they obtain cigarettes), and an assessment of children's attitudes to smoking. Additional variables examined children's attitudes to school, academic achievement and future work plans. Further details of the study design and an overview of the results are available (Welsh Heart Programme, 1986; Nutbeam, 1986).

There are a number of excellent reviews of why young people smoke and the consequences of this for planning programmes of action and no attempt is made here to repeat this work (Flay, 1983; Reid, 1985; Nutbeam, 1988b). These studies have been used in Wales both to place our own results into some perspective, and to provide a wider base of information for planning. Five key planning issues are identified here.

1. Developing the habit

Children rarely become regular smokers overnight, and smoking behaviour generally follows a predictable sequence of trying for the first time, followed by continued experimentation, followed by more regular smoking, and finally habituated smoking. This sequence can happen over a period of months but may take years to fully unfold. Table 1 indicates that over half of 15-16 year olds admit to having tried smoking at least once. Even among 11-12 year olds, a quarter admit to having tried. Of those who do experiment many may decide not to do so again while others will experiment further. Regular (weekly or daily) smoking is uncommon in Year 1, but grows in prevalence considerably by Year 3 and continues to grow into Year 5. The proportion of occasional smokers grows only slightly and remains relatively low

Table 1. Smoking prevalence (percentage responses: Welsh Youth Health Survey, 1986).

Year and sex		Daily smoker	Weekly smoker	Occasional smoker	Ex-smoker	Never smoked	Sample size
Year 1	Boys	0.8	1.1	2.5	20.2	75.3	1065
	Girls	0.4	1.9	2.7	17.9	77.1	1120
Year 3	Boys	5.0	2.5	4.2	34.2	54.1	1049
	Girls	8.5	3.5	5.7	37.4	44.9	1139
Year 5	Boys	12.9	2.5	4.4	41.3	38.9	974
	Girls	15.1	5.1	4.4	41.1	34.2	1111
Total	Boys	6.1	2.0	3.7	31.6	56.6	3088
	Girls	8.0	3.5	4.3	32.2	52.1	3370

Table 2. Pupils' opinions about smoking – percentage responses for Years 1, 3, and 5 combined. (Welsh Youth Health Survey, 1986.)

Statement	BOYS		GIRLS	
	Smokers	Non-smokers	Smokers	Non-smokers
Positive Images				
Smoking helps to calm your nerves . . .	51.1	18.0	56.0	17.1
Smoking keeps you slim	22.3	9.4	21.0	9.8
Smoking helps you cope with problems	34.4	7.6	30.7	5.4
Smoking helps you to make friends . . .	17.9	3.7	11.1	2.8
Negative Images				
People my age smoke to show off	45.8	76.7	38.6	77.5
Smoking makes you smelly	69.6	89.1	80.2	91.0
Smoking is a waste of money	76.8	94.5	86.1	95.4
Sample size	350	2700	525	2800

in Year 5. Among girls there is a substantial rise in overall smoking prevalence between Years 1 and 3 (5%→18%) whereas among boys the increase is more linear between the year groups. In all age groups more girls than boys are smokers.

Becoming a regular smoker in adolescence does not automatically mean becoming a habitual smoker as an adult – but it is a powerful predictor. Alternatively, quitting at any stage may not be a final decision. During adolescence, movement between regular smoking, experimental smoking and non-smoking is relatively fluid due to changes of friends, school, lifestyle, etc.

The implications of this developmental process for smoking education programmes is in the need to consider carefully the *timing* of activities and their relevance to a particular age group. It is vital that educational programmes to reduce smoking commence at a time when most young people experiment and before they become regular smokers. This generally means programmes should be targeted at 9-13 year olds. Continued reinforcement relevant to different stages will maximise the chances of success.

2. Positive and negative views

Table 2 combines the answers from pupils of all ages. There are some variations in opinion with age which are disguised with this presentation, but the general differences illustrated in this summary remain constant. A majority of smokers believe that smoking 'helps calm your nerves' and a substantial proportion that it 'helps you cope with your problems'. The belief that smoking keeps you slim is also held by an important minority of both boys and girls. Relatively few see smoking as a way of helping to make friends, although more smokers than non-smokers hold this belief. The negative images of smoking are held by the great majority of all young people but there are quite marked differences between boys and girls, and between smokers and non-smokers.

Although over half of 15-16 year olds in Wales have either experimented with smoking or become smokers, the majority are non-smokers. In all our concern with 'smoking' and 'smokers' it is easy to forget that for most young people smoking education is mainly about maintaining the status quo. Table 2 indicates that the great majority of non-smokers already hold negative views of smoking, and whilst these need to be reinforced, it is also important to promote a positive image for non-smokers and ex-smokers. This will almost certainly involve providing information to counter the myths and attractions surrounding smoking (e.g., stress reduction, slimming and toughness), and more positively emphasising that non-smokers feel fitter, healthier, in greater control of their lives, and wealthier.

3. Moving from knowledge to skills

Traditionally, smoking education has been based on the transfer of knowledge, particularly concerning the negative impact on health. Such approaches on their own have rarely been shown to be effective. Although the basic information about smoking described above is undoubtedly important, the social and environmental factors which influence smoking behaviour extend well beyond a traditional knowledge base.

Table 3 indicates a relatively weak but consistent relationship between parental smoking status and children's smoking status. Fathers who smoke appear to have a stronger influence among both boys and girls than mothers who smoke. Young people who smoke are considerably more likely to have best friends who also smoke.

Table 4 indicates that most young people in Wales who smoke usually obtain cigarettes from shops. The proportion rises with age from a quarter of 11-12 year olds to more than three-quarters of 15 and 16 year olds. The other main source given by pupils is 'friends'. This includes older friends who 'buy them for you' and cigarettes given or shared by young people.

In the recent past the most successful school-based smoking education programmes have sought to address these social and environmental issues both by helping young people to develop skills to resist social pressures to smoke, and by trying to link school activity with home. Examples of this type of project in the UK include Smoking Education for Teachers Project (*Smoking and Me*) and the Family Smoking Education Project. Both these projects are relatively new and require approaches to classroom teaching which are alien to many teachers. Clearly their effective use in schools will

Table 3. Social influences on smoking – percentage responses for Years 1, 3, and 5 combined. (Welsh Youth Health Survey, 1986.)

Influence	SMOKERS		NON-SMOKERS	
	Boys	Girls	Boys	Girls
Father smoker	58.8	55.4	44.2	43.8
Mother smoker	44.2	46.7	34.5	34.4
Best friend smoker	80.9	81.1	14.9	13.9
Sample size	358	524	2669	2784

Table 4. Usual sources of cigarettes for current smokers (percentage responses: Welsh Youth Health Survey, 1986).

Source	YEAR 1		YEAR 3		YEAR 5	
	Boys	Girls	Boys	Girls	Boys	Girls
Shop	31.8	21.3	48.5	58.4	77.8	76.8
Cigarette machine . . .	2.3	8.5	9.9	5.9	4.7	2.8
Other people	4.5	8.5	6.9	7.6	2.3	1.6
Friends	38.6	46.8	22.8	21.1	14.0	17.7
Brother/sister	11.4	2.1	2.0	1.6	0.0	0.0
Mother/father	0.0	2.1	3.0	0.5	0.6	0.8
Take/steal	4.5	4.3	2.0	2.2	0.0	0.0
Other	6.8	6.4	5.0	2.7	0.6	0.4
Sample size	44	47	101	185	171	204

Table 5. Pupils' feelings about school – percentage responses for Years 1, 3, and 5 combined. (Welsh Youth Health Survey, 1986.)

Statement about school	SMOKERS		NON-SMOKERS	
	Boys	Girls	Boys	Girls
I like it a lot	13.4	13.2	22.1	32.9
I like it a bit	36.9	44.7	48.0	48.6
I dislike it a bit	24.6	22.1	18.9	12.8
I dislike it a lot	25.1	20.0	11.0	5.8
Sample size	358	524	2669	2784

Table 6. Pupils' opinions of their teacher's assessment of performance – percentage responses for Years 1, 3, and 5 combined. (Welsh Youth Health Survey, 1986.)

Teacher thinks he / she is.....	SMOKERS		NON-SMOKERS	
	Boys	Girls	Boys	Girls
Very good	6.6	6.8	13.3	14.7
Good	31.1	28.3	41.8	41.4
Average	49.3	56.5	40.9	42.6
Below average	13.1	8.3	4.0	1.4
Sample size	351	515	2646	2740

not only require that curriculum time is available, but also that teachers are adequately prepared for and supported.

4. Beyond the school

Tables 5 and 6 illustrate the fact that young people who smoke are more likely to feel alienated from the school and its educational tradition, and more likely to perceive themselves as academically unsuccessful. Such findings are an important reminder that an effective programme to reduce smoking has to involve actions outside the school setting. Using the media and other youth networks (such as youth clubs) to reinforce and extend work done in the classroom is an important element in a comprehensive programme. In addition, Table 4 has already indicated that action which will reduce the supply of cigarettes to young people (e.g., proper enforcement of the laws relating to the sale of cigarettes), as well as actions to reduce demand (e.g., further restrictions on cigarette advertising and sponsorship) will further help create a restrictive environment for young smokers.

5. Boys and girls

Smoking is more common among girls of all ages than among boys in Wales. This has also been found in the rest of the UK and in other countries in Europe (Nutbeam, 1988b; Goddard, 1987). Past studies in the UK have consistently indicated that more boys than girls smoked. This change, if confirmed in subsequent studies, has important implications for smoking education programmes which will need to be more sensitive to the factors which influence girls to become smokers. Table 3 indicates that a substantial minority consider that smoking assists weight control, and that a majority believe it helps to control stress. These may be important issues which need greater attention.

The Heartbeat Wales Programme in school...

Although no specific funding for a youth programme was originally granted to Heartbeat Wales, the project team considered work with young people to be essential and developed an embryonic programme with a special focus on smoking. Consistent with the main programme work, a range of activities have been developed to support and extend existing community work, particularly that in schools.

Special emphasis has been placed on supporting the widespread use of three curriculum projects. The first, the *My Body* project, has been developed for use with primary schoolchildren, has been field-tested and shown to have an impact on children's smoking. The other two, the Smoking Education for Teenagers and Family Smoking Education projects, were both designed for use in secondary schools.

Within schools, a complementary survey to the one reported here, has indicated that relatively few schools have a comprehensive smoking policy which covers staff and pupils (Nutbeam, 1987).

... and outside school

Outside the school a club for 10–12 year olds, 'Heartguards', has been established on a pilot basis in three areas in Wales. This has been set up in an attempt to reach young people in their homes. The principal aim is to involve young people in health issues and promote an understanding of factors which have an impact on health. Membership includes children in pledging always to say 'no' to cigarettes and involves them in quizzes, competitions, etc., through a regular newsletter. Early activities were focussed on smoking, encouraging children to consider what might influence them to smoke, and to take positive action to prevent it (e.g., writing to us about cigarette advertising, asking in restaurants for a no-smoking table).

Conclusion

In 1987, Heartbeat Wales became part of the Health Promotion Authority for Wales. This Authority was established by the Secretary of State for Wales to provide further impetus to the wide range of health education and health promotion work in Wales. One early priority for the new Authority has been to develop a more comprehensive Young Persons Programme. This will evolve in the coming months using the data from the Youth Health Survey and the experiences of the past eighteen months described above.

References

Flay, B., d'Avernas, J. R., Best, J. A., *et al* (1983). In McGrath, P. & Firestone, P. (eds.), *Paediatric and adolescent behavioural medicine.* New York: Springer-Verlag.

Goddard, E. & Ikin, K. (1987). *Smoking among secondary schoolchildren in 1986.* OPCS, Social Survey Division: HMSO.

Nutbeam, D. (1986). *Smoking or youth: preventing teenage smoking in Wales.* Cardiff: Heartbeat Wales.

Nutbeam, D., Clarkson, J., Pillips, K., *et al* (1987). The health promoting school: organisation and policy development in Welsh secondary schools. *Health Education Journal,* 46: 3, 109-115.

Nutbeam, D. & Catford, J. C. (1988a). *Social marketing principles and practice: the Heartbeat Wales experience.* (In press.)

Nutbeam, D., Mendoza, R. & Newman, R. (1988b). *Planning for a smoke-free generation in Europe.* Copenhagen: World Health Organisation (EURO).

Parish, R., Catford, J. C. & Nutbeam, D. (1987). Breathing life into Wales. Progress in the Welsh Heart Programme. *Health Trends,* 19: 2, 23-26.

Puska, P., Nissinen, A., Salonen, J. T. *et al* (1985). *The community-based strategy to prevent heart disease: conclusions from the ten years of the North Karelia Project.* US Annual Review of Public Health.

Reid, D. (1985). Prevention of smoking among schoolchildren: recommendations for policy development. *Health Education Journal,* 44: 1, 3-11.

Welsh Heart Programme Directorate (1986). *Welsh Youth Health Survey protocol and questionnaire.* Cardiff: Heartbeat Wales.

World Health Organisation (1982). *Prevention of coronary heart disease. Report of a WHO Expert Committee.* Geneva: Technical Report Series 678.

World Health Organisation (1985). *Health behaviour in schoolchildren. A cross-national survey: protocol.* Copenhagen: KP/NCD 503 501.

World Health Organisation (1986). *Community prevention and control of cardiovascular diseases. Report of a WHO Expert Committee.* Geneva: Technical Report Series 732.

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