

Control of Adolescent Smoking

**Transnational variation in prevalence of
adolescent smoking: the role of national
tobacco control policies and the school and
family environment**

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SUMMARY

The Control of Adolescent Smoking (CAS) study is an international research study investigating the association between national tobacco policies, school smoking restriction policies and the smoking of young people. The CAS study received funding as a Concerted Action under 6.2 of the BIOMED research programme of the European Commission, and included eight countries: Austria, Belgium (French-speaking Belgium only), Denmark, Finland, Germany (North Rhine-Westphalia only), Norway, Scotland and Wales.

The CAS study was based on theoretical assumptions about student uptake of smoking in that observational learning, as suggested by Social Cognitive Theory, may influence individual attitudes and subjective norms, which in the Theory of Reasoned Action are assumed to be basic determinants of intentional behaviour. Observational learning was assumed to be influenced by national and school tobacco policies through exposure to smoker role models.

Schools were chosen as the subject of this study not only because of the impact that they have on adolescent development, but also because aspects of the school environment appear to be related to smoking initiation among young people. Furthermore, health education and health promotion programmes aimed at young people are most often made available through schools.

Data for the CAS study was collected at three levels - national, school and student levels - during the academic year 1997/98. The data collection at the student level was carried out as part of an existing transnational survey on health behaviours among children and adolescents, "Health Behaviour in School-aged Children: a WHO cross-national study" (HBSC). The total student sample was 13,090 students aged 15. The staff survey was administered as an integral part of the fieldwork with students, and 2,162 staff responses were collected. National data on governmental tobacco control policies, in particular those relating to smoking at school were gathered through a review of scientific and official documents and interviews with key informants in each country. The hierarchical structure of the data enabled the use of multilevel techniques in statistical analysis.

The study findings indicate that certain aspects of government policy did appear to be related

to lower smoking rates among young people. In particular, countries where it was difficult for adolescents to get access to cigarette vending machines, and where cigarette prices were high, had lower smoking prevalences than countries with easy access to vending machines and relatively low prices.

Students were also less likely to be exposed to teachers smoking in school in countries with comprehensive national smoking policies. Moreover, in schools that had smoke-free policies, the probability that students reported being exposed to teachers smoking indoors was 7 %, in contrast to 37% for those in non-smoke-free schools. The study demonstrated that policy strength, policy enforcement and the prevalence of smoking among students were associated, after having adjusted for student-level characteristics. These findings suggest that the wider introduction of comprehensive school smoking policies may help reduce teenage smoking

The results also suggest that good teacher support for students was correlated with lower smoking rates in students. Thus, smoke-free school policies are likely to work better in supportive school environments.

It has to be noted that in some countries, very restrictive national policies on indoor smoking at school can push teacher smoking outdoors, resulting in the negative and unforeseen side effect of making smoking more visible to students. But the main recommendation from the CAS study is to aim for smoke-free schools and support this aim with comprehensive national tobacco control policies.

1. INTRODUCTION

This report has grown out of an international research study investigating the association between national tobacco policies, school smoking restriction policies and the smoking of young people - the Control of Adolescent Smoking (CAS) study. The CAS study received funding as a Concerted Action under 6.2 of the BIOMED research programme of the European Commission during February 1998-March 2001.

The overall aim of the CAS study was to contribute to i) the identification of the principal risk factors causing young teenagers to start smoking, and ii) the identification and evaluation of specific public health policy strategies throughout Europe, with a view to producing the optimal conditions for a reduction in cardiovascular and lung diseases in the European population. The main objectives of the study were:

- i) to describe national tobacco control policies, in particular, those relating to restriction of smoking in schools, and their national context;
- ii) to assess how national and school policies and practices are related to students' perceptions of smoking at school by peers and teachers; and
- iii) to study how these perceptions are related to smoking prevalences among students.

Aim of report

This report constitutes the scientific report of the Control of Adolescent Smoking (CAS) study, presenting the study as a whole, including background, scientific rationale, methods, instruments, data analyses and findings produced following one year of data analysis. These findings were presented by the CAS research group at a special seminar at the European Parliament in Brussels, 'Smoking and Young People', on 24th January, 2001 (see Appendix 6). The seminar was hosted and chaired by Catherine Stihler, MEP, and attended by delegates from a wide range of organisations, (including EC Biomed project officers, European

Network of Health Promotion Agencies (ENHPA) professionals, representatives from European Network on Young People And Tobacco (ENYPAT)). The seminar presentations stimulated a lengthy discussion.

Partners

The countries participating in the CAS study were: Austria, Belgium (French-speaking Belgium only), Denmark, Finland, Germany (North Rhine-Westphalia only), Norway, Scotland and Wales. A short overview of partners is presented in Table 1.1. The Scottish team coordinated the project. The Norwegian team was responsible for coordinating the international work on the student survey, the Welsh team for the school staff survey, and the Danish team for policy analysis at the national level.

Table 1.1 A short overview of the participants

Participating country	Research Institute	Participants
Austria	LBI for the Sociology of Health & Medicine, c/o Institute of Sociology, Neues Institutsgebaude of University of Vienna	Wolfgang Dür
French-speaking Belgium	Université Libre de Bruxelles, École de Santé Publique	Danielle Piette Laurence Kohn Christine Bazelmans
Denmark	Institute of Public Health, University of Copenhagen	Bjørn E. Holstein Lis Hentze-Jensen
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Scotland	Child and Adolescent Health Research Unit, University of Edinburgh.	Candace Currie Dawn Griesbach
Wales	Health Promotion Division, National Assembly for Wales.	Chris Tudor-Smith Chris Roberts

1.2 Background

Smoking among young people in Europe

In Europe it is estimated that smoking tobacco is a primary or major contributory cause of lung diseases (e.g. cancer, bronchitis, emphysema) and cardiovascular disease (WHO, 1996). Evidence from extensive research shows that about half of those who start smoking cigarettes regularly in their teenage years, and keep on smoking steadily, will eventually be killed by tobacco (about one quarter in old age plus one quarter in middle age) (Peto et al., 1994). In European countries, most adult smokers report taking up regular smoking between the ages of 13 and 15 (Reid et al, 1995), and one in four teenagers have become regular smokers by the age of 15 (varying from 6 % of Lithuanian girls to 56 % of girls from Greenland) (Currie et al., 2000).

The reduction of smoking among young people is a major public health priority in many countries in the European region. Following a number of large community-wide efforts, the prevalence of smoking among young people declined steadily in Europe and North America in the 1970s and 1980s. This decline then levelled out, and in the 1990s it appears that the prevalence of smoking is increasing again among adolescents and college students in America and many European countries (Currie, Roberts & Francois, 1999; Kraft & Svendsen, 1997; King et al., 1996; Gilpin & Pierce, 1997; NicGabhainn & Roberts, 2000; Wechsler et al., 1998).

The explanation for this recent increase among adolescents has not been ascertained, but it is likely to be the result of more than one factor. A number of scholars have suggested that insufficient use of preventive measures might contribute (Kraft & Svendsen, 1997; Wechsler et al., 1998), while at the same time, the tobacco industry is constantly developing new strategies to target their advertising at young people (Kraft & Svendsen, 1998, Pierce et al., 1991, King et al., 1998, Arnett & Terhanian, 1998).

1.3 Scientific rationale for the CAS study

Determinants of adolescent smoking

Given the fact that regular smoking becomes prevalent between the ages of 13 and 15, policies and programmes to prevent young people from becoming smokers need to be based on knowledge about the development of this behaviour. Previous research (Reid et al., 1995; Aaroe et al., 1986; King et al., 1996, Nutbeam & Aaroe, 1991; Moore et al., 1994; Surgeon General, 1994; Tyas & Pederson, 1998; NHS Centre for Reviews and Dissemination, 1999) suggests that major factors contributing to the decision of teenagers to start smoking or not to smoke, are:

- socio-environmental (i.e., whether their best friend smokes, whether their parents smoke, whether older siblings smoke, the socio-economic status of the head of the household, tobacco advertising, the availability and price of cigarettes, whether or not they perceive that tobacco use is culturally acceptable, smoking of teachers, and the existence or absence of health education programmes at school);
- behavioural (i.e., participation in other risk behaviours such as alcohol use); and
- personal (i.e., low academic achievement, alienation from school, and beliefs about the psychological and social benefits of smoking).

The study of the adoption and maintenance of health risk behaviours such as tobacco use must take into account the influences of the main socialising agents in a young person's life: the family, the school, the peer group and the media (Hürrelmann, 1989; Perry et al., 1993; Wold et al., 1994). Schools have been chosen as the subject of this study not only because of the impact that they have on adolescent development, but also because aspects of the school environment appear to be related to smoking initiation among young people (Samdal et al., 2000). Furthermore, health education and health promotion programmes aimed at young people are most often made available through schools (Millstein et al., 1993).

According to Bronfenbrenner (1979), school influences on smoking may be conceived as the interplay between roles, activities and relationships at four levels:

1. The micro-level. This is the level at which processes impact on young people's immediate environments. For example, how teachers may influence students through their own behaviour, by smoking or not smoking, may be thought of as a micro-level influence.
2. The meso-level. This is the level where one may see inter-relations between two or more settings in which young people actively participate. The way in which smoking restrictions in school correspond with family smoking practices is an example of a meso-level influence.
3. The exo-level. This level includes events which do not involve the young person as an active participant. For example, the way in which school smoking restriction policies are developed and supported by school staff may be seen as an exo-level influence.
4. The macro-level. This level includes influences arising from outside the school, but which may impact upon the school environment. The way in which national tobacco control policies are communicated and introduced to schools is an example of a macro-level influence.

1.4 The micro- and meso-level: school and family influences on adolescent smoking

Teachers and other staff who smoke at school represent potential smoker role models to the students. According to social cognitive theory (Bandura, 1986), students are expected to be much more likely to take up smoking if they observe that their teachers are smoking. Modeling can affect not only behaviour but also cognitions and perceived emotions, including attitudes. According to ecological developmental theory (Bronfenbrenner, 1979), modeling effects on attitudes are expected to be even stronger if there is a consistency between home and school experiences, e.g. if the adolescent is exposed to smoker role models in both settings.

Parental substance use has been found to be associated with adolescents' attitudes towards substance use (Ennett & Baumann, 1991). In a sample of 1775 adolescents aged 13, Wills et al. (1994) found indirect effects of parental substance use through attitudes representing alienation from conventional goals and endorsement of attitudes that would be characterised as socially deviant, in addition to indirect effects of a number of other constructs such as lower behavioural control, greater perceived coping function of substance use and more affiliation with peer users.

The parental and teacher modeling effects on attitude toward smoking may be mediated through adolescent beliefs about the consequences of smoking, weighted by the importance or value placed on these consequences as suggested by the Theory of Reasoned Action (Ajzen, 1988). If smoking is not restricted at home or at school, or if parent and teacher smoking is not restricted, the students may perceive smoking as something positive and acceptable, and as a result develop positive attitudes towards it. Fewer restrictions on smoking may mean less social pressure for students to be non-smoking. In combination, because of the relatively high prevalence of smoking among teachers and parents in many countries, the lack of smoking restrictions at school is likely to influence students to develop favourable personal beliefs and subjective norms about smoking, resulting in intentions to start smoking. If the students experience high levels of self-efficacy regarding taking up smoking, and cigarettes are available to them, the initiation of student smoking is very likely to occur.

Bans on students' smoking in schools have been associated with reductions in both the prevalence of smoking and the consumption of cigarettes among school children in France and California, while the practice of permitting older students to smoke in designated areas has been linked with higher prevalence in the USA (Pentz et al., 1989; Reid et al., 1995). Other studies suggest no associations between school policies and prevalence of smoking (Clarke et al., 1994; Charlton & While, 1994). In a recent study of a large sample of American high school students, Wakefield et al. (2000) found that school smoking bans were associated with a greater likelihood of being in an earlier stage of smoking uptake and a lower 30 day prevalence of smoking, but only when the ban was strongly enforced. The study also showed that more restrictive arrangements on smoking at home were associated with a greater

likelihood of being in an earlier stage of smoking uptake and a lower 30 day prevalence of smoking.

There are now many studies which show that smoking bans in the workplace result in decreased cigarette consumption and an increase in the proportion of smokers who accept smoking cessation programmes (Stave & Jackson, 1991; Gottlieb & Nelson, 1990; Kinne et al., 1993; Rosenstock et al., 1986; Sorenson et al., 1991; Farrelly et al., 1999). The school may be considered to be the workplace for adolescents, but so far, there is not sufficient evidence to determine whether the experience from adults' workplace programmes can be generalised to adolescents. It has been suggested, however, that such policies would be appropriate for colleges and universities (Pierce et al., 1991).

1.5 The exo-level influences: restriction of smoking at school in policy and practice

Following the above line of reasoning, restricting adolescents' exposure to models of adult smokers may prove an effective means of smoking prevention, especially when supported by other preventive measures in the community. Through various public health initiatives such as mass media campaigns in European countries, adults have been encouraged not to smoke, but few efforts seem to have been made to influence the view of parents and teachers as significant smoker role models (Reid et al., 1995). The more powerful strategies may therefore imply restrictions of adult smoking at places where young people spend time, mainly in private homes, schools and other relevant public places. As smoking in private homes cannot be regulated at a political/legislative level, interventions have to rely on voluntary efforts from smokers. The types of advocacy and educational campaigns which would be feasible strategies to achieve smoke-free homes tend to be very expensive and probably not very effective (Reid et al., 1995).

Achieving smoke-free schools is a more feasible alternative, especially given the function of school as a formal arena for development and learning. The adults at school may be expected

to be motivated to act as good examples for the students, and studies have shown that teachers, including teachers who smoke, agree that school staff should set a good example by not smoking (Galaif et al., 1996). However, as a group, staff smokers tend to be unfavourable toward a no-smoking policy at school (Galaif et al., 1996; de Moor et al., 1992), and several studies suggest that compliance with bans on smoking in school is low (Galaif et al., 1996; Wakefield & Chaloupka, 2000).

As suggested by Reid et al. (1995), the costs to health departments of encouraging restrictions on smoking in schools are likely to be minimal. However, there are many obstacles to full implementation unless school administrators are willing to make no-smoking mandatory. Very little is known about the precise role, and relative significance, of implementing policies on restriction of smoking on school grounds (Chollat-Traquet, 1996). One of the few studies reported is an evaluation of a project to expand smoking control policies in primary schools in the city of Barcelona (Villalbi & Ballestin, 1994). This project was launched after new regulations on smoking in public places were enacted but were judged to be largely non-enforced in school settings. Emphasis was put on facilitating a process of internal discussion and consensus building within schools in defining policies on smoking. The baseline data showed that actual policies on smoking were often not explicit, restricted to banning smoking by students and to non-smoking by adults within the classroom and in some other areas, but that visible smoking by adults was frequent in primary schools. Thus, the main obstacles to successful implementation were represented by teachers, and other staff, who smoke at school. An indicator of the success of implementation of national and school policies on restrictions on smoking could therefore be to what extent students are exposed to teachers who smoke at school.

Whereas most European countries do have some type of legislation about restriction of smoking at public places such as schools (Harkin et al., 1997), evidence from recent studies suggests that very few European schools are in fact smoke-free (Reid et al., 1995). US studies have also shown that compliance with bans on smoking in school is low (Galaif et al., 1996; Wakefield & Chaloupka, 2000). As the degree to which schools are smoke free may depend on national or regional tobacco control policies, it is important to define and classify such policies, and examine the extent to which they include issues related to smoking at school. Moreover, there is a need to define the current status of smoke free schools, in order to

investigate whether national and regional tobacco control policies have been successfully implemented in schools.

1.6 The macro-level: national tobacco control policy

The cultural context plays a very significant role as regards the extent to which national policies on smoking restriction are successfully implemented at school level. Societal norms regarding smoking and acceptance of legislative measures vary considerably across countries. Furthermore, the relationship between school level policies and practices and national policies may also differ to a great extent, in that relevant national policies may be quite easy to implement in some countries, and difficult to implement in others. The macro-level analysis therefore sought to gather relevant information and gain a better understanding of national policy implementation at school level

Cultural influences is rather difficult to define conceptually. Culture may be defined as "the set of attitudes, values, beliefs, and behaviours, shared by a group of people, communicated from one generation to the next via language or some other means of communication (Barnouw, 1985, ref. in Georgas & Berry, 1995). A more anthropological definition of culture is for example "the man-made part of the environment" (Georgas & Berry, 1995). According to Georgas & Berry (1995), there has been an inability to construct a concept of culture for operational use, and that what is needed is a system of classification, a taxonomy of nations and of cultural and ethnic groups, in terms of specific ecological and social indicators. This model could be employed to select nations that differ or are similar in regard to ecological and social indicators and to enable the interpretation of the health variables in terms of these ecological and social indicators. Georgas & Berry (1995, p.127) propose that "one way to proceed is to "abandon" culture as a theoretical concept in cross-cultural research as a sampling unit and to adopt some more operational concepts, such as some specific dimensions of national units" (appr. 180 national units are currently recognized by the United Nations).

In the Control of Adolescent Smoking (CAS) study, geographic nations are the preferred unit. However, acknowledging that some of the participating countries include different cultures, such as in Belgium and the United Kingdom, samples from regions have been selected, such as the French-speaking community of Belgium, Scotland and Wales from U.K.

In order to investigate whether and how smoking in schools depends upon the implementation and enforcement of national tobacco control policies, it is important to define and classify such policies, and examine the extent to which they include issues related to smoking at school. According to Ham & Hill (1993), the concept of “policy” poses definitional problems, making it difficult to treat it as a specific and concrete phenomenon. Nevertheless, several definitions of policy emphasize that it is concerned with the selection of goals and the means of achieving them within a specified situation. Thus, one way of classifying policies may be according to the goals or aims of a policy, and the strategies or actions required to achieve those aims.

Policy aims. Crosswaite & McQueen (1993) pointed out that health policy may be considered to be a form of health protection as defined by Downie et al. (1990): “Health protection comprises legal and fiscal controls, other regulations and policies, and voluntary codes of practice, aimed at the enhancement of positive health and the prevention of ill-health”. Thus, tobacco control policy, as one type of health policy, may be expected to have the aim of protecting individuals from conditions known to be harmful to health.

Policy strategies Tobacco control policies and programmes advocate two basic aims, namely to help existing users of tobacco to give up or cut down, and to dissuade young people from starting to use tobacco in the first place (Reid et al., 1995; King et al., 1996). The tobacco control policies of many European countries employ various strategies to achieve these aims (Dalla-Vorgia et al., 1990).

These strategies include:

1. educational programmes, which may take the form of school or community health education classes, health warnings on cigarette packages or mass media campaigns.
2. restrictions or bans on the advertising of tobacco products;
3. direct restraints on smoking in public places (e.g., work places, schools, hospitals) and the restriction of tobacco sales to young people;
4. economic measures such as increased tobacco taxation and insurance incentives.

Among the main developments in tobacco control during the past 20 years, is the increase in legislation and policies on restriction of smoking at national, state and local levels (Harkin et al., 1997; Wakefield & Chaloupka, 2000). A comprehensive description of national smoking control policies in the European region in the mid-1990s concluded that the vast majority of countries had some form of tobacco control policy but that there was a considerable variation in the extent of these policies and their comprehensiveness (Harkin et al., 1997). In general, Finland, Iceland, Norway and Sweden had the most comprehensive legislative framework. While legislative control was overwhelmingly the strategy used in the Region, some countries favoured voluntary agreements with the tobacco industry.

1.7 How effective are tobacco control policies? A review of the literature.

Health education programs: There is by now a large number of studies which evaluate smoking prevention programmes for adolescents. A meta-analysis of the effects separated programmes by orientation: 1) social reinforcement orientation, 2) developmental orientation, 3) social norms' orientation, and 4) a traditional rational orientation. The analysis suggests that the effects on smoking behaviour is largest for type 1 intervention programmes, moderate for type 2 and 3 programmes, and small for type 4 interventions. Attitude effects followed the same pattern but effects on knowledge were similar across all four orientation categories (Bruvold 1993).

Reid et al (1995) reviewed the effects of major intervention programmes in the Western countries to reduce smoking in youth, i.e. school health education, media and school programmes for young people, media and community programmes for all age groups, prevention of sales to teenagers, restrictions on smoking in schools, advertising bans, fiscal policy, and media advocacy. They concluded that interventions aimed primarily at youth are likely to have a delaying effect only. Sophisticated school programmes, though potentially valuable, have proved to be difficult to implement effectively on a large scale. They suggest that priority should be given to broad-based interventions aimed at the community as the whole, including mass campaigns for all-age groups, fiscal policies, restrictions on smoking, and bans on advertising. Mass media campaigns may be more effective than school based campaigns in order to reach high risk groups.

It has been demonstrated that the development of smoking control policies in schools stimulate discussions and consensus building in defining policies on smoking (Villalbí and Ballestín 1994) but the effects on young people's smoking are still largely unknown. Reid et al. (1992) in their review claim that neither workplace restrictions nor school programmes have proved to have permanent effects on prevalence of smoking, although both help to promote long-term favourable changes in the social environment. Sussman et al. (1994) on the other hand studied the effect of four different curricula and concluded that they reduced cigarette consumption, in particular if they were combined. Likewise, Elder et al. (1994) have demonstrated that both classroom intervention with change agents and one-to-one telephone interventions can reduce smoking onset.

Inexpensive mass-media based campaigns have gained more interest in recent years. Although their overall effect on smoking prevalence is relatively low they can still be cost-effective because of their low budget. Secher-Walker et al. (1997) demonstrated that such a campaign did reduce the onset of smoking and that it was economically attractive compared with other preventive and therapeutic strategies. Goldman et al. (1998) conducted focus-group interviews with young people. Their analysis suggested that a mass-media campaign focus on industry manipulation and the harmful effects of secondhand smoke would be most effective among young people.

Restrictions or bans on advertising: The ban of tobacco advertisement may have effect. Certain kinds of cigarette advertisements enhance the appeal of smoking to many adolescents (Arnett & Terhanian 1998). Advertising may appear in subtle forms, e.g. merchandising and the display of smokers in magazines and videos and other media targetted to young people (Amos et al. 1999). Even modest levels of TV-viewing may result in substantial exposure to glamorized depictions of tobacco coupled with sexuality (DuRant et al. 1997).

Direct restraints on smoking: There are now many studies which demonstrate that a worksite smoking ban is favored by a majority of employees. Further, that such interventions result in decreased cigarette consumption and an increase in the proportion of smokers who accept smoking cessation programmes (Stave et al. 1991, Gottlieb & Nelson 1990, Kinne et al. 1993, Rosenstock et al. 1986, Sorensen et al. 1991, Farrelly et al. 1999). The school environment is the worksite for adolescents but we have so far not sufficient evidence to extrapolate from

experiences from adults' worksite programmes to adolescents. Pierce et al. (1991) suggest such policies for colleges.

Another study demonstrates that clean indoor air legislation is associated with lower smoking prevalence (Emont 1992). Brownson et al. (1997) found in their review of policies to reduce exposure to environmental tobacco smoke (ETS) that efforts to restrict public smoking have proliferated over the past decade, and that bans on public smoking are effective in reducing nonsmokers' exposure to ETS.

One study of legislation to reduce young people's access to tobacco did not show any major effects on young people's perceived access to tobacco or their smoking (Rigotti et al. 1997). The prohibition of sales of tobacco products to minors' have been shown to be both effective and without effect in a number of studies. DiFranza et al. (1996) showed that «It's the Law» programmes are ineffective in preventing illegal sales. Effective reduction of tobacco products to minors may require ongoing enforcement measures, e.g. fines to shopowners who do not comply with the rules (Gemson et al. 1998). Cummings et al. (1998) demonstrated that compliance with this legislation requires a perception among retailers of a real threat of enforcement of the rules.

Economic measures: Tobacco tax influences cigarette consumption (Wasserman et al. 1991, Meier & Licari 1997, Emont et al. 1992) but large reductions in consumption require large tax increases (Meier & Licari 1997). The increase of tobacco tax in California is estimated to result in a 5 to 7 % decline in consumption (Flewelling et al. 1992). This is also true for teenagers: the most recent research suggests that a 10 pct increase in price would reduce the number of teenagers who smoke by 7 % (Grossman & Chaloupka 1997). One study from the US finds no effect from tobacco prices on smoking onset among young people (Gilpin & Pierce 1997). This study suggests that increased prices stimulate the tobacco industry to expand tobacco marketing with increased emphasis on tactics that may be particularly pertinent to young people.

Townsend (1996) demonstrates in a comprehensive analysis that progressive increases in cigarette tax rates is a powerful tool to reduce cigarette consumption - and to generate extra government revenue. She suggests that this policy is most effective for groups within the

population which have been least influenced by health education. There has been an argument among economists and tobacco control politicians regarding the optimal cigarette tax but there is still no conclusion from this debate. It appears that the arguments are more based on values and policies than on strict economic analyses (Warner et al. 1995).

Della-Vorgia et al. 1990 studied the effectiveness of tobacco-control legislative policies in EC-countries. They concluded that the cumulative anti-tobacco legislation seems to be effective. They also concluded that tobacco prices were a much stronger predictor of smoking than other legislation.

Comprehensive and comparative analyses: Combination of methods to reduce cigarette consumption are useful: An analysis of smoking in OECD countries 1960-1986 suggests that tobacco advertising restrictions and tobacco taxes are effective means to reduce cigarette consumption and that an increase female labour force participation were also associated with low rates of smoking prevalence (Laugesen & Meads 1991). Increasing real income, on the other hand, increased the prevalence of smoking. Further, the smoking prevalence was high if a large fraction of the tobacco consumption was manufactured cigarettes.

Lewitt et al. (1997) conducted two cross-sectional school-based surveys in 21 North American localities and analysed the determinants of adolescent smoking behaviour. Both smoking participation and the intent to smoke were related to the price of cigarettes and it appeared that boys were far more sensitive to cigarette prices than girls. Limited access to tobacco products and exposure to tobacco education were also associated with reduced smoking and reduced intention to smoke. Policies which prohibited smoking in public places and in schools were on the other hand not associated with smoking prevalence. Surprisingly, exposure to anti-tobacco advertisement increased the prevalence of smoking.

One Canadian study suggested that increased cigarette taxes and the use of no-smoking regulations were most effective in controlling smoking. If each of these means was used separately, however, they were likely to have *less* impact than the two measures used together (Stephens et al, 1997), again pointing to the importance of comprehensiveness of policies. Both tobacco taxes and anti-smoking media campaigns result in reduced cigarette consumption but the magnitude of the taxes and the amount of media campaign expenditures

are key factors in the strength of these efforts (Hu et al. 1995). Rimpela (1992) analysed the effect of the Finnish Tobacco Act which includes a number of measures. She concludes that health oriented tobacco legislation is inefficient unless it is properly implemented and combined with some kind of a watch-dog activity.

In the US, statewide comprehensive tobacco control programmes have been shown to be effective in reducing adolescent smoking (Wakefield & Chaloupka, 2000). More well resourced programmes used extensive mass media campaign advertising and community initiatives; had a greater capacity to implement school based smoking prevention programmes; and resulted in an increase in the passage of local ordinances that reduce cigarette sales to youth and create smoke free indoor environments

A study of tobacco-control legislation in European countries suggested that no one strategy was sufficient to reduce tobacco consumption in a country, but that a *combination* of strategies seemed to be most effective (Della-Vorgia et al., 1990). This finding suggests that tobacco control policies which may be characterized as being comprehensive (having a high number of regulations) are more likely to be effective.

In their evaluation of disease prevention and health promotion policies in Europe, Rütten et al. (2000, p. 123) suggested that “for smoking policy development it may be a good strategy to weave an atmosphere of non-smoking duties and obligations, strengthen the perceived ability of smokers to abstain from smoking, and encourage smoking restrictions in particular settings (e.g., in the workplace)”.

It is important to keep in mind that the tobacco industry has responded to smoking control policies and interventions with its own counter-measures. The tobacco industry continues to use its political influence on a national and regional level to promote the passage of laws that pre-empt the local regulation of tobacco. These efforts are believed to significantly reduce the effect of tobacco control policies (Moore et al., 1994; MMWR, 1999; Siegel et al., 1997; Monardi & Glantz, 1998). Other challenges to national tobacco control activities have come from transnational TV and press advertising, and the difficulty of enforcing restrictions of tobacco sales to young people. Moreover, many countries in the European Region have

experienced considerable investment in their tobacco manufacturing sector, which undermines the effect of national anti-smoking policies.

1.8 Research questions

The above considerations suggest that the known variations in tobacco control policies (specifically school related policies) and in adolescent smoking prevalence, across different countries in Europe lend themselves to an in depth analysis of the relationship between the two with the aim of evaluating the impact of policy on adolescent smoking.

Consequently, the specific research tasks are to study

- 1) how national tobacco control policies on restriction of smoking differ in European countries
- 2) how national tobacco control policies restricting places where smoking is allowed are associated with staff perceptions of school policies and practices on restriction of smoking
- 3) how school policies and practices on restriction of smoking are associated with exposure to perceived adult smoking at school among students
- 4) how exposure to perceived adult smoking at school is associated with student attitudes, subjective norms and intentions about smoking
- 5) how school policies and practices on restriction of smoking are associated with student smoking
- 6) since smoking differs by gender and socioeconomic status: how the associations depicted in tasks 3,4 and 5 vary according to gender and socioeconomic status of students.

2. METHODS

Data for the CAS study was collected at three levels. The data collection at the student level was carried out as part of an existing transnational survey on health behaviours among children and adolescents, "Health Behaviour in School-aged Children: a WHO cross-national study (HBSC)" (Aaroe et al., 1986; Smith et al., 1992; Currie et al., 2000). The HBSC study takes a behavioural and epidemiological approach to research on health behaviours and lifestyles among young people in Europe. Eight of the 29 countries participating in HBSC were partners in the CAS study, and these eight partners prepared three surveys to collect data on smoking and tobacco control policies at the national, school and student levels.

2.1 The student survey

The student sample

The survey was based on a sample representing each country or a large geographical and administrative unit in a country (in Belgium the French-speaking community was surveyed, in Germany the region of North Rhine-Westphalia, and two samples from U.K.; one sample from Scotland and one from Wales). Each country sample comprised at least 1,300 students aged 15, with the exception of the French-speaking community of Belgium. The total sample was 13,090 students (table 2.1). Mean ages are presented in Table 2.2.

A two stage clustered sample approach was used, the primary sampling unit being the class or school, the latter when a list of classes was not available. Analyses of data from the 1993/94 HBSC study using this sampling approach indicate that there is a negligible loss of precision in estimation of population parameters by using classes instead of individual students as the sampling unit (King et al., 1996).

A detailed description of the samples from each country is given in Wold, Currie & Lund (2000). With the exception of Belgium, all response rates are satisfactory. In Belgium a school response rate of 32 % was obtained. This low response can be explained by the introduction of a new Ministry of Education regulation, requiring schools to set up a

”pedagogical project” for the start of the school year 1998. This made it difficult for schools to participate in research projects. Due to this low response rate, and the resulting possibility of selection bias, data from the student survey in the French-speaking community of Belgium is not included in this report. Findings from the Belgian student survey are reported in Wold, Currie & Lund (2000).

Table 2.1 Student sample sizes and month of data collection by country

Participating Countries	Original sample	Final sample	N after cleaning	Response rate ¹	Months of data Collection
1 Austria	1,865	1,419	1,376	76.1%	March – April 1998
2 BELfr – French-speaking Belgium			803		January – June 1998
3 Denmark	1,873	1,578	1,546	84.2%	April 1998
4 Finland	1,760	1,564	1,545	88.9%	March – May 1998
5 Germany- North Rhein-Westphalia			1,599		Dec. 1997, Jan. – March 1998
6 NOR – Norway	2,165	1,699	1,670	78.5%	December 1997
7 POL – Poland			1,636		February – March 1998
8 SCO – Scotland	2,075	1,727	1,727	83.2%	March – May 1998
9 WAL – Wales			1,427		January 1998

Table 2.2 Descriptive statistics of students’ age (in years) by gender

	Boys						Girls					
	Mini-mum	Maxi-mum	Mean	St. dev.	Valid N	Missing N	Mini-mum	Maxi-mum	Mean	St. dev.	Valid N	Missing N
AUT	14.3333	16.2500	15.2082	0.34055	610	0	14.4167	16.2500	15.1907	0.34532	763	3
DNK	14.8333	16.8333	15.8400	0.34541	733	19	14.8333	16.8333	15.7885	0.33621	787	7
FIN	14.8333	16.7500	15.7673	0.31456	764	6	14.8333	16.5833	15.7255	0.29981	770	5
DEU	14.5000	16.4167	15.3793	0.36037	796	3	14.5000	16.4167	15.3078	0.34288	799	1
NOR	14.6667	16.1667	15.4970	0.28977	844	4	14.5833	16.0833	15.4685	0.28768	819	3
POL	14.9167	16.4167	15.6574	0.30177	884	7	14.7500	16.4167	15.6440	0.30022	736	9
SCO	15.0833	16.4167	15.6074	0.30029	804	6	14.6667	16.5000	15.5818	0.30117	914	3
WAL	15.1667	16.7500	15.8777	0.30046	723	0	15.3333	16.5833	15.8614	0.29733	704	0

¹ Response rate is Final sample in percent of Original sample

The questionnaire

- Selected demographic questions (age, sex, family structure, father's and mother's occupation, questions on perceived family wealth, personal spending money, and ecological indicators of socio-economic status, place of living).
- Behavioural questions relevant to smoking: experimental smoking, regular smoking, number of cigarettes smoked per day.
- Questions on school smoking policy and practices, including perceptions of adult smoking at school (whether or not students see/believe/know that teachers and students smoke at school, where smoking occurs, beliefs/attitudes concerning these perceptions)
- Questions on parental and peer smoking, perceptions of adult smoking at public places and in the family home

The student questionnaire is included in Appendix 1.

Data collection

Data collection took place in schools during the academic year 1997/98. The specific dates in each country are presented in Table 2.1. Data were gathered from 15-year-old students by use of a self-completion questionnaire filled in during school hours. The procedures ensured the students' anonymity. Teachers, instructed in administration of the survey, or specially trained personnel were responsible for the administration of the data collection in the classroom. Full details are included in the HBSC protocol (Currie et al., 1998).

Problems of standardization

Special care was taken to make the questionnaire, sampling and data collection method as standardized as possible in the participating countries. Based on previous HBSC experience, several problems of standardization exist:

- i) The variety of school systems makes it difficult to achieve both homogeneity in the ages of the sampled children, and a common date of data collection,

- ii) Variations in question wording. In certain languages it may prove difficult to find appropriate words and phrases to those used in the standard English version of the international questionnaire, and
- iii) Cultural differences between countries imply that identical understanding of some of the concepts covered by the survey cannot be assured.

Attempts to overcome these problems were made by ensuring that data collection took place at the optimum time of the year in each country in order to achieve as homogenous ages as possible (a common date of data collection was not possible due to the differences in school systems). In order to overcome the language and conceptual difficulties, the questionnaires were translated and then retranslated to English, and extensively piloted.

Data files

The national data files were exported to the International Data Bank Manager in Bergen, between May and September 1998. The data were cleaned for logical inconsistencies and cases with too many missing responses, and the structure of the data files were standardized. Finally the data were merged into one international data file, which was exported back to the participating countries in December 1998. Each country checked that their data was properly presented in the international file, and various types of statistical analyses were undertaken in order to check for possible errors. The final file was available from November 1999, and forms the basis for the present report.

Validity and reliability

A number of separate studies have been undertaken to examine the reliability and validity of the data collected from previous HBSC surveys, and similar results on incomplete and inconsistent reporting, biochemical validation of smoking and the use of fictitious drugs have been found to those in other studies, indicating satisfactory levels of validity and reliability (Smith & Nutbeam, 1992). The test-retest reliability of the variable measuring regular smoking was high in a Norwegian sample of 108 students (Pearson correlation of 0.89, Kappa coefficient of 0.78) (Torsheim et al., 1997). A study of the test-retest reliability of selected items of the student survey was conducted in Norway in 1998.

2.2 The staff survey

The staff sample

The staff survey was administered as an integral part of the fieldwork with students. Copies of the staff questionnaire were given to teachers and senior managers in those schools participating in the student level survey. Through the use of school identifiers, the school level data collected could be matched to responses from students in that school. Combining data in this manner enables, for example, analyses of associations between school smoking policies and students' exposure to smoking or smoking behaviour.

In each of the participating countries, questionnaires were sent to two key individuals in each school, these being the head teacher (or other senior manager) and a teacher with responsibility for health education (table 2.3). Additional members of staff were also involved in Austria, Belgium, Finland and Germany. A detailed description of the samples from each country and fieldwork dates is given in Roberts (2000).

Table 2.3 Staff sample details.

Participating Countries	No. of schools in study	Schools returning at least one staff questionnaire	School response rate (%)	No. of staff members sampled	No. of staff members responding	Staff response rate (%)	
AUSTRIA	180	170	94	540	429	79	
BELGIUM	142	139	98	?	769	?	
FR							
DENMARK	55	49	89	110	92	84	
FINLAND	87	73	84	261	177	68	
GERMANY	62	62	100	?	280	?	
NORWAY	105	78	74	210	149	71	
SCOTLAND	84	79	94	168	158	94	
WALES	62	60	97	124	108	87	

Note: Staff level response rate calculation not possible for Belgium Fr. or Germany

The staff questionnaire

The staff questionnaire covered the following issues:

- Smoking policies for students, staff and visitors, covering types of restriction in place, how long they have existed, where smoking is permitted and what sanctions are employed when restrictions are broken;
- Smoking education initiatives in the school and views on their importance;
- Factors predisposing, enabling and reinforcing staff adherence to the restrictions, in particular social norms.

The full staff questionnaire is presented in Appendix 2.

Problems of standardization

As with the student survey, every effort was taken to ensure that the questionnaire and method of data collection was as consistent as possible across the eight countries. Similar problems to those inherent in the student level work apply with the staff survey, including variation in school systems, variations in question wording and translation issues and cultural differences between countries. In addition, there are specific school level issues including:

- Differences in national legislation relating to school smoking, such that questions on school policies may not be relevant in all countries;
- Differences in school environment, such that items relating to smoking in certain locations (e.g. cafeteria) may not be relevant in all countries;
- Differing perceptions of policy and practice within the school.

Steps taken to address these problems included the involvement of all countries in the design of the questionnaire, allowing countries to omit items where appropriate and the inclusion of at least two members of staff in each school, including a senior manager and classroom teacher.

Data file

The national data files were exported to the Research and Evaluation Branch, Health Promotion Division, National Assembly for Wales. The data were cleaned for logical inconsistencies and the structure of the data files were standardized. Finally the data were merged into one international data file, which was exported back to the participating countries in July 2000.

2.3 National policy data

In addition to the data collected by student and school staff surveys, the CAS project research teams also collected data on their government's tobacco control policies, in particular those relating to smoking at school. This information was gathered through a review of scientific and official documents and interviews with key informants in each country. Key informants included policy makers from national and local government and non-governmental organisations in the area of tobacco control.

The results presented here describe the national policy situation in the eight countries at the time of data collection among students and staff, i.e., the academic year of 1997 – 1998. It is important to keep this in mind, since policies in several countries have changed since 1998.

A standard international guide for the collection of national policy data was developed (see Appendix 3) based on Crosswaite & McQueen's (1993) model of good practice in implementation, and both quantitative and qualitative data were collected about national tobacco policy development, implementation and enforcement.

The data collections included the following key issues:

- National tobacco control policies not directly related to the school environment
- National smoking policies restricting smoking in schools
- Smoking as part of the school curriculum.

2.4 Data analysis

In addition to the traditional bivariate and multivariate statistical techniques (such as those available in the SPSSPC software), the CAS study also have a scope for methodological development, in particular the use of multilevel techniques given the hierarchical nature of the data from the study (see for example Bryk & Raudenbush, 1992; Goldstein, 1995; Kreft & de Leeuw, 1998). Whilst such techniques are now well established, they are still relatively uncommon in health promotion research.

The multilevel perspective is also useful in examining relationships where non-independence affects the data (Torsheim & Wold, in press). Due to the fact that individual members of a shared context are more similar than others, individual responses from these members are likely to be non-independent. Individual-level approaches assume independence (Kenny & Judd, 1986). As a consequence, relationships that are affected by non-independence may not be detectable when studied at the individual level, but strongly present when the influence of shared context is taken into account in a multilevel study.

In the results section, graphs illustrating the findings from multilevel analysis (run by the MLWiN software program) are presented. These graphs are based on separate logit-models with binomial variation at the student level, where individual predicted logits were obtained. To increase interpretability, predicted logits were transformed to predicted probabilities. The predicted probabilities reflect the predicted average individual probability for being exposed to smoking under given values of the predictors.

3. RESULTS

Selected findings concerning the information about national policies, student data on smoking prevalences, smoking perceptions and smoking restrictions at school as well as staff data on school smoking policy and enforcement are presented here. Graphs illustrating the differences between countries have been included in the text. Data from the French-speaking community of Belgium is not included in the presentations of findings from the students survey, due to the large number of non-response caused by problems in carrying out the survey at the same time as all schools in this region was obliged to take part in a school reform.

A complete set of tables for all variables in the study, including unweighted Belgian data, is presented in the technical reports of the student (Wold, Currie & Lund, 2000) and staff (Roberts, 2000) surveys. Note that the proportions reported here are of all staff responding to the survey, rather than schools, given that more than one member of staff from each school was included in the survey.

The main type of dissemination from the Control of Adolescence (CAS) study will be through articles in peer-reviewed international journals. As the project is still in an early phase concerning analysis of data and reporting of findings, no papers have yet been published. However, several papers have been submitted to journals for review, and findings from the CAS study have been presented at a number of international conferences and meetings of the CAS partners held biannually in the period 1998-2001 (see Appendix 5 for a list of CAS meetings). The results of these analyses are outlined below, presenting the main findings as they relate to the research questions of the project. A short summary of each presentation is included in Appendix 4.

3.1 Instruments

One of the aims of the Control of Adolescent Smoking (CAS) study was to harmonize research instruments and data collections, and allow cross-national comparisons of how macro level factors (national tobacco policies) may influence micro level factors (individual smoking behaviours).

Three instruments were developed for data gathering, this work being the focus of partner meetings in year 1 of the project. The national policy monitoring instrument was developed as a standard 'interview guide' for use in interrogating key informants and official documentation. It is presented in full in Appendix A of Project Deliverable I: 'National Policies on Restriction of Smoking in eight European Countries' (Wold, Holstein, Griesbach and Currie, 2000). The instrument was based on Crosswaite and McQueen's (1993) model of policy implementation and guided the collection of both quantitative and qualitative data on national tobacco policy development, implementation and enforcement. Specifically, the instrument was designed to gather information on

- tobacco control policies outside the school
- smoking restriction policies in schools
- smoking as part of the school health education curriculum

The instrument to gather information on policies and practices around smoking restriction at school level was a confidential staff questionnaire to be self-completed by two staff in each school where student level data was also being collected. The instrument was designed to cover the following main areas:

- smoking policies for students, staff and visitors , covering types of restriction in place, how long they have existed, where smoking is permitted and what sanctions are employed when restrictions are broken
- smoking education initiatives in the school and views on their importance

- factors predisposing, enabling and reinforcing staff adherence to restrictions including social norms among school staff with regard to the restrictions

The staff questionnaire instrument is presented in full in Appendix A of Project Deliverable II 'Technical Report of Staff Survey in Eight European Countries' (Roberts, 2000).

The student instrument was a confidential and anonymous questionnaire developed as a complementary instrument to the staff questionnaire and was designed principally to investigate students' experiences of smoking in the school environment. A range of contextual information was also collected. The questionnaire included questions on the following four main areas:

- demographic questions (age, sex, family structure, parental occupations, family wealth, personal spending money, ecological indicators of socioeconomic status, place of living)
- behavioural questions on smoking: experimental smoking, regular smoking, cigarettes smoked per day
- questions on school smoking restriction including perceptions of adult and student smoking at school, beliefs and attitudes concerning these perceptions
- questions of peer and parental smoking, and perceptions of adult smoking in public places

The questionnaire is presented in full in Appendix A of Project Deliverable II: Technical Report on Surveys of 15 year-olds in Nine European Countries (Wold, Currie and Lund, 2000).

3.2 National tobacco control policies restricting smoking at school in eight European countries

This section will present the results of national-level data collection and will describe and compare national tobacco policies which particularly relate to schools. A number of countries have very comprehensive policies, which aim not only to reduce smoking prevalence among adults and young people, but which also aim to protect non-smokers from passive smoking and to prevent smoking uptake. Schools are, of course, usually not the only target of a particular country's smoking policies. Instead, schools are often seen as one of many types of "public building" in tobacco policies which aim to reduce or restrict smoking in public buildings. A more detailed description of the results concerning national tobacco policies is presented in Wold et al. (2000).

Tobacco control policies outside the school

Before looking at the way in which national policies impact on smoking in schools, it is helpful to look at national tobacco policies more generally, and to compare the strategies and actions used by different countries to tackle smoking. Table 3.1 gives an overview of types of policies by country.

As can be seen in table 3.1, only Finland and Norway had published and government-funded strategies for reducing smoking among young people. By 1998, all eight countries had national legislation which banned the advertising of tobacco products on television and radio. Belgium, Denmark and Germany had no age limits on tobacco sales, although Germany had a national law prohibiting smoking by children under 16. In Austria, Scotland and Wales, it was illegal to sell tobacco products to children under 16. In Finland and Norway, it was illegal to sell tobacco products to children under 18. However, even in those countries where there were age limits, the laws prohibiting the sale of cigarettes to minors were not necessarily strictly enforced among shopkeepers and retailers. Scotland and Wales were the only two countries in this study which had no national legislation to restrict smoking in public buildings.

Table 3.1: National government activity relating to smoking, 1998

	Aus	Belg	Den	Fin	Ger*	Nor	Sco	Wal
Published government targets for reducing smoking	—	—	+	+	—	+	+	+
Published and government-funded strategy for reducing smoking among young people	—	—	—	+	—	+	—	—
Ban on direct tobacco advertisement (newspapers, magazines, billboards, etc.)	+	+	—	+	—	+	—	—
Legal age for purchasing cigarettes -18 or older + - 16 or older ++	+	—	—	++	—	++	+	+
Restrictions on accessibility of cigarette vending machines to adolescents	—	+	+	+	—	+	+	+
National law restricting smoking in public buildings (offices, public transport, etc.)	+	+	+	+	+	+	—	—
National law restricting smoking in schools	+	+	—	+	+	+	—	—
Smoking education compulsory in schools	+	—	—	—	—	+	—	+

Key: — no + yes

* This data concerns *national* government activity only. Germany, as a federal state, organises some of these activities at the federal level. Therefore, for Germany, a minus (—) in some cases must not be interpreted to mean that there has been no activity in this area, only that there has been no activity at a *national* level.

Smoking restriction policies in schools

In looking more specifically at the impact of national policies on smoking restrictions in schools, the main differences between the eight countries can be characterized by whether or not smoking restrictions exist in schools, and if so, whether these restrictions were based on policies developed by the national government, a regional or local government, or by individual schools. Thus, the countries may be classified according to the following two main categories:

1. countries with national laws that prohibit or restrict smoking in schools — Austria, Belgium, Finland, Germany (federal law of North Rhein-Westphalia) and Norway;
2. countries with no national laws that prohibit or restrict smoking in schools— Denmark, Scotland and Wales.

There was variation between all countries in the way in which information about the national legislation was communicated to schools when it came into force. But in all cases, the

responsibility for implementing and enforcing the law in the school lay with the school head and the teachers, and there were no other formal structures to oversee the implementation and enforcement of the policy in schools.

Table 3.2 presents a summary of national policies on restriction of smoking at school.

Table 3.2: Countries with national legislation restricting smoking in school or on school premises

	Aus	Belg	Den	Fin	Ger*	Nor	Sco	Wal
Teachers' smoking restricted on school premises (indoors or outdoors)	+	+	—	+	+	+	—	—
Smoking by teachers banned totally inside school building**	—	+ / —	—	—	—	+	—	—
Smoking by teachers banned outside school building on school premises	—	+	—	+	—	—	—	—
Smoking by students over 16 banned in school building and on school premises	—	+	—	+	—	+	—	—
Smoking by students under 16 banned in school building and on school premises	+	+	—	+	+	+	—	—

Key: — Country has no national law restricting smoking in this way.
+ Country has a national law which restricts smoking in this way.

* This data concerns *national* laws only. Germany, as a federal state, organises some of these policies at the federal level. Therefore, for Germany, a minus (—) in some cases must not be interpreted to mean that a law does not exist on this topic, only that a *national* law does not exist. National legislation in Germany, although it does not specifically address schools, does, in effect result in certain restrictions on smoking in school.

** In Belgium, one national law prohibited smoking inside school buildings, but another law (on smoking in the workplace) permitted teachers to establish separate smoking rooms within schools.

Countries with national laws that restrict smoking in schools

In Austria, Belgium, Finland, Germany and Norway, smoking was prohibited in schools on the basis of national legislation concerning smoking in public buildings. The aim of these laws, in all cases, was to protect non-smokers from the harmful effects of passive smoking by providing a clean indoor environment. In Austria, these laws have been in effect since 1987, in Belgium since 1990, in Finland since 1995, in Germany since 1975, and in Norway since 1988.

Restrictions of student smoking: Smoking by students aged 15 was completely banned in these countries, while smoking by older pupils (16 years and older) was allowed in Austria and North Rhein-Westphalia, after a decision by the school conference and with parental consent, in restricted areas of the school grounds. No students, irrespective of their age, were permitted to smoke within school buildings.

Restrictions of teacher smoking: In four countries (Austria, Belgium, Finland and Germany), the law allowed teachers to establish a separate smoking room inside the school. In Austria and Norway, earlier proposals to ban smoking in schools altogether met with strong opposition from teachers' unions and resulted in compromises to allow teachers to smoke. In Austria, this change allowed teachers to establish a smoking room inside the school building, but in Norway, only outdoor smoking was allowed. In Belgium, one law prohibited all smoking in school buildings, but another law on smoking in the workplace allowed teachers, in principle, to establish separate rooms for smokers. However, some Belgian schools had voted to ban smoking throughout the building. Similarly, in Finland, teachers could establish a separate room for smokers, but the law required that this room was not an area used by pupils under 18 years of age, and that no smoke from the room was able to enter areas where smoking was prohibited. Smoking outdoors on the school premises was not allowed in Finland.

The situation in Germany was slightly different from Austria, Belgium, Finland and Norway. In these latter countries, the law on smoking in public buildings makes specific reference to schools as a type of public building. In Germany, however, any regulations concerning schools would rightfully fall within the jurisdiction of the federal governments, not the national government. Nevertheless, the national law in Germany required smoking to be restricted in all public buildings for the protection of non-smokers. Schools, as public buildings, were required to comply with this law. The way in which the law was implemented in schools could vary from one state to another, however.

Countries with no national laws that prohibit or restrict smoking in schools

Denmark also had legislation restricting smoking in public buildings. However, in Denmark, this legislation did not apply to schools, as Danish schools are under the jurisdiction of individual local school boards. For this reason, if schools in Denmark had smoking restriction policies at all, they varied considerably from one school to another.

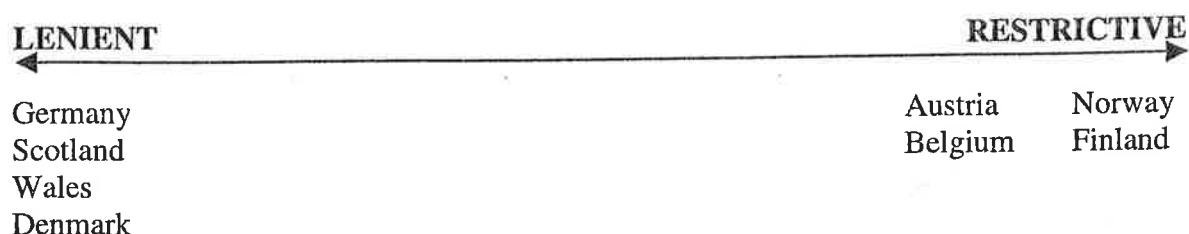
In Scotland and Wales, smoking policies in schools, if they existed, had generally been developed by local education authorities or by the schools themselves; they were not based on national legislation.

Summary of government tobacco control policies

As can be seen from table 3.1, Norway and Finland had the broadest range of national tobacco control activities, while Denmark, Germany and Scotland were least active. Of the eight countries in this study, Norway and Finland had the strictest national laws concerning school smoking restrictions, while Denmark, Scotland and Wales had no national laws concerning smoking in schools (table 3.2).

By combining the information presented in Tables 3.1 and 3.2, as well as the qualitative data on the ways in which various policies are operationalized in each country, a differential pattern of national policies between countries emerges. Thus, the countries in this study may be ranked on a continuum from restrictive to lenient in terms of their national tobacco control policies as suggested in figure 3.1.

Figure 3.1: Restrictiveness of national tobacco control policies



The four countries at the restrictive end of the continuum all had national laws which restricted or banned smoking in schools. Two of the countries at the lenient end of the continuum (Germany and Denmark) also had national laws restricting smoking in public buildings, but in Denmark, those restrictions did not apply to schools, and in Germany, the restrictions on pupil smoking could vary depending upon the pupil's age.

Three lenient countries (Scotland, Wales and Denmark) had no national restrictions at all on smoking in schools. However, these same countries did have laws which were intended to restrict adolescents' access cigarettes. Germany, on the other hand, *did* have national restrictions on smoking which also applied to schools, but the way in which these restrictions were implemented in schools could vary from one state to another, and as mentioned already, could also depend on the pupil's age. Germany had no national laws to restrict sales of tobacco products to young people, but rather had a law which prohibited smoking by young people under 16.

To some extent, Germany's position as a lenient country was the result of this country's governmental structure. Much of the responsibility for health and education was devolved in Germany to the federal governments, and the national government did not have jurisdiction over these matters. It was beyond the scope of this study to gather data on the activities of all the federal governments in Germany, but one might expect to find a great deal of variation between states in the extent to which tobacco control and smoking prevention was a priority.

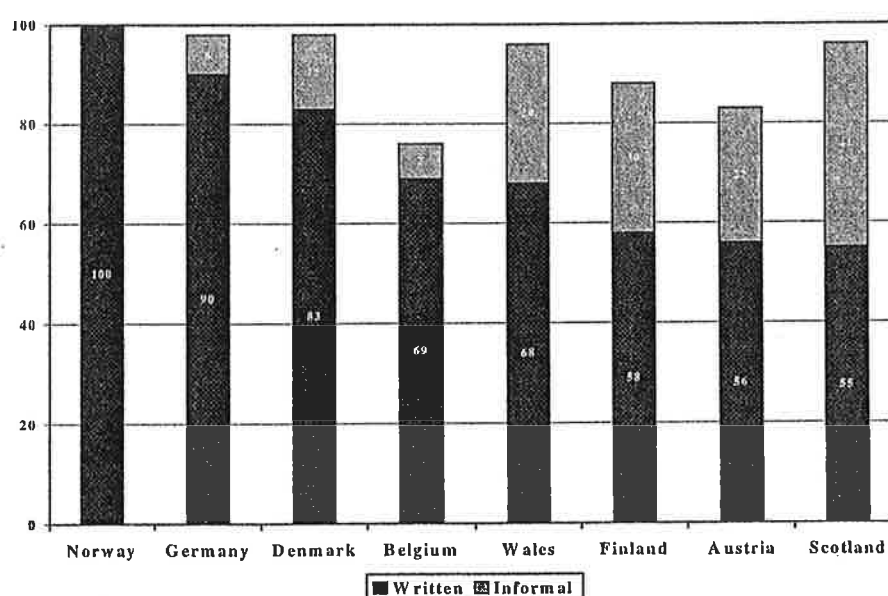
The four restrictive countries differed from the lenient countries in the number of policies and strategies employed by these governments to reduce smoking and prevent smoking uptake by young people. All had laws on smoking in public places, and all had a national bans on tobacco advertising. These four countries differed from each other mainly in the definition and comprehensiveness of their policies — Norway and Finland being the countries with the most comprehensive and restrictive policies (e.g., tobacco may not be sold to under-18s; a published strategy for reducing smoking; a national ban on tobacco advertising).

In sum, the lenient countries generally lacked national policies both regarding school smoking restrictions and other areas of tobacco control, while the restrictive countries tended to have both.

3.3 School policies and practices on restriction of smoking.

In general, more than 80 % of the school staff reported that their school had a policy restricting student smoking, and this policy was mainly a written one (figure 3.2). In four countries, almost all staff reported that no students were allowed to smoke on the school premises (figure 3.3). In the other four countries, students older than 15 years were allowed to smoke in restricted areas, this was the case in 70 % of the Danish schools. In Denmark and Belgium, a small proportion of school staff (8 % and 6 %) reported that all students were allowed to smoke in restricted areas.

Figure 3.2. Percent staff reporting that their school had a policy restricting student smoking.



Except for schools in Finland and the French-speaking community of Belgium, where smoking was banned for staff, most schools seem to have their own policy restricting staff smoking (figure 3.4). In Denmark, all school staff reported that they had such a policy, 79 % reporting that the policy was in writing. In contrast, only 22 % of Finnish school staff reported that their school had a written policy restricting staff smoking. In most schools, teacher smoking was allowed in restricted areas (figure 3.5). This was the case in almost all

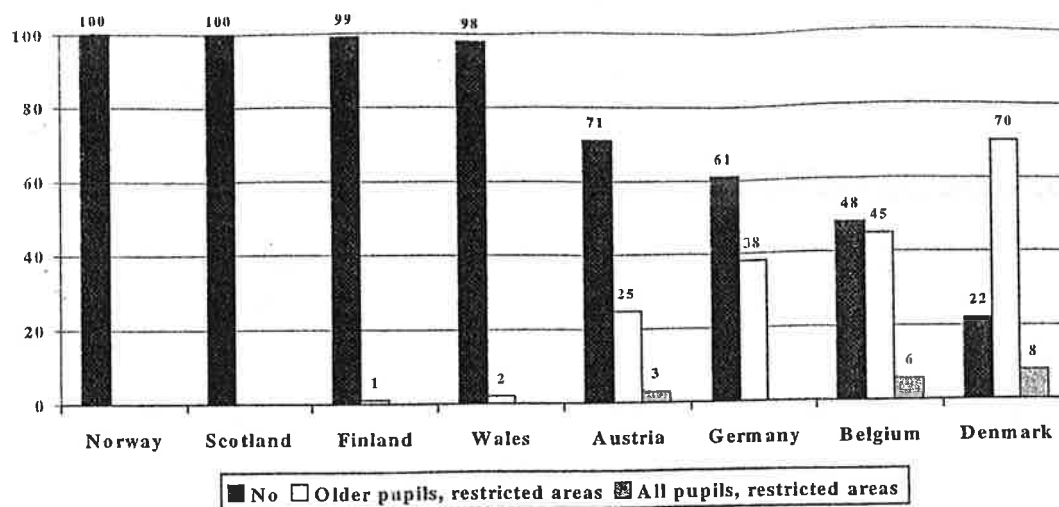


Figure 3.3. Percent staff reporting whether student smoking is allowed.

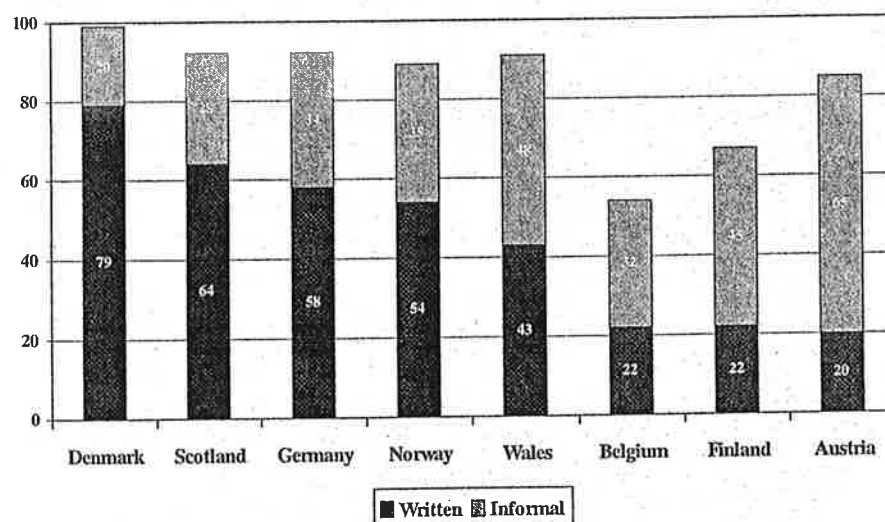


Figure 3.4. Percent staff reporting that their school had a policy restricting staff smoking.

German and Danish schools. A complete ban on smoking among teachers was quite common in Norway and Finland (64 % and 61 %), but not in the other countries.

The percent of students responding that students were not at all allowed to smoke on school premises is shown in figure 3.6. This question was not asked in Finland and Norway, as all students were expected to report this. About 90 % of students in Scotland and Wales responded that students were not allowed to smoke at their school, while only 14 % of Danish

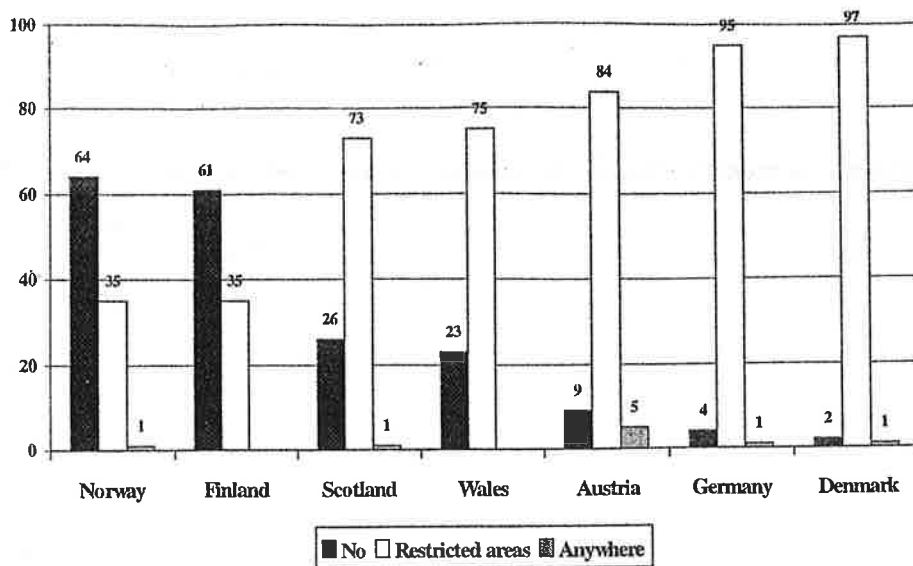


Figure 3.5. Percent staff reporting whether staff smoking is allowed.

students gave such a response. Correspondingly, only 1 % of the Danish students reported that teachers were not at all allowed to smoke at school, in contrast to 41 % of Norwegian students.

Restrictions are not always enforced. For example, student smoking in the toilets was not allowed in any of the schools, but this restriction was not always enforced (figure 3.7). In four countries, more than half of the school staff reported that they always enforced the ban on smoking in toilets, while the proportion was much lower in the other countries (only 11 % of Danish school staff).

Figure 3.6. Percent students reporting whether student smoking is allowed.

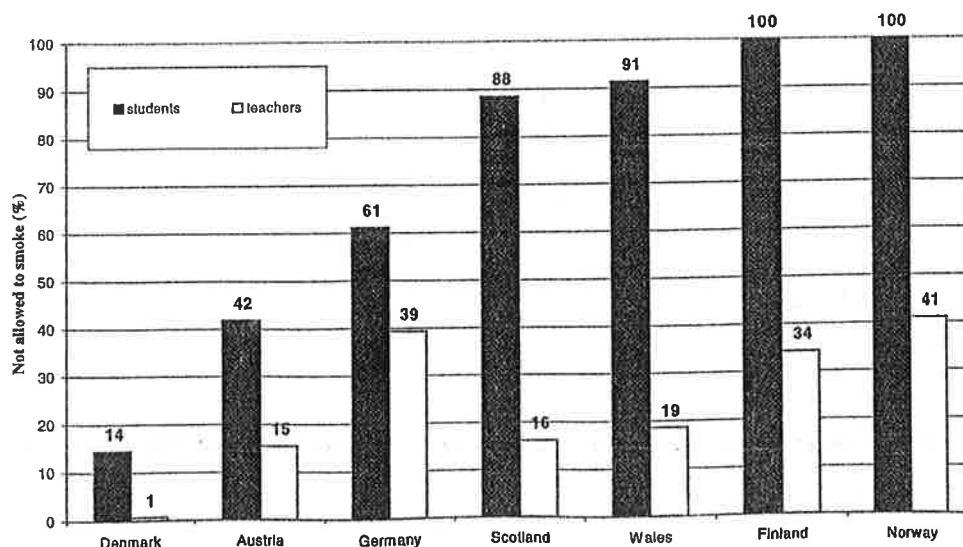
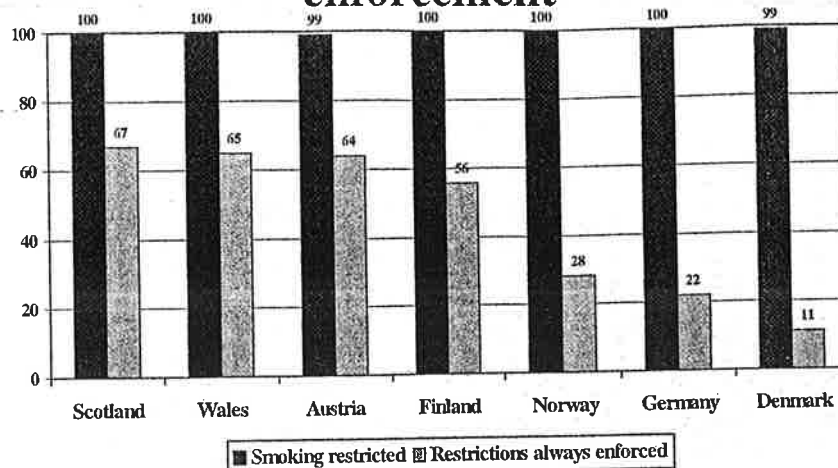


Figure 3.7. Staff reporting of student smoking in the toilets: policy and enforcement



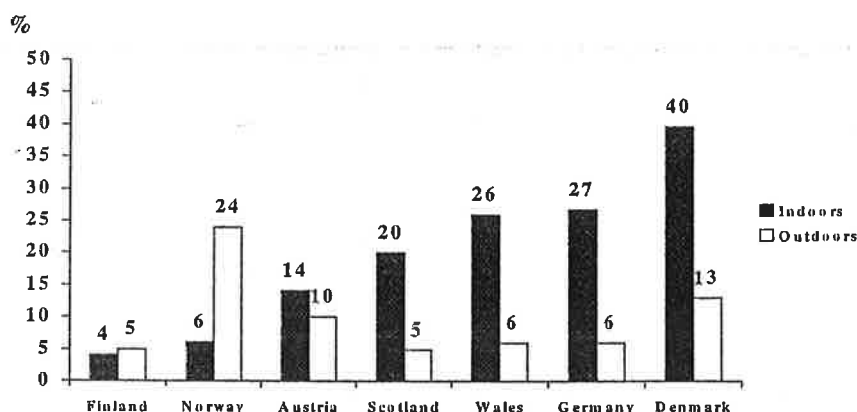
The results of the school staff survey provide evidence of variation in school policies and practices between and within the eight countries. Teachers in Norwegian and Finnish schools were more likely to report a complete ban on teacher smoking. Most Danish schools seem to have written policies restricting smoking among teachers and students, but few schools in Denmark have a total ban on smoking. Permitting smoking among teachers in restricted areas was the most common policy reported by school staff. Thus, very few schools reported that they had a smoke free policy.

More of the schools in Scotland, Wales and Austria reported that restrictions on student smoking were enforced than in the other countries. Thus, the findings indicate that in countries with a higher proportion of schools with very restrictive policies, policies are usually not enforced. The exception to this is Denmark, which seems to be low both on restrictiveness and enforcement of policies.

3.4 Policies on restriction of smoking at school and perceived adult smoking at school among students

Student responses regarding exposure to teachers who smoke differed significantly between countries (figure 3.8). The staff room was the most common place to see or know about teachers who smoke, except in Finland and Norway. In these countries, exposure to teachers

Figure 3.8. Percent 15-year-old students being exposed to teacher smoking indoors and outdoors by country.



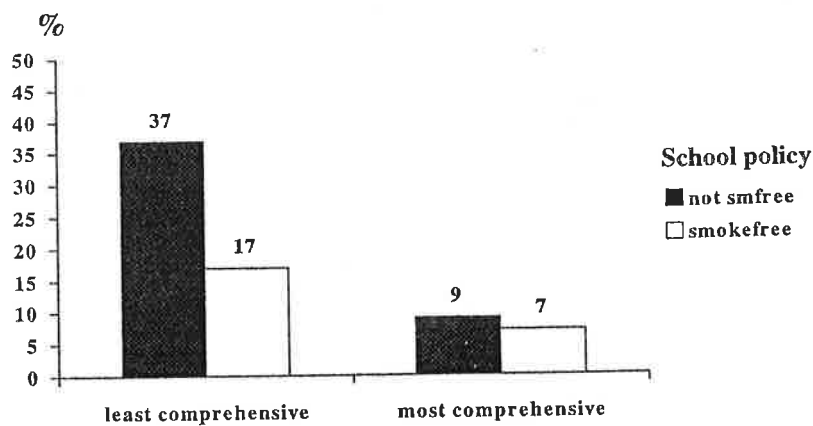
smoking outdoors was most common. Moreover, seeing teachers who smoke outside school premises every day during school was most common in Finland.

Analyses of the Scottish data indicate that in schools where a complete ban on teacher smoking existed, smoking among teachers were perceived less often in the staff rooms, but more often in outside areas on school premises (Griesbach, Inchley & Currie, submitted).

Moreover, multilevel analyses of data from all countries except Belgium, indicated that national and school policies on restrictions of smoking at school are related to students' exposure to teachers who smoke at school (Wold et al., 2000). Separate multilevel logistic regression models were run for student exposure to in-door teacher smoking and exposure to outdoor teaching smoking. As shown in figure 3.9, exposure to in-door teacher smoking was strongly related to national and local smoking policy. Students in schools with a smoke free school policy, were three times less likely to report exposure to teacher smoking, compared to students in schools without a smoke free policy. This relationship was maintained also when national policies were controlled for, suggesting that local variation in smoking policies have an independent effect.

Students in countries with a restrictive tobacco policy had a almost seven-fold lower likelihood of being exposed to in-door teacher smoking. When controlling for local smoke free school policy and individual factors, students within countries with a comprehensive

Figure 3.9. Predicted probability (%) of 15-year-old students being exposed to teacher smoking indoors by comprehensiveness of national policies on tobacco control and smoking policy of local schools in 7 European countries.

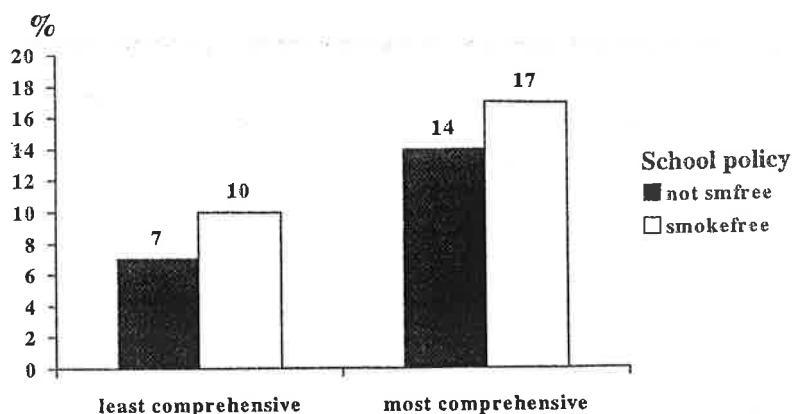


policy still had a five-times lower likelihood of exposure to teacher smoking also when local policy and individual factors were controlled for.

As shown in figure 3.10, local and national policies were only weakly related to student exposure to outdoor teacher smoking. Surprisingly, students in schools with a smoke free policy were more likely to report exposure to outdoor teacher smoking. This relationship was also evident when national policy was controlled for. A similar pattern was evident for national policies. Students in countries with a restrictive policy on smoking were more likely to report exposure to outdoor smoking, but the finding did not achieve statistical significance at the .05 level, due to large standard errors.

The findings suggest that restrictive tobacco control policies at national and local levels seem to be effective in reducing nonsmokers' exposure to environmental tobacco smoke, but negative side effects of restrictive policies were observed in student exposure to teachers who smoke outdoors.

Figure 3.10. Predicted probability (%) of 15-year-old students being exposed to teacher smoking outdoors by comprehensiveness of national policies on tobacco control and smoking policy of local schools in 7 European countries.



3.5 Exposure to perceived adult smoking at school related to students' smoking perceptions

Considerable variation was observed in the responses to students' intention to smoke daily in two years time (figure 3.11). Interestingly, fewer than half of the students in the Nordic countries responded "definitely not" to this question, while more than 60 % of British students responded that they definitely did not intend to smoke in two years time. Students in the Nordic countries were less likely to report positive attitudes towards smoking.

Wold et al. (1999) found that perceived exposure to smokers at school was positively associated with students' behavioural beliefs in favour of smoking, positive attitudes to smoking and intention to smoke. Subjective norms seemed less related to exposure. Four different countries (Austria, Norway, Scotland and Wales) differing with respect to the status of national and local policies on smoking restrictions in schools were selected for analyses (Structural Equation Modeling (EQS)).

Positive attitudes toward smoking and being exposed to teachers and parents who smoke were found to be significantly related to intentions to smoke (Wold et al., 2001). As illustrated in figure 3.12, being exposed to teachers who smoke outdoors at school increase the probability of students intending to smoke in two years time both among smokers and non-smokers. Data

Figure 3.11. Percent students who report that they definitely do not intend to smoke

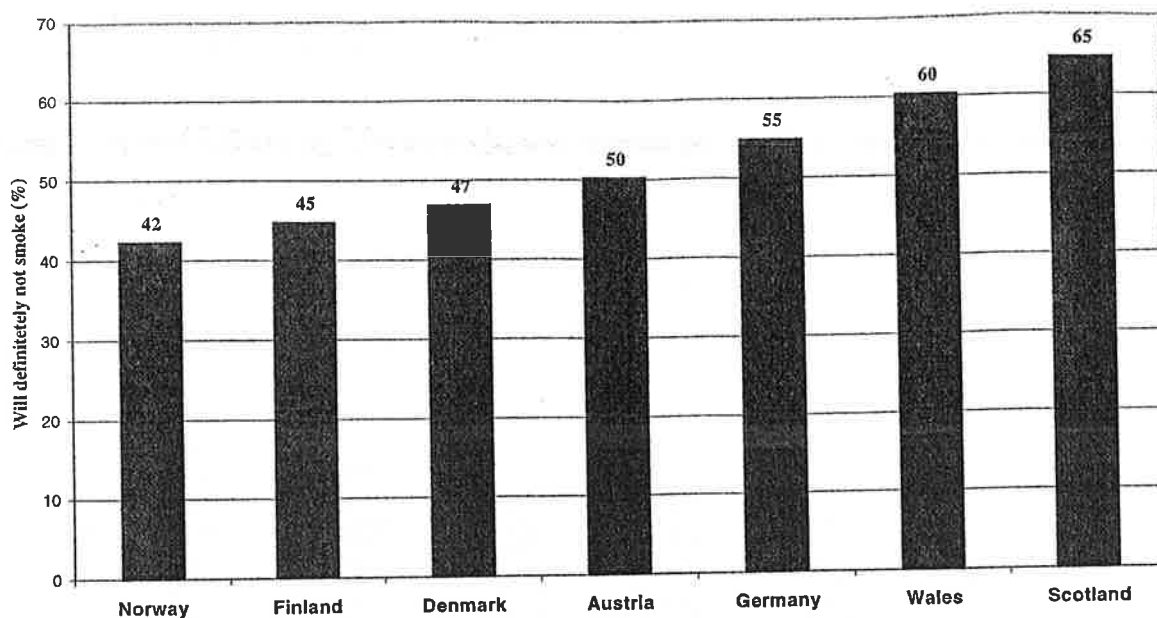
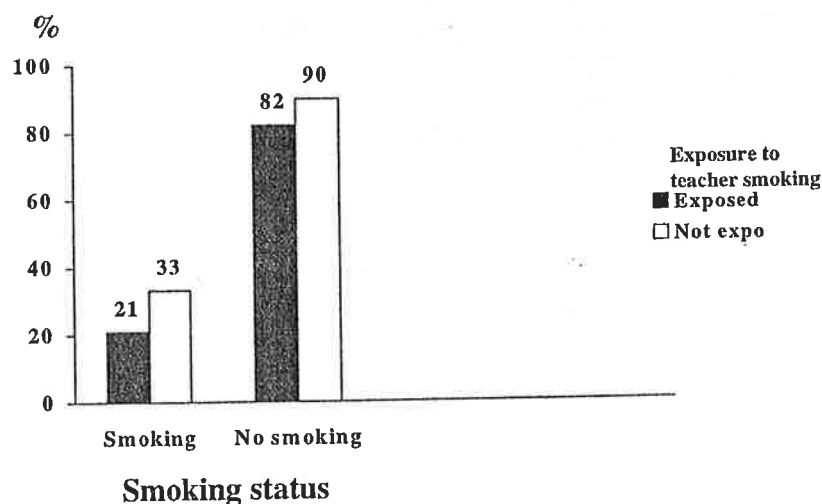


Figure 3.12. Predicted probability (%) of 15-year-old students stating that they do NOT intend to smoke in two years time by smoking status and exposure to teacher smoking, controlling for attitudes towards smoking. Data from 7 European countries.



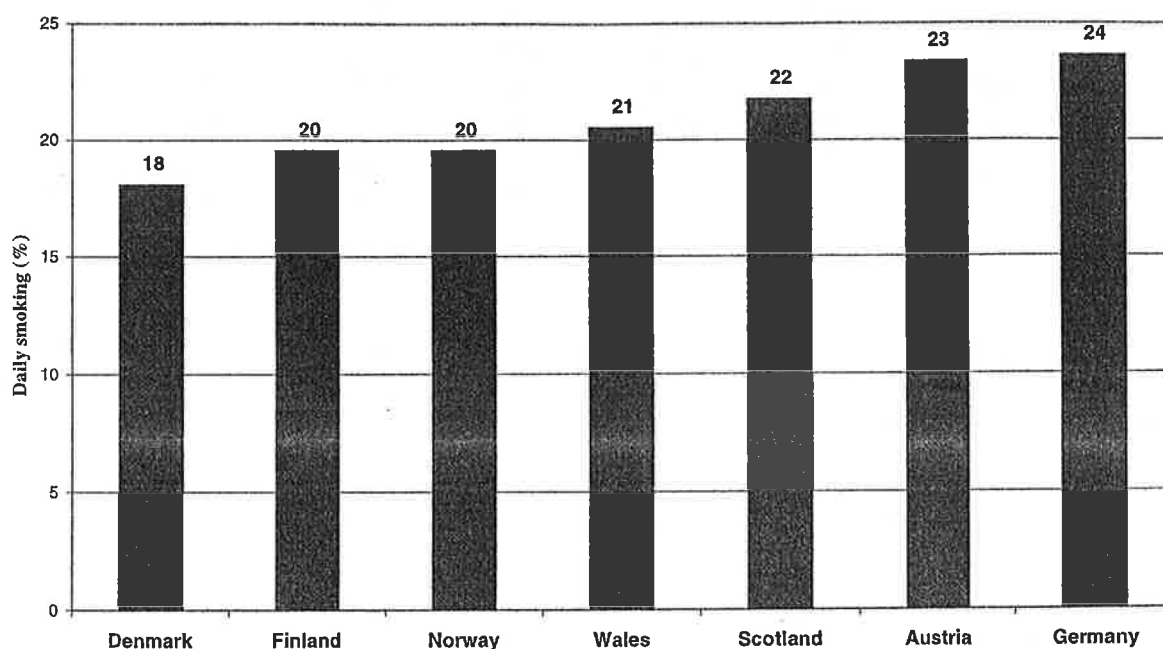
from all countries except Belgium were included in this analysis (Multilevel Modeling applying MLWiN software).

3.6 Student smoking, policies on restriction of smoking at school, and exposure to adult smoking.

According to figure 3.13, about 20 % of 15 year-olds in the seven countries report that they are daily smokers. The differences in smoking prevalences between the countries were quite

small. The lowest prevalences are reported in the Nordic countries (18 % in Denmark), while students in Austria and Germany (North Rhein-Westphalia) reported the highest prevalences

Figure 3.13. Percent students who report to smoke daily



(24 % of the German students). In all countries smoking was more common among girls than boys, with the exception of Finland. Among students who reported that they are daily smokers, the most common place to smoke seems to be at school in most countries (figure 3.14).

As can be seen in figure 3.15, the highest prevalences of perceived parental smoking were reported in Denmark (44 % reported that their father smoke daily), and the lowest in Finland (21 % on mother smoking). In most countries, about 1/3 of the students reported that their parents smoke daily.

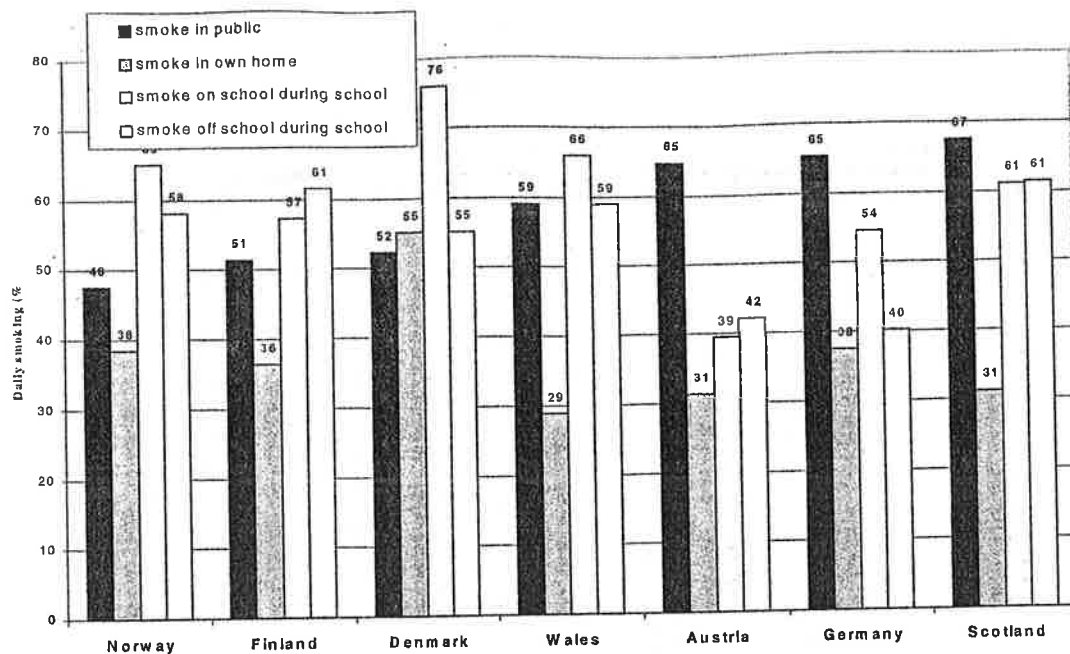


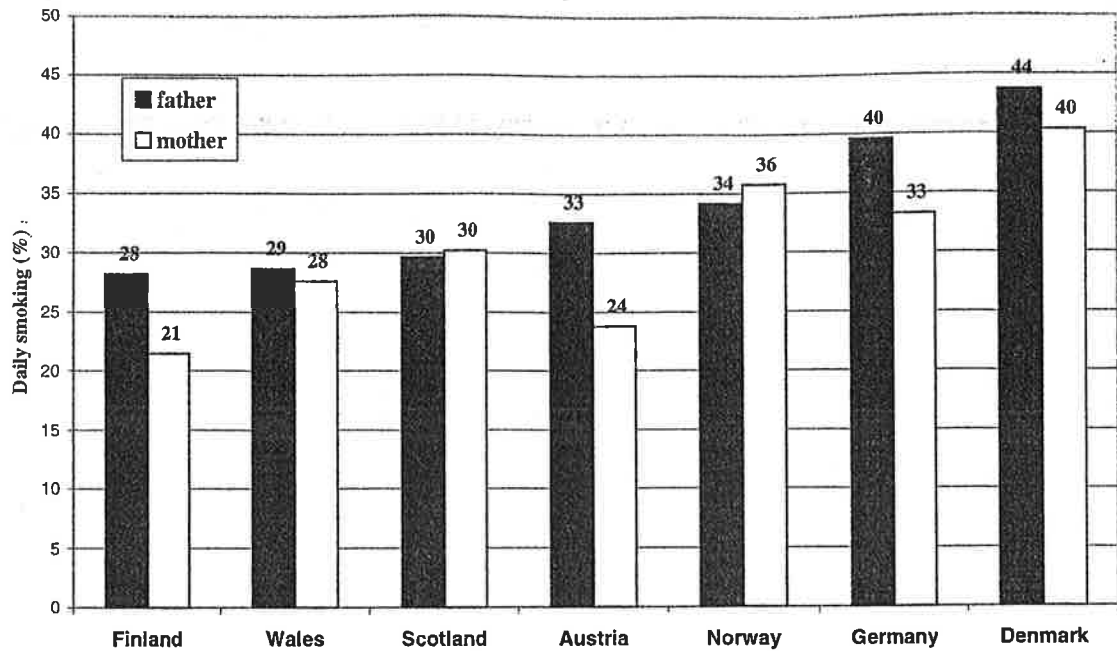
Figure 3.14. Percent students reporting where they smoke (daily smokers only).

Jensen et al. (submitted) found that Danish students' exposure to teachers' smoking outdoors was significantly related to daily smoking after adjustment for other smoking exposures and gender (adjusted OR=1.8; CI: 1.1-2.8), while adolescents' perceived exposure to teachers' smoking inside the school building was not related to daily smoking (adjusted OR=0.9; CI: 0.6-1.3).

Analysis of Welsh staff and student data (Moore et al., in press) indicate that the prevalence of daily smoking in schools with a written policy on smoking for students, teachers and other adults, with no students or teachers allowed to smoke anywhere on the school premises, was 9.5% (95% confidence interval: 6.1%, 12.9%). In schools with no policy on students' or teachers' smoking, 30.1% (23.6%, 36.6%) of students reported daily smoking. In schools with an intermediate level of smoking policy, 21.0% (17.8%, 24.2%) smoked every day. School smoking policy was associated with school-level variation in daily smoking ($p=0.002$).

In multilevel analysis, after adjusting for students' sex, parents' and best friends' smoking status, parental expectations and alienation from school, there was less unexplained school-level variation, but school smoking policy remained statistically significant ($p=0.041$).

Figure 3.15. Percent students reporting that father and mother smoke daily



Both daily and weekly smoking prevalence were lower in schools where students' smoking restrictions were always enforced. Enforcement of teacher smoking restrictions was not significantly associated with students' smoking.

This study demonstrates an association between policy strength, policy enforcement and the prevalence of smoking among students, after having adjusted for student-level characteristics. These findings suggest that the wider introduction of comprehensive school smoking policies may help reduce teenage smoking.

Schmidt & Kolip (submitted) found that school smoking policy along with gender had significant primary effects but no interaction effect upon students' smoking, their perceptions about smoking among other students and attitude to school smoking restrictions. Less smoking occurred in schools with weak regulations.. Besides, students at smoke-free schools estimated nicotine consumption within their age group as significantly greater than students at restricted schools. And at schools with total smoking bans, smoking restrictions were viewed more positively.

Dür & Grossmann (2001) conducted multilevel analysis with aggregated data on school level from all countries except Belgium, and found that smoking prevalences among 15-year-olds are significantly lower in countries

(1) with high prices of cigarettes

- (2) restricted access to vending machines
- (3) published targets concerning smoking policies

Smoking prevalences in schools were not significantly associated with tobacco policies targeted to students, but with policies targeted to teachers: in schools with a total ban of smoking for teachers the prevalences of smoking students were significantly lower.

However, the association between teacher support and smoking prevalences is even stronger than the association between these and tobacco policies for teachers; expressed with an odds ratio: students in schools with poor level of teacher support are nearly 9 times more likely to be daily smokers than students in schools with a high level of teacher support.

The association between tobacco policies for teachers and smoking prevalences is not independent from teacher support: the positive and the negative effects teachers can have as a tobacco related role model seems to depend on their relation to students and their supportiveness.

Thus, the findings suggest that national policies have an independent impact on students smoking by increasing cigarette prices, restricting vending machines and providing targets for their tobacco policies.

Likewise, schools have an independent impact on smoking prevalences of students, but only if there is a total ban for students AND teachers. A total ban of students' smoking contradicted by teachers who are allowed to smoke in their rooms seems to be of little impact and indeed may be counterproductive, because it may cause rebellious smoking behaviours in students.

The role model impact of teachers seems to depend on their relation with students. Supportive and non-smoking teachers are likely to have a high non-smokers rate among their students.

3.7 The significance of demographic factors for adolescent smoking: gender, socioeconomic background and family structure.

Bivariate analyses of student data from Scottish schools (Small, 2000) indicated that daily smoking was higher in girls (24% v 19%). A smoking gradient was found in which the highest daily rates were observed in those with unemployed parents (30% ...18%). Moreover, daily smoking was less common in those intending to go to university (10% v 28%).

The highest daily smoking rates were found in step-families (37%), then single parent families (24%), compared to traditional families (19%). Higher daily smoking rates among 15 year-olds were found among in families where at least one parent smokes (29% v 16%).

The results from separate logistic regression analysis showed that all independent variables except parental occupation were still significantly associated with daily smoking, that is the 'effect' of occupational status disappears due to the fact that parental occupational status is associated with parental smoking and adolescents' intentions to go to university (Small, 2000).

Further analysis of student data from five countries (Denmark, Germany, Norway, Scotland and Wales) suggested that in only three countries was there a significant association between Family Affluence (scored as High, Middle or Low) and daily smoking - these were Denmark, Finland and Germany, where highest daily smoking rates were found among children from Low Affluence families (Currie & Griesbach, submitted). A significant bivariate association between parental occupation and adolescent smoking was observed in all countries, with the lowest rates of daily smoking in the highest occupational group in all countries.

Logistic regression analyses revealed significant differences between professional and unemployed groups (i.e. the extremes), rather than a gradient, in Scotland and Wales (Currie & Griesbach, submitted). Fifteen year olds in families where parents were unemployed were twice as likely to smoke daily in Scotland and Wales. In Denmark and Norway children from

semi- and unskilled manual working families were twice as likely to smoke daily than those from professional families (unemployed were not separately classified). The German data revealed a significant gradient with increasing smoking rates from professional, through skilled and non-skilled workers. Family affluence effects more or less disappeared in this analysis, with the exception of Finland and Germany where children in Low Affluence families were significantly more likely to smoke daily than those in High Affluence families. This relationship was not found in other countries.

Family structure was found to be significantly associated with smoking among 15-year-olds in all countries, with smoking prevalence lowest among adolescents in intact families and highest among adolescents in stepfamilies (Griesbach, Amos & Currie, submitted). Multivariate analysis showed that several risk factors were associated with higher smoking prevalences in all countries, but that even after these other factors were taken into account, there was an increased likelihood of smoking among adolescents in stepfamilies.

Schmidt & Kolip (submitted) found that girls smoke significantly more often than boys. Furthermore, girls estimated nicotine consumption within their age group significantly higher than did boys. Boys rated smoking restrictions more positively than do girls. Both school smoking policy and gender were associated with differing perceptions, attitudes and behaviour concerning smoking. However, girls demonstrated specific risk factors. Thus, interventions at the political level and accompanying evaluation must be planned on a gender-specific basis including the monitoring of undesired side-effects – e.g. reactive behaviour toward strict policy.

Based on student data from Danish schools, the correlation between male and female smoking in the school class was studied by group level analysis (Rasmussen et al., submitted). The proportion of male and female smokers within the school class was not found to be correlated. In school classes with varying smoking prevalence among boys and girls, the number of classes with relatively more smoking girls than boys was double the number of classes with relatively more smoking boys. High variation in male and female smoking behaviour between the school classes was observed.

The findings suggest that the influence of class-room environment on the processes causing smoking behaviour may vary for boys and girls. For boys and girls respectively, the social climate in some school classes encourage smoking behaviour while others foster non-smoking behaviour. The observed smoking prevalences among boys and girls within the school classes cannot be explained by a cluster effect at the school level.

4. CONCLUSION

The Control of Adolescent Smoking (CAS) study involved highly qualified researchers and European centres with expertise in psychological, medical, sociological and educational research on health promotion. The project succeeded to harmonize research instruments and data collection, and allowed cross-national comparisons of how macro level factors (national tobacco policies) were related to micro level factors (individual smoking behaviours).

The CAS study found huge variations between countries in the extent and comprehensiveness of national smoking policies. Some countries have used legislation to ban advertising or restrict smoking in public buildings. Other countries have used a non-legislative approach, and instead have established voluntary agreements between the government and the tobacco industry.

The study found that certain aspects of government policy did appear to be related to lower smoking rates among young people. In particular, countries where it was difficult for adolescents to get access to cigarette vending machines, and where cigarette prices were high, had lower smoking prevalences than countries with easy access to vending machines and relatively low prices.

Students are also less likely to be exposed to teachers smoking in school in countries with comprehensive national smoking policies. For example, in Finland and Norway, which have very comprehensive national smoking policies, only 5% of students in the survey reported being exposed to teachers smoking in schools, whereas in those countries with little in the way of national tobacco policy, e.g., Denmark, Scotland, Wales, about a third of young people reported that they saw or knew about teachers smoking in their schools.

The findings show that schools are playing a paradoxical role in teaching young people about smoking. Lessons from health education classes are often contradicted by lessons in the school yard or toilets where smoking by students is commonplace in all countries. In fact, school is the place where adolescents are *most* likely to smoke, with up to 90% of young daily smokers in some countries smoking at school during the school day.

But, findings from the CAS study show that efforts to combat smoking in the school *can* work. In schools that had smoke-free policies, there was a 7% probability for students reporting to be exposed to teachers smoking indoors, whereas the probability was 37% for students in non-smoke-free schools. Findings from Scotland showed that students were also less likely to see other students smoking in schools where smoking restrictions were consistently enforced. And there was some evidence from Wales that where policies in schools were both *comprehensive* and *enforced*, that actual smoking rates among students were lower. In Welsh schools where policies were strong, only 10% of students were daily smokers compared to 30% in schools where they were weak.

The study also found that good teacher support for students was correlated with lower smoking rates in students. Thus, smoke-free school policies are likely to work better in supportive school environments. The development and implementation of smoking policies in schools should be a joint enterprise between students, staff and parents in order to maximise effectiveness and minimise the risk of any unforeseen negative side effects.

It has to be noted that in some countries, very restrictive national policies on indoor smoking at school can push teacher smoking outdoors, resulting in the negative and unforeseen side effect of making smoking more visible to students. But the main recommendation from the CAS study is to aim for smoke-free schools and support this aim with comprehensive national tobacco control policies.

Family structure was found to be a significant risk factor in young people's smoking in every country with adolescents from stepfamilies having consistently higher rates of daily smoking. This effect remained even when socioeconomic factors and parental smoking were controlled for. The mechanism by which being in a step family may affect smoking of young people is not illuminated by this study but nevertheless the findings suggest that particular support may be needed for families under stress from marital breakdown and family reconstruction.

Gender was also a consistent risk factor across all countries, girls having higher daily smoking rates and higher cigarette consumption than boys. Smoking among girl classmates

was independent of smoking among boy classmates. All these findings together indicate that gender sensitive smoking prevention strategies are needed.

Cross-country patterns of smoking by socioeconomic factors were less clear and less consistent than by family structure and gender. Where associations were significant they linked smoking to low family affluence and low occupational status. There was evidence that young people's expectations about their future educational or occupational prospects after leaving school were linked to smoking, with the higher expectations of a university education being associated with a lower risk of smoking.

The implications of these findings for policy are further discussed in Kannas & Schmidt (2001). Moreover, data from the CAS study will be analysed further with the aim for papers to be published in international peer review journals. One manuscript has already been accepted, several manuscripts have been submitted, and a number of articles are currently being developed.

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APPENDIX 1. Student questionnaire in the CAS study

31. How often do you smoke in the following places? (Tick one box for each line)

	(1) <i>Every day</i>	(2) <i>More than once a week</i>	(3) <i>Occasionally</i>	(4) <i>Never</i>
In your own home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In relatives' homes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In your friends' homes	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
On school premises during school hours	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Off school premises during school hours	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In public places, eg. on the street, in cafes, parks, shopping centres	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

32. Do any of the following people smoke? (Tick one box for each person)

	(5) <i>Don't have / don't see this person</i>	(1) <i>Smokes daily</i>	(2) <i>Smokes sometimes</i>	(3) <i>Does not smoke</i>	(4) <i>Don't know</i>
Father.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stepfather / Mother's partner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mother.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stepmother / Father's partner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your best friend.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

33. How many of your other friends smoke?

1	<input type="checkbox"/>	Most of them
2	<input type="checkbox"/>	About half of them
3	<input type="checkbox"/>	Some of them
4	<input type="checkbox"/>	None of them
5	<input type="checkbox"/>	Don't know

34. About how many pupils in your year at school smoke?

- 1 ☐ Most of them
- 2 ☐ About half of them
- 3 ☐ Some of them
- 4 ☐ None of them
- 5 ☐ Don't know

35. About how many teachers in your school smoke?

- 1 ☐ Most of them
- 2 ☐ About half of them
- 3 ☐ Some of them
- 4 ☐ None of them
- 5 ☐ Don't know

36. How often do you see or know about the following people smoking in your home? (Tick one box for each person)

	(4) <i>Don't have / don't see this person</i>	(1) <i>About every day</i>	(2) <i>Sometimes</i>	(3) <i>Never</i>
Father.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stepfather / Mother's partner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mother.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Stepmother / Father's partner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other people you live with..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relatives that come to your home.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your best friend.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

37. During school hours, how often do you see or know about teachers smoking? (Tick one box for each place)

	(1) <i>About every day</i>	(2) <i>Sometimes</i>	(3) <i>Never</i>	(4) <i>Don't know</i>
In staff rooms.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the canteen/cafeteria.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In corridors.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In other parts of the school building	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outdoors on school premises.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outdoors off school premises.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

38. During school hours, how often do you see or know about pupils smoking? (Tick one box for each place)

	(1) <i>About every day</i>	(2) <i>Sometimes</i>	(3) <i>Never</i>	(4) <i>Don't know</i>
In the cloakrooms / toilets.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the canteen / cafeteria.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In corridors.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In other parts of the school building	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outdoors on school premises.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outdoors off school premises.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

39. During school hours, how often do you see or know about other people smoking on school premises (eg. staff other than teachers, workmen or visitors)?

- 1 ☐ About every day
- 2 ☐ Sometimes
- 3 ☐ Never

40. Do you intend to smoke daily in two years time?

- 1 ☐ Definitely yes
- 2 ☐ Probably yes
- 3 ☐ Maybe, maybe not
- 4 ☐ Probably not
- 5 ☐ Definitely not

41. What would you think about you smoking two years from now?

	(1) <i>Strongly agree</i>	(2) <i>Agree</i>	(3) <i>Neither agree nor disagree</i>	(4) <i>Disagree</i>	(5) <i>Strongly disagree</i>
It would be bad.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It would be mature..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It would be OK.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It would be foolish..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

42. Do you agree or disagree that smoking helps people when they are nervous?

(1) <i>Strongly agree</i>	(2) <i>Agree</i>	(3) <i>Neither agree nor disagree</i>	(4) <i>Disagree</i>	(5) <i>Strongly disagree</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

43. How important is it to you that you don't feel nervous?

(1) <i>Very important</i>	(2) <i>Important</i>	(3) <i>Neither important nor unimportant</i>	(4) <i>Not important</i>	(5) <i>Not at all important</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

44. Do you agree or disagree that smoking keeps a person's weight down?

- | | | | | |
|----------------------------------|--------------------------|--|--------------------------|-------------------------------------|
| (1)
<i>Strongly
agree</i> | (2)
<i>Agree</i> | (3)
<i>Neither agree
nor disagree</i> | (4)
<i>Disagree</i> | (5)
<i>Strongly
disagree</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

45. How important is it to you to keep your weight down?

- | | | | | |
|----------------------------------|--------------------------|---|---------------------------------|--|
| (1)
<i>Very
important</i> | (2)
<i>Important</i> | (3)
<i>Neither important
nor unimportant</i> | (4)
<i>Not
Important</i> | (5)
<i>Not at all
important</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

46. Do you agree or disagree that smoking makes people feel confident?

- | | | | | |
|----------------------------------|--------------------------|--|--------------------------|-------------------------------------|
| (1)
<i>Strongly
agree</i> | (2)
<i>Agree</i> | (3)
<i>Neither agree
nor disagree</i> | (4)
<i>Disagree</i> | (5)
<i>Strongly
disagree</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

47. How important is it to you that you feel confident?

- | | | | | |
|----------------------------------|--------------------------|---|---------------------------------|--|
| (1)
<i>Very
important</i> | (2)
<i>Important</i> | (3)
<i>Neither important
nor unimportant</i> | (4)
<i>Not
important</i> | (5)
<i>Not at all
important</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

48. Do you agree or disagree that smoking makes people's teeth yellow?

- | | | | | |
|----------------------------------|--------------------------|--|--------------------------|-------------------------------------|
| (1)
<i>Strongly
agree</i> | (2)
<i>Agree</i> | (3)
<i>Neither agree
nor disagree</i> | (4)
<i>Disagree</i> | (5)
<i>Strongly
disagree</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

49. How important is it to you that your teeth don't look yellow?

- | | | | | |
|----------------------------------|--------------------------|---|---------------------------------|--|
| (1)
<i>Very
important</i> | (2)
<i>Important</i> | (3)
<i>Neither important
nor unimportant</i> | (4)
<i>Not
important</i> | (5)
<i>Not at all
important</i> |
| <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

50. What do you think about the following statement?

Most people who are important to me wouldn't mind
if I smoked two years from now.

(1)	(2)	(3)	(4)	(5)
<i>Strongly agree</i>	<i>Agree</i>	<i>Neither agree nor disagree</i>	<i>Disagree</i>	<i>Strongly disagree</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

51. Do you think your father would mind if you smoke two years from now?

(1)	(2)	(3)	(4)	(5)
<i>Don't have/ Don't see him</i>	<i>A lot</i>	<i>A bit</i>	<i>Not very much</i>	<i>Not at all</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

52. How much will you care what he thinks?

(1)	(2)	(3)	(4)	(5)
<i>Don't have/ Don't see him</i>	<i>A lot</i>	<i>A bit</i>	<i>Not very much</i>	<i>Not at all</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

53. Do you think your mother would mind if you smoke two years from now?

(1)	(2)	(3)	(4)	(5)
<i>Don't have/ Don't see her</i>	<i>A lot</i>	<i>A bit</i>	<i>Not very much</i>	<i>Not at all</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

54. How much will you care what she thinks?

(1)	(2)	(3)	(4)	(5)
<i>Don't have/ Don't see her</i>	<i>A lot</i>	<i>A bit</i>	<i>Not very much</i>	<i>Not at all</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

55. Do you think your best friend would mind if you smoke two years from now?

(1)	(2)	(3)	(4)	(5)
<i>Don't have</i>	<i>A lot</i>	<i>A bit</i>	<i>Not very much</i>	<i>Not at all</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

56. How much will you care what he or she thinks?

(1)	(2)	(3)	(4)	(5)
<i>Don't have</i>	<i>A lot</i>	<i>A bit</i>	<i>Not very much</i>	<i>Not at all</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

57. Do you think most of your other friends would mind if you smoke two years from now?

(1)	(2)	(3)	(4)	(5)
<i>Don't have</i>	<i>A lot</i>	<i>A bit</i>	<i>Not very much</i>	<i>Not at all</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

58. How much will you care what they think?

(1)	(2)	(3)	(4)	(5)
<i>Don't have</i>	<i>A lot</i>	<i>A bit</i>	<i>Not very much</i>	<i>Not at all</i>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

59. Do you think it will be easy for you not to smoke two years from now?

- | | | |
|---|--------------------------|----------------------------|
| 1 | <input type="checkbox"/> | Very easy |
| 2 | <input type="checkbox"/> | Easy |
| 3 | <input type="checkbox"/> | Neither easy nor difficult |
| 4 | <input type="checkbox"/> | Difficult |
| 5 | <input type="checkbox"/> | Very difficult |

60. Below are some statements about restrictions on where people are allowed to smoke. Please show how much you agree or disagree with each statement.

	(1) <i>Strongly agree</i>	(2) <i>Agree</i>	(3) <i>Neither agree nor disagree</i>	(4) <i>Disagree</i>	(5) <i>Strongly disagree</i>
Students should be allowed to smoke on school premises...	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teachers should be allowed to smoke on school premises....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Parents should not be allowed to smoke at home.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smoking in public places should not be allowed.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

61. Does your school have rules restricting smoking by pupils on school premises?

- 1 ☐ Yes
- 2 ☐ No
- 3 ☐ Don't know

62. Are pupils allowed to smoke on school premises? (Tick one box)

- 1 ☐ No, not at all
- 2 ☐ Yes, older pupils are allowed to smoke anywhere
- 3 ☐ Yes, older pupils are allowed to smoke in restricted areas
- 4 ☐ Yes, all pupils are allowed to smoke in restricted areas
- 5 ☐ Yes, all pupils are allowed to smoke anywhere on school premises
- 6 ☐ Don't know

63. How often do staff make sure that rules restricting pupils smoking are kept in these places? (Tick one box for each line)

	(1) <i>Always</i>	(2) <i>Most of the time</i>	(3) <i>Sometimes</i>	(4) <i>Never</i>	(5) <i>There are no rules</i>
In the cloakrooms / toilets.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the canteen / cafeteria.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the corridors.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In other parts of the school building..	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the playground / outdoor area of the school.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

64. What action is usually taken if the restrictions are broken by pupils in your year? (Tick one box)

- | | | |
|---|--------------------------|---|
| 1 | <input type="checkbox"/> | No action is taken |
| 2 | <input type="checkbox"/> | Parent(s) are informed (eg. a letter sent home) |
| 3 | <input type="checkbox"/> | Pupil is disciplined or punished |
| 4 | <input type="checkbox"/> | Pupil is counselled or given advice |

65. In which of the following ways have you been made aware of school smoking restrictions? (Tick one box for each line)

	(1) <i>Yes</i>	(2) <i>No</i>	(3) <i>Don't know</i>
Written school rules	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Told by teachers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
'No Smoking' signs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

66. Are teachers allowed to smoke on school premises?

- | | | |
|---|--------------------------|--|
| 1 | <input type="checkbox"/> | No, not at all |
| 2 | <input type="checkbox"/> | Yes, in restricted areas (such as staff rooms) |
| 3 | <input type="checkbox"/> | Yes, anywhere on school premises |
| 4 | <input type="checkbox"/> | Don't know |

APPENDIX 2.
SCHOOL STAFF QUESTIONNAIRE IN THE CAS STUDY

**SCHOOL POLICIES AND PRACTICES ON
RESTRICTING SMOKING**

Thank you for taking part in this survey.

For most of the questions you will simply have to tick a box. When you have finished, please return the questionnaire to us in the pre-paid envelope provided.

Your answers will be treated in strictest confidence.

SMOKING BY PUPILS

1. Does your school have a written or informal policy restricting smoking by pupils on the school premises? (Please tick one box only)

Yes - written	<input type="checkbox"/>	Go to Q2
Yes - informal	<input type="checkbox"/>	Go to Q2
No policy	<input type="checkbox"/>	Go to Q3
Don't know	<input type="checkbox"/>	Go to Q3

2. How long has this policy been in place:
(Please tick one box only)

Less than one year	<input type="checkbox"/>
One to two years	<input type="checkbox"/>
Three to four years	<input type="checkbox"/>
Five or more years	<input type="checkbox"/>

3. Are pupils allowed to smoke on the school premises? (Please tick one box only)

No, not at all	<input type="checkbox"/>	Go to Q6
Yes, only older pupils are allowed to smoke anywhere	<input type="checkbox"/>	Go to Q4
Yes, only older pupils are allowed to smoke in restricted areas	<input type="checkbox"/>	Go to Q4
Yes, all pupils are allowed to smoke anywhere	<input type="checkbox"/>	Go to Q5
Yes, all pupils are allowed to smoke in restricted areas	<input type="checkbox"/>	Go to Q5
Don't know	<input type="checkbox"/>	Go to Q6

4. Which pupils are allowed to smoke on the school premises?

(Please tick those boxes that apply and write in N/A where a year group(s) is not present in the school)

Year 7	<input type="checkbox"/>	Year 9	<input type="checkbox"/>	Year 11	<input type="checkbox"/>
Year 8	<input type="checkbox"/>	Year 10	<input type="checkbox"/>	Year 12/13	<input type="checkbox"/>

5. Are pupils allowed to smoke in any of the following places? (Please tick one box for each line)

	Yes	No	Don't know
In cloakrooms/toilets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the canteen/cafeteria	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the corridors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the playground/other outdoor area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
During school trips or visits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the common room(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In other parts of the school building	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

(Please say where)

6. Do pupils smoke in any of these places? (Please tick one box for each line)

	Yes	No	Don't know
In cloakrooms/toilets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the canteen/cafeteria	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the corridors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the playground/other outdoor area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
During school trips or visits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the common room(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In other parts of the school building	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

7. How often are the restrictions on pupils' smoking enforced in the following areas? (Please tick one box for each line)

	Always	Most of the time	Sometimes	Never	No restrictions
In cloakrooms/toilets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the canteen/cafeteria	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the corridors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the playground/other outdoor area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the common room(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
During school trips or visits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In other parts of the school building	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

8. What is the main action taken if the restrictions are broken by Year 11 pupils? (Please tick one box only)

No restrictions	<input type="checkbox"/>
No action is taken	<input type="checkbox"/>
Parent(s) are informed	<input type="checkbox"/>
Pupil disciplined	<input type="checkbox"/>
Pupil counselled	<input type="checkbox"/>
Other	<input type="checkbox"/>
If other, please say what _____	

SMOKING BY TEACHERS

9. Does your school have a written or informal policy restricting smoking by teachers on the school premises? (Please tick one box only)

Yes - written	<input type="checkbox"/>	Go to Q10
Yes - informal	<input type="checkbox"/>	Go to Q10
No policy	<input type="checkbox"/>	Go to Q12
Don't know	<input type="checkbox"/>	Go to Q12

10. How long has this policy been in place? (Please tick one box only)

Less than one year

One to two years

Three to four years

Five or more years

11. Were teachers involved in developing this policy? (Please tick one box only)

Yes, to a large extent

Yes, to some extent

No

Don't know

12. Are teachers allowed to smoke on the school premises? (Please tick one box only)

No, not at all

Yes, in restricted areas

Yes, anywhere on the school premises

Don't know

Go to Q14

Go to Q13

Go to Q13

Go to Q14

13. Are teachers allowed to smoke in any of the following places? (Please tick one box for each line)

Yes

No

Don't know

In the staff room

In the canteen/cafeteria

In the corridors

Outdoors on the school premises

In other parts of the school building

14. Do teachers smoke in any of these places? (Please tick one box for each line)

	Yes	No	Don't know
In the staff room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the canteen/cafeteria	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the corridors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outdoors on the school premises	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In other parts of the school building	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. How often are the restrictions on teachers' smoking enforced in the following areas? (Please tick one box for each line)

	Always	Most of the time	Sometimes	Never	No restrictions
In the staff room	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the canteen/cafeteria	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the corridors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Outdoors on the school premises	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In other parts of the school building	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. What action is usually taken if the restrictions are broken? (Please tick one box only)

No restrictions	<input type="checkbox"/>
No action is taken	<input type="checkbox"/>
Teacher is disciplined	<input type="checkbox"/>
Teacher is counselled	<input type="checkbox"/>
Other	<input type="checkbox"/>
If other, please say what	

17. Does your school have a policy restricting smoking by other adults (eg non-teaching staff and visitors) on the school premises? (Please tick one box only)

Yes, covered by teaching staff policy

Yes, separate written policy

Yes, separate informal policy

No

Don't know

INFORMATION FOR STAFF AND PUPILS

18. In which of the following ways are pupils made aware of smoking restrictions? (Please tick one box for each line)

	Yes	No	Don't know	No restrictions
Written school rules for new entrants				
Verbal information from teachers				
Through health education lessons				
No smoking signs				
Information to parents				
It goes without saying as it is the law				

19. In which of the following ways are teachers made aware of smoking restrictions? (Please tick one box for each line)

	Yes	No	Don't know	No restrictions
Included in job information sent to applicants				
Included in advertisements for new staff				
Included in contract of appointment for staff				
Through staff meetings				
It goes without saying as it is the law				

Smoking related education initiatives in the school

20. Which of the following best describes the way that smoking education is currently covered in your school?

(Please tick all those that apply)

Not covered at all

Taught within another subject (eg Science, Personal and Social Education)

As a special initiative in the current school year

In some other way

(Please say how)

21. Which of the following best describes the degree to which smoking education is currently covered in your school?

(Please tick one box only)

More than adequate

Adequate

Less than adequate

Inadequate

Not covered at all

22. And how important do you think it is for smoking education to be covered in your school?

(Please tick one box only)

Very important

Important

Quite important

Not very important

Don't know

23. Can you provide examples of smoking education initiatives in the current school year (eg curriculum content, special projects, development of materials)

YOUR VIEWS ON SMOKING IN THE SCHOOL

24. Thinking about the teachers in your school, how many would be likely to agree with the following statements about smoking and smoking restrictions? (Please tick one box for each line)

	All of them	Most of them	Some of them	None of them	Don't know
Teachers should be allowed to smoke out of sight of pupils	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
This school should have a policy restricting pupils' smoking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pupils must accept that teachers should be allowed to smoke on the school premises	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
This school should have a policy restricting smoking by teachers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Teachers can do little to control smoking by pupils	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smoking by teachers on the school premises does influence pupils' smoking	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

A FEW QUESTIONS ABOUT YOURSELF

25. Which of the following best describes your position in the school? (Please tick one box only)

Headteacher

Other senior manager

Health Education Co-ordinator or teacher with
responsibility for health education

Subject teacher

26. How long have you worked in this school?
(If less than one year write in '0')

_____ years

APPENDIX 3.

INTERVIEW GUIDE FOR NATIONAL POLICY DATA

I. Context:

General:

1. Adult smoking prevalence (trends during the 1990s), with break-down of males vs. females.
2. Smoking prevalence among teachers, doctors and nurses in 1997 (and trends through the 1990s, if available)
3. Trends in adolescent smoking in the 1990s, with break-down of boys vs. girls and weekly and daily smoking.
4. How much money is raised annually by tobacco taxation, and what is done with the money?
5. How much money is spent on cigarettes per year, on average, by smokers?

Adolescents' access to tobacco:

1. How old must you be before you are permitted to buy tobacco products in your country?
2. How is the legal age limit for purchasing tobacco products enforced among retailers in your country? (*Optional*)
3. Are cigarette vending machines available in your country? Where?
4. What is the price of a pack of 20 cigarettes?
5. Can cigarettes be purchased individually?

Government health policy:

1. What percentage of the annual mortality rate is attributable to tobacco-related diseases?
2. Are there national targets for smoking reduction among adults and adolescents?
3. Does the government have a clearly defined strategy for reducing smoking among the whole population? If so, describe it.
4. How much money is spent by the government on smoking research/cessation programmes? (*Optional*)
5. What are the warnings that appear on cigarette packages?

School health education:

1. How are government health policies implemented in school health education classes?
2. How many schools out of the total number of schools in your country participate in the Health Promoting Schools programme?
3. Is smoking education compulsory in the curriculum?

Tobacco legislation:

1. Legislation relevant to young people, or other policies on protection of young people, or prevention of smoking.
2. What legislation or other policies (including voluntary agreements) exist to restrict tobacco advertising, promotion, and sponsorship? (radio and TV; printed media like newspapers and journals; billboards; merchandising; hidden advertising, eg, magazine editorial pages, such as fashion).
3. When did these restrictions come into effect?
4. Are there restrictions on smoking in public places?
5. How are restrictions on smoking in public places (ie., public transport, etc.) implemented and enforced?
6. What percentage of people in your country are for/against smoking restrictions?

Detailed references should be provided for all information.

II. Policy definition

1. What are the policies/laws/codes of practice relevant to restriction of smoking in schools? (Quote them in their entirety.)
2. When was the policy regarding smoking restrictions in schools defined? When was it written down? Was this at national, local or other level?
3. How clearly and concisely are the aims of the policy/law/code of practice formulated? (Comment upon text of policy.)
4. Was there a public debate prior to its introduction? (*Optional*)

III. Evaluation

1. Is there any authority which checks whether and how schools are implementing policy?
2. Has the policy been successful? What is the evidence base? (hard or soft)
3. Has the policy had any side effects?

APPENDIX 4.

LIST AND SUMMARY OF CAS PRESENTATIONS

The main type of dissemination from the Control of Adolescence (CAS) study will be through articles in peer-reviewed international journals. As the project is still in an early phase concerning analysis of data and reporting of findings, no papers have yet been published. However, several papers have been submitted to journals for review, and findings from the CAS study have been presented at a number of international conferences and meetings of the CAS partners held biannually in the period 1998-2001. The results of the analyses are outlined following the list of publications and presentations, presenting the objective of each analysis, variables, data, type of statistical analysis, results and implications, as well as an indication of the persons responsible for the various products.

Control of Adolescent Smoking (CAS).

List of publications and conference presentations.

Currie, C., Roberts, C & Francois, Y. Trends in adolescent tobacco use in Europe. Invited plenary presentation at the Second European and First Ibero-american Conference on Smoking or Health, Las Palmas, Gran Canaria, Feb. 22 – 25, 1999.

Currie, C. Introduction and Overview of the CAS Project. ? Paper presented at Smoking and Young People, European Parliament, Brussels 24 January 2001.

Currie, C. & Griesbach, D. (submitted) Socioeconomic variation in prevalence of smoking.

Dür, W. & Grossmann, W. How do national tobacco policies relate to smoking behaviour among 15 year olds in 7 countries? Paper presented at Smoking and Young People, European Parliament, Brussels 24 January 2001.

Griesbach, D., Inchley, J. and Currie, C. (submitted) More than words? The status and impact of smoking policies in Scottish schools.

Griesbach, D., Amos, A. and Currie, C. (submitted) Adolescent smoking and family structure in Europe.

Griesbach, D., Wold, B., Holstein, B. and Currie, C., Comparing national policies on smoking in eight European countries, CAS Fact Sheet 1, November 2000.

Griesbach, D. and Currie, C., Adolescent smoking trends and intentions to smoke in eight European countries, CAS Fact Sheet 2, January 2001.

Jensen, L.H., Osler, M., Roberts, C., Holstein, B.E., Due, P. & Damsgaard, M.T. (submitted) Exposure to teachers' smoking is associated with adolescent smoking behaviour

Kannas, L. Policy implications of CAS findings. Paper presented at Smoking and Young People, European Parliament, Brussels 24 January 2001.

Kannas L, Schmidt B. The Control of Adolescent Smoking (CAS) study (2001). Policy implications and recommendations for a smoke-free school. Department of Health Sciences, University of Jyväskylä. Report submitted to the European Commission under contract BMH4-CT98-3721.

Moore L, Roberts C, Tudor-Smith C. School smoking policies and adolescent smoking: multilevel analysis of cross-sectional data from Wales. Poster presentation at the 11th World Conference on Tobacco or Health, Chicago, 6th-11th August 2000.

Moore, L., Roberts, C. & Tudor-Smith, C. (in press), School smoking policies and smoking prevalence among adolescents: multilevel analysis of cross-sectional data from Wales. Tobacco Control.

Nurkkala, H., Kannas, L. & Tynjälä, J. et al. Adolescent smoking at school in seven European countries. Poster presented at the 11th World Conference on Tobacco or Health in Chicago 6-11 August 2000.

Nurkkala H., Kannas L., Tynjälä J. (submitted) Smoke-free school day – a challenge for Health Promotion. Pupils' smoking during the school day in seven European countries

Rasmussen, M., Damsgaard, M.T., Due, P. & Holstein, B.E. (submitted) Male and Female smoking within the Danish school class: a group level analysis.

Roberts C, Currie C, François Y. Trends in adolescent tobacco use in Europe. Paper presented at the 2nd European Conference on Tobacco or Health, Las Palmas de Gran Canaria, 23rd-27th February 1999.

Roberts C, Currie C, Wold B The development and implementation of school smoking policies in eight European countries. Paper presented at the 2nd European Conference on Tobacco or Health, Las Palmas de Gran Canaria, 23rd-27th February 1999.

Roberts C Control of adolescent smoking: school smoking policies in eight European countries. Paper presented at Smoking and Young People meeting at the European Parliament, 24th January 2001.

Roberts C. Control of Adolescent Smoking (the CAS study) 1997/1998: Technical Report on the staff survey in eight European countries. Report to European Commission. Research and Evaluation Branch, Health Promotion Division, National Assembly for Wales. 2000.

Schmidt, B. & Kolip, P. (submitted). Smoking Culture in Schools and Gender Differences in Smoking Perceptions, Attitudes and Behaviour.

Small, G. Gender, family and school factors in adolescent smoking. MSc thesis, the Napier University in Edinburgh, 2000.

Tynjälä, J., Kannas, L. & Villberg, J. Smoking and perceived alertness in 13-and 15-year-old Finns. Poster presented at Smoke Free Europe Conference in Las Palmas 23-27 February 1999.

Tynjälä, J., Kannas, L., Nurkkala, H. et al. School smoking policies and teachers' smoking in eight European countries. Poster presented at the 11th World Conference on Tobacco or Health in Chicago 6-11 August 2000.

Wold, B., Torsheim, T., Roberts, C. & Currie, C. Observational learning and subjective norms: the effect of being exposed to smokers in school. Paper presented at "Researching for health. Challenges and Controversies." Edinburgh 20-21. Sept. 1999.

Wold B, Torsheim T, Currie, C. & Roberts, C. (2000) National tobacco policies and adolescent smoking: the significance of cultural differences in school smoking restrictions. Poster presented at 11th World Conference on Tobacco OR Health, Chicago 6-11 August.

Wold, B., Torsheim, T., Currie, C. & Roberts C. Adolescent exposure to smoking in school: the significance of national and local differences in school smoking restrictions. Paper presented at III European Conference of Community Psychology, Bergen 11-13. September 2000.

Wold, B., Holstein, B., Griesbach, D., and Currie, C. (2000) National policies on restriction of smoking at school in eight European countries. RUHBC, University of Edinburgh. Report submitted to the European Commission under contract BMH4-CT98-3721.

Wold B, Currie C & Lund M (2000). Control of Adolescent Smoking (The CAS study) 1997/1998. Technical report on surveys of 15 year-olds in nine European countries. Research Centre for Health Promotion, University of Bergen. Report submitted to the European Commission under contract BMH4-CT98-3721.

Wold B & Currie C (2001) Control of Adolescent Smoking: Transnational variation in prevalence of adolescent smoking: the role of national tobacco control policies and the school and family environment. Research Centre for Health Promotion Research, University of Bergen. Report submitted to the European Commission under contract BMH4-CT98-3721.

Wold B. Evaluating policies on school smoking restrictions: a multilevel analyses of social and psychological predispositions to start smoking. Paper presented at Smoking and Young People, European Parliament, Brussels 24 January 2001.

Wold, B. Tobacco use among youth and smoking policies in schools – HBSC study. Guest lecture at ENYPAT Spring School Helsinki 26 March 2001.

Observational learning and subjective norms: the effect of being exposed to smokers in school.

Wold, B., Torsheim, T., Roberts, C. & Currie, C.

Paper presented at "Researching for health. Challenges and Controversies." Edinburgh 20-21. Sept. 1999.

The paper was based on theoretical assumptions about student uptake of smoking in that observational learning, as suggested by Social Cognitive Theory, may influence individual attitudes and subjective norms, which in the Theory of Reasoned Action are assumed to be basic determinants of intentional behaviour.

The aim of this paper was to study how perceived exposure to smokers at school was associated with students' attitudes and norms regarding smoking. Four different countries differing with respect to the status of national and local policies on smoking restrictions in schools were selected for analyses.

Variables measuring exposure to students or teachers smoking in various places at school were included in the analyses, as well as operationalisations of the Theory of Reasoned Actions, including scales measuring attitudes and subjective norms about smoking. The paper was based on data from the school-based surveys on national representative samples of 15 year-olds in Austria, Norway, Scotland and Wales (total n=6000).

Structural Equation Modeling (EQS) was applied to the data in order to determine how the same theoretical model fits with data from these four countries. Cultural differences in exposure to smoking at school were studied through analysis of variance.

The findings concerning cultural differences in exposure to smokers at school, suggested that:

- Exposure to student smoking was highest in UK
- Exposure to teacher smoking was highest in Norway
- Exposure to student smoking outdoors was most frequent compared to exposure to indoor smoking in all countries, especially in Norway.
- Exposure to student smoking indoors was most frequent in Scotland and Wales, and toilets were the main setting.
- Exposure to teacher smoking was mainly outdoors in Norway, and mainly indoors (staff room) in UK

The findings related to associations between exposure to smokers at school and students' attitudes, norms and intention to smoke suggested that:

- Exposure to smokers at school is positively related to behavioural beliefs in favour of smoking, positive attitudes to smoking and intention to smoke.
- Subjective norms seem to be less related to exposure.

Exposure to teachers' smoking is associated with adolescent smoking behaviour

Jensen, L.H., Osler, M., Roberts, C., Holstein, B.E., Due, P. & Damsgaard, M.T. (manuscript submitted)

The purpose of the present paper was to determine whether adolescent smoking behaviour is associated with their perceived exposure to teachers' smoking at school, after adjustment for exposure to smoking at home, in school and best friends smoking.

The analyses were based on data from 1547 students (mean age 15.8 years) from 95 classes in 48 randomly selected Danish schools. Variables regarding daily smoking, smoking >20 cigarettes a week and exposure to student and teacher smoking were included.

The findings suggest that nearly 60% of the students were exposed to teachers' smoking outdoors on school premises, while approximately 15 % reported that they had seen teachers smoke inside school building. Furthermore nearly 90 % of the students reported that they had seen other students smoke outdoors on school premises. Adolescents' perceived exposure to teachers' smoking outdoors was significantly related to daily smoking after adjustment for other smoking exposures and gender (adjusted OR=1.8;CI:1.1-2.8), while adolescents' perceived exposure to teachers' smoking inside the school building was not related to daily smoking (adjusted OR=0.9;CI:0.6-1.3). Nearly the same pattern of associations were found with heavy smoking as dependent variable.

These results suggest that exposure to teacher smoking during school hours might influence adolescent smoking. The findings have implications for future tobacco prevention strategies in schools in many countries with liberal smoking policies, because teachers' smoking within the school setting is potentially modifiable.

Smoking policies and enforcement of smoking restrictions in Scottish secondary schools

Griesbach, D., Inchley, J. and Currie, C., More than words? The status and impact of smoking policies in Scottish schools. (Manuscript submitted)

The aim of this study was to determine the current status of smoking policies in Scottish schools and to investigate the relationship between policy status and actual smoking behaviour among students and teachers.

The analyses included staff data on questions concerning whether the school has written or informal policies restricting smoking by students and teachers, types of policy (where smoking is allowed) and enforcement of restrictions of student smoking, as well as student data on exposure to teachers and student smoking at school premises.

Chi-square was used to test associations between variables. The definition of the school's policy status and restrictions on student and teacher smoking was based on staff reports. Perceptions of (student and teacher) smoking in the school and on school grounds were based on student reports.

The results indicated that more schools had a written policy on teacher smoking than on student smoking. All schools in the sample banned smoking by students on school premises, but the majority allowed smoking by teachers in restricted areas. Irrespective of the type of policy or restrictions on smoking, students reported smoking among both students and teachers on school premises in all of the sample schools. Whether or not a school had a written policy appeared to be unrelated to student smoking in the toilets or teacher smoking outdoors on school premises. However, students were less likely to be aware of students smoking outdoors and teachers smoking in the staff rooms in schools where there were written policies on student and teacher smoking respectively. Consistent enforcement of a ban on student smoking was associated with lower levels of perceived smoking among students. Where a complete ban on teacher smoking existed, smoking among teachers was perceived less often in the staff rooms, but more often in outside areas on school premises. Therefore, banning of indoor smoking in the staff rooms may result in smoking among teachers being more visible to students.

While school policy is an important component of a whole school approach to health promotion, the findings indicate that policy *per se* has limited effectiveness. In particular, where smoking is concerned, consistent enforcement of restrictions would appear to be the key to making a significant impact on students' behaviour. Thus, policy development must be followed by comprehensive implementation and enforcement. It is also important that staff smoking policies complement student smoking policies, but the unintended consequences of smoking bans such as relocation to potentially more visible areas must be addressed.

Adolescent exposure to smoking in school: the significance of national and local differences in school smoking restrictions.

Wold, B., Torsheim, T., Currie, C. & Roberts C.

Paper presented at III European Conference of Community Psychology, Bergen 11-13, September 2000.

The paper examines systematical associations between national policies on tobacco control, local school smoking restrictions and students' exposure to teachers who smoke at school. Data from Austria, Denmark, Finland, Germany, Norway, Scotland and Wales constituted the basis for analysis.

Multilevel modeling analyses (MlwiN) were applied to integrate data from three levels: national (indicators of restrictiveness, and types of policies), school (surveys among staff, n=800) and student (surveys among 15-year-old students, n=10 890).

Three of the participating countries (Austria, Finland and Norway) had national policies restricting smoking at school, while the remaining countries (Denmark, Germany, Scotland and Wales) did not have such legislation at the national level. The policies dictated that indoor smoking among teachers was either banned totally or restricted to certain smoking areas (e.g. staff room). With the exception of Finland, there were no national policies regulating outdoor smoking by teachers during school hours.

According to the results of the school staff survey, large variations in local school policies on restriction of teacher smoking both within and between countries existed. The results of the multilevel analyses suggest that national and school policies on restrictions of smoking at school are related to students' exposure to teachers who smoke at school. Local school policies predicted exposure to smokers in addition to national policies.

The findings suggest that restrictive tobacco control policies at national and local levels seem to be effective in reducing nonsmokers' exposure to environmental tobacco smoke, but negative side effects of restrictive policies were observed in student exposure to teachers who smoke outdoors.

School smoking policies and smoking prevalence among adolescents: multilevel analysis of cross-sectional data from Wales

Laurence Moore, Chris Roberts & Chris Tudor-Smith (in press), Tobacco Control.

The objective was to examine the association between school smoking policies and smoking prevalence among students. Multilevel analysis of cross-sectional data from surveys of schools and students from 55 secondary schools in Wales (55 teachers and 1375 students in year 11 (aged 15-16)) was conducted. The main outcome measures were self-reported smoking behaviour.

The results indicate that the prevalence of daily smoking in schools with a written policy on smoking for students, teachers and other adults, with no students or teachers allowed to smoke anywhere on the school premises, was 9.5% (95% confidence interval: 6.1%, 12.9%). In schools with no policy on students' or teachers' smoking, 30.1% (23.6%, 36.6%) of students reported daily smoking. In schools with an intermediate level of smoking policy, 21.0% (17.8%, 24.2%) smoked every day. School smoking policy was associated with school-level variation in daily smoking ($p=0.002$). In multilevel analysis, after adjusting for students' sex, parents' and best friends' smoking status, parental expectations and alienation from school, there was less unexplained school-level variation, but school smoking policy remained statistically significant ($p=0.041$). The association of smoking policy with weekly smoking was weaker than for daily smoking, and not statistically significant after adjustment for student-level variables. Both daily and weekly smoking prevalence were lower in schools where students' smoking restrictions were always enforced. Enforcement of teacher smoking restrictions was not significantly associated with students' smoking.

This study demonstrates an association between policy strength, policy enforcement and the prevalence of smoking among students, after having adjusted for student-level characteristics. These findings suggest that the wider introduction of comprehensive school smoking policies may help reduce teenage smoking.

What is already known on this topic:

Many schools have policies regarding smoking by students, teachers and others on the school premises, but the content and enforcement of these policies are variable. Evidence on the effectiveness of such policies is mixed, and no published studies have been conducted in the United Kingdom.

What this study adds:

In line with the weight of evidence elsewhere, this study demonstrates in the United Kingdom an association between policy strength, policy enforcement and students' smoking behaviour. The findings support the wider introduction of strongly enforced comprehensive smoking policies in secondary schools.

How do national tobacco policies relate to smoking behaviour among 15 year olds in 7 countries?

Wolfgang Dür & Wilfried Grossmann.

Paper presented at Smoking and Young People, European Parliament, Brussels 24 January 2001.

The paper set forth to answer the following questions:

- How do national tobacco policies relate to smoking behaviour among 15 year olds in 7 countries?
- Can differences in national tobacco policies explain the differences in smoking prevalences in these countries?
- If yes: how do tobacco policies on the national level and on the school level interact regarding smoking prevalences?
- Are associations between smoking prevalences and tobacco policies on the two levels independent from each other?
- Or can effects on one level be explained by effects on the other?
- Regarding associations between school tobacco policies and smoking prevalences: how are differences between policies targeted to students and policies targeted to teachers associated with smoking prevalences?
- Do these associations eventually depend on the student-teacher relation, particularly on the support culture in schools?

The variables included were.

- The 12 relevant factors describing national policies in these countries (see table X) : Published governmental targets, Ban on tobacco advertisement, Legal age limit for purchasing cigarettes, Vending machines, No smoking in public buildings, Restriction to students' smoking in schools, Restriction to teachers' smoking in schools, Price of a pack of cigarettes (€), and Raised tobacco taxation.
- Variables describing school-based tobacco policies targeted to (a) teachers and (b) to students derived from the teacher questionnaire.
- A combined variable derived from the students' questionnaire describing whether or not students perceive their teachers to be interested in them and whether or not they can receive help from their teachers whenever needed.

Multilevel analysis were conducted with aggregated data on school level (n = about 500 schools).

The findings suggest that smoking prevalences among 15-year-olds are significantly lower in countries

- (1) with high prices of cigarettes
- (2) restricted access to vending machines
- (3) published targets concerning smoking policies

Most schools had different tobacco policies for students and for teachers: while the former most frequently involved a formal total ban, smoking by teachers was in most schools only informally restricted to certain areas.

Smoking prevalences in schools were not significantly associated with tobacco policies targeted to students, but with policies targeted to teachers: in schools with a total ban of smoking for teachers the prevalences of smoking students were significantly lower.

However, the association between teacher support and smoking prevalences is even stronger than the association between these and tobacco policies for teachers; expressed with an odds ratio: students in schools with poor level of teacher support are nearly 9 times more likely to be daily smokers than students in schools with a high level of teacher support.

The association between tobacco policies for teachers and smoking prevalences is not independent from teacher support: the positive and the negative effects teachers can have as a tobacco related role model depend on their relation to students and their supportiveness.

Thus, the findings suggest that national policies have an independent impact on students smoking by increasing cigarette prices, restricting vending machines and providing targets for their tobacco policies.

Likewise, schools have an independent impact on smoking prevalences of students, but only if there is a total ban for students AND teachers. A total ban of students' smoking contradicted by teachers who are allowed to smoke in their rooms is of little impact and indeed may be counterproductive, because it may cause rebellious smoking behaviours in students.

The role model impact of teachers seems to depend on their relation with students. Supportive and non-smoking teachers will have a high non-smokers rate among their students.

Adolescent smoking and family structure in Europe

Griesbäch, D., Amos, A. and Currie, C. (Manuscript submitted)

This study sought to examine the relationship between family structure and smoking among 15-year-old adolescents in seven European countries, and to investigate the association between family structure and a number of known smoking risk factors including family socio-economic status, the adolescent's disposable income, parental smoking and the presence of other smokers in the adolescent's home.

The paper was based on data from the school-based surveys on national representative samples of 15 year-olds in Austria, Denmark, Finland, Germany, Norway, Scotland and Wales. The analyses included data on current smoking, parental smoking, exposure to others smoking in the home, family structure (which persons live at their home) and family affluence

Chi-square was used to test associations between variables, and logistic regression to test the independent effects of individual variables on the likelihood of being a daily smoker.

Family structure was found to be significantly associated with smoking among 15-year-olds in all countries, with smoking prevalence lowest among adolescents in intact families and highest among adolescents in stepfamilies. Multivariate analysis showed that several risk factors were associated with higher smoking prevalences in all countries, but that even after these other factors were taken into account, there was an increased likelihood of smoking among adolescents in stepfamilies.

More research is needed to investigate the nature of the differences in family relationships and processes that are related to the higher smoking rates among adolescents in stepfamilies across countries and in different cultural contexts. This is essential in order to inform the development of appropriate health promotion policies and practices across and within countries in Europe. It may not be the structural or living arrangements within families that need to be addressed but rather the type and quality of family relationships, the experience of daily family life, that may impact negatively or positively on adolescent health-related behaviours.

Socioeconomic variation in prevalence of smoking

Currie, C. & Griesbach, D. with technical support from Gillian Small (statistician).

The research question addressed gradients in smoking according to family socioeconomic circumstances among 15 year olds in Europe. Student data from five countries, Denmark, Germany, Norway, Scotland and Wales were used. The dependent variable was smoking frequency: variously categorised as daily, weekly, occasional (less than daily), never.

Independent variables: socioeconomic factors measured by:

- Family affluence scale (composite score derived from number of cars in household, young person having own bedroom or not, number of family holidays in last year (Currie et al, 1998))
- Parental occupational status

The analyses included bivariate techniques (chi-squared test) to examine associations between the socioeconomic factors and smoking frequency, and logistic regression to examine socioeconomic gradients in smoking (daily smoking v. non-smoking).

The findings suggest that:

- In the bivariate analyses, in only three countries was there a significant association between Family Affluence (scored as High, Middle or Low) and daily smoking - these were Denmark, Finland and Germany where highest daily smoking rates were found among children from Low Affluence families.
- Significant bivariate association between parental occupation (highest if two in employment) and smoking (daily/ occasional/ non-) in all countries. Lowest rates of daily smoking in highest occupational group in all countries.
- Logistic regression revealed significant differences between professional and unemployed groups (i.e. the extremes), rather than a gradient, in Scotland and Wales. Fifteen year olds in families where parents were unemployed were twice as likely to smoke daily in Scotland and Wales. In Denmark and Norway children from semi- and unskilled manual working families were twice as likely to smoke daily than those from professional families (unemployed were not separately classified). The German data revealed a significant gradient with increasing smoking rates from professional, through skilled and non-skilled workers. Family affluence effects more or less disappeared in this analysis, with the exception of Finland and Germany where children in Low Affluence families were significantly more likely to smoke daily than those in High Affluence families. This relationship was not found in other countries.

Thus, occupational status (reflecting educational background) of parents may be a more important influence on children's smoking than the material affluence of a family. In some countries, parental unemployment is the significant family factor, whereas status of job is important in other countries.

Gender, family and school factors in adolescent smoking

This work formed the MSc thesis of Gillian Small, who provided statistical input to the Scottish CAS team. Gillian was awarded the class medal and the highest grade (distinction) for her thesis, which formed part of her MSc at the Napier University in Edinburgh.

The purpose of the paper was to examine how the prevalence of smoking among 15 year olds vary according to gender, family factors and schools factors, using the example of Scotland.

Student data from Scottish schools were used. The dependent variable was smoking frequency (daily smoking versus non-smoking), and independent variables were:

- Gender
- Parental occupational status
- University intentions
- Family structure
- Perceived parental attitudes to smoking
- Parental smoking behaviour
- School attended

Chi-squared tests were used to examine associations between each independent variable and the dependent smoking variable, logistic regression to examine the relative contribution that each independent variable makes to variation in daily smoking, and multilevel analyses of school effects on smoking

The results indicated that:

Bivariate analyses

- Gender: daily smoking higher in girls (24% v 19%)
- Parental occupation: smoking gradient with highest daily rates in those with unemployed parents (30% ...18%)
- University intentions: daily smoking less common in those intending to go to university (10% v 28%)
- Family structure: highest daily smoking rates in step-families (37%), then single parent families (24%), compared to traditional families (19%)
- Parental smoking: higher daily smoking rates where at least one parent smokes (29% v 16%)
- Parental attitudes: lower daily smoking rates where at least one parent strongly objects (15% v 39%)
- School effects: % of students smoking daily ranged from 0% to 50% in schools sampled

Multivariate analyses: logistic model:

- all independent variables except parental occupation still significantly associated with daily smoking, that is the 'effect' of occupational status disappears due to the fact that parental occupational status is associated with parental smoking and adolescents' intentions to go to university
- family structure - only step family effect significant (not single parent)

- university intentions and parental attitudes to smoking were factors with largest influence

Multilevel analysis: school effects

45% variance in smoking rates due to between-school effects. Some schools are performing worse or better on smoking rates than the characteristics of their pupils.

The implications of this work are that parental smoking is an important model for adolescent smoking and therefore family as well as individual smoking issues need to be addressed by health promotion. Adolescents own aspirations for the future need to be supported as this may be a protective factor. Future work needs to investigate the extent to which school policies/restrictions have a role in differences in school smoking profiles in Scotland.

Smoking Culture in Schools and Gender Differences in Smoking Perceptions, Attitudes and Behaviour.

Schmidt, B. & Kolip, P. (manuscript submitted).

The aim of this work was to examine whether perceptions, attitudes and behaviour regarding smoking differ depending upon school smoking policy and gender.

The analyses are based on data from the all countries in the CAS study. Variables regarding current smoking behaviour, smoking perceptions (how many students in your year at school smoke?), smoking policy attitude (students should be allowed to smoke on the school premises) were included in the analyses. The classification of school smoking restrictions were constructed from two questions which asked whether there is a ban on smoking for students and for teachers. This allows the construction of a school smoking restriction variable on school smoking policy: Restriction of smoking: "forbidden/strongly restricted/hardly restricted".

The primary method of analysis for the different items was the analysis of variance (ANOVA) strategy with school smoking policy and gender as the independent variables; and smoking behaviour, perceptions and attitudes as the factors (i.e. the dependent variables). When a statistical effect of school smoking policy was observed, paired comparisons (adaptation for multiple-comparison in accordance with Bonferroni) were conducted to determine which conditions differed significantly from others. In presenting the results, focus was placed upon the significant effects of school smoking policy and gender, and on significant interactions of policy and gender. Because of the size of the random sample, the significance level was set at 0.01.

School smoking policy along with gender have significant primary effects but no interaction effect upon the dependent variables. Less smoking occurs in schools with weak regulations. Besides, students at smoke-free schools estimate nicotine consumption within their age group as significantly greater than students at restricted schools. And at schools with total smoking bans, smoking restrictions were viewed more positively.

Girls smoke significantly more often than boys. Furthermore, girls estimate nicotine consumption within their age group significantly higher than do boys. Boys rate smoking restrictions more positively than do girls.

Both school smoking policy and gender are associated with differing perceptions, attitudes and behaviour concerning smoking. However, girls demonstrate specific risk factors. Interventions at the political level and accompanying evaluation must be planned on a gender-specific basis incl. the monitoring of undesired side-effects – e.g. reactive behaviour toward strict policy.

Male and Female smoking within the Danish school class: a group level analysis.

Rasmussen, M., Damsgaard, M.T., Due, P. & Holstein, B.E. (manuscript submitted)

The aim of the paper was to study the correlation between male and female smoking in the school class by group level analysis. The analyses were based on data from 1578 students (mean age 15.8 years) from a random sample of schools from Denmark. Variables regarding gender, daily smoking and at-all smokers were included.

Results: The proportion of male and female smokers within the school class is not correlated. In school classes with varying smoking prevalence among boys and girls, the number of classes with relatively more smoking girls than boys is double the number of classes with relatively more smoking boys. High variation in male and female smoking behaviour between the school classes.

The findings suggest that the influence of class-room environment on the processes causing smoking behaviour may vary for boys and girls. For boys and girls respectively, the social climate in some school classes encourage smoking behaviour while others foster non-smoking behaviour. The observed smoking prevalences among boys and girls within the school classes cannot be explained by a cluster effect at the school level. This paper illustrates that group level analysis provides valuable new knowledge.

Tobacco use among youth and smoking policies in schools – HBSC study

Wold, B.

Presentation at ENYPAT Spring School Helsinki 26 March 2001

Negative trends in youth smoking pinpoints the need to evaluate the effects of tobacco control strategies. The aims of this paper are to examine systematical associations between national policies on tobacco control, local school smoking restrictions, students' exposure to smokers at school and student smoking. The data is based on a EU-funded study on Control of Adolescent Smoking (the CAS study) in seven European countries. The study focuses on the effect of smoking restrictions in school on student smoking by integrating data from these countries.

Multilevel modeling analyses (MlwiN) is applied to integrate data from three levels: national (indicators of restrictiveness, and types of policies in 7 countries), school (surveys among staff, n=2000) and student (surveys among 15-year-old students, n=12 000). The student survey is linked to "Health Behaviours in School-aged Children. A WHO cross-national survey" (the HBSC study).

The findings indicate that three of the participating countries (Austria, Finland and Norway) have national policies restricting smoking at school, while the remaining countries (Denmark, Germany, Scotland and Wales) do not have such legislation at the national level. With the exception of Finland, there are no national policies regulating outdoor smoking by teachers during school hours. Large variations in local school policies on restriction of teacher smoking were found both within and between countries, ranging from 1 % smoke free schools in Denmark to 65 % in Norway.

The findings show that schools are playing a paradoxical role in teaching young people about smoking. Lessons from health education classes are often contradicted by lessons in the school yard or toilets where smoking by students is commonplace in all countries. In fact, school is the place where adolescents are most likely to smoke, with up to 90% of young daily smokers in some countries smoking at school during the school day.

Students were found to be less likely to be exposed to teachers smoking in school in countries with comprehensive national smoking policies. For example, in Finland and Norway, which have very comprehensive national smoking policies, only 5% of students in the survey reported being exposed to teachers smoking in schools, whereas in those countries with little in the way of national tobacco policy, e.g., Denmark, Scotland, Wales, about a third of young people reported that they saw or knew about teachers smoking in their schools. Thus, the study indicates that restrictive tobacco control policies at national and local levels are effective in reducing nonsmokers' exposure to environmental tobacco smoke.

The study also confirms the findings of previous studies, in that exposure to adult smoker role models is found to be associated with an increased probability of smoking. It has to be noted that in some countries, very restrictive national policies on indoor smoking at school can push teacher smoking outdoors, resulting in the negative and unforeseen side effect of making smoking more visible to students. But the main recommendation from the CAS study is to aim for smoke-free schools and support this aim with comprehensive national tobacco control policies.

School smoking policies and teachers' smoking in eight European countries

Tynjälä, J, Kannas, L., Nurkkala, H. et al.

Poster presented at the 11 th World Conference on Tobacco or Health in Chicago August 2000.

Objective: To describe smoking restriction policies and teachers' smoking on school premises in eight European countries.

Design: Analysis of cross-sectional data from surveys conducted as part of the CAS project in 1998 among teachers in upper secondary schools in Austria, the French-speaking part of Belgium, Denmark, Finland, Germany, Norway, Scotland and Wales.

Subjects: 2179 teachers in comprehensive schools in eight European countries.

Results: Large variations were found between countries concerning the existence of a written or an informal policy restricting teachers' smoking on school premises. Proportion of teachers reporting that their school had a written policy varied from 20.2% to 64.3% and those recording an informal policy from 19.6% to 65.3%. On an average, a written or an informal policy had been in force for five or more years in half of the countries. About 60% of respondents in Finland and Norway reported that teachers were not allowed to smoke anywhere on the school premises; in other countries these proportions were much lower. Smoking was allowed in restricted areas on the school premises in 35% to 97% of the countries studied. More specifically, teachers were very seldom allowed to smoke in the staff room in Finland and Norway (1.1% and 2.1%, respectively), compared to Denmark (73.8%). The corresponding figures for smoking outdoors on the school premises were lowest in Finland and Scotland (6.3/6.5%) and highest in Belgium and Denmark (71.4/70.6%). If smoking was not allowed on school premises, the majority of teachers - about 90% - did not smoke in these places.

Conclusions: Great differences were found between countries in smoking policies to prevent teachers from smoking on school premises and in teachers' smoking behaviour. Explicitly expressed smoking policy at school seemed to be associated with a lower level of teachers smoking.

Adolescent smoking at school in seven European countries

Nurkkala, H., Kannas, L. & Tynjälä, J. et al.

Poster presented at the 11 th World Conference on Tobacco or Health in Chicago August 2000.

Objective: To study smoking behaviour of 15-year-old pupils at school in seven European countries.

Method: The survey was conducted in seven European countries (Austria, Denmark, Finland, Germany, Norway, Scotland and Wales) in 1998 (CAS-project). Altogether 10 890 (5312 boys, 5578 girls) 15-year-old school children answered a questionnaire concerning smoking habits at school.

Results: The proportion of adolescents smoking daily varied from 18 to 24 % between countries. In all countries smoking was more common among girls (20-26 %) than among boys (15-23 %), excluding Finland. Among occasional or regularly smokers daily smoking on school premises proportion was smallest in Austria (22 %) and greatest in Scotland (44 %) and Wales (44 %). It was more likely for smoking boys than smoking girls to smoke on school premises. Pupils' perceptions of other pupils smoking in different places at school varied between countries. For example, in Germany, Scotland and Wales were seen smokers in toilet more than in other countries (33 -37 % vs. 4 -9 %). In most countries smoking was most common in school premises than outside of the school.

Conclusions: This study indicates that in spite of restrictions on smoking at school in every country there were great differences in daily smoking on school premises that is why there is need to restrain smoking at school.

Smoke-free school day – a challenge for Health Promotion.

Pupils' smoking during the school day in seven European countries

Nurkkala H., Kannas L., Tynjälä J. (manuscript submitted)

Objective: To describe smoking behaviour of e.g. daily smokers during the school day in seven European countries.

Method: The survey (CAS-project) was conducted in seven European countries (Austria, Denmark, Finland, Germany, Norway, Scotland, Wales) in 1997/1998. Altogether 10 890 (5312 boys, 5578 girls) 15-year-old school children answered a questionnaire concerning their smoking habits during the school day.

Results: The proportion of adolescents smoking daily at school varied between 14 % and 18 % in the seven European countries. There were no big differences between the countries. Anyway among regular smokers smoking at school was more common than expected. The proportion of regular smokers who smoked daily at school varied between 56% and 83 %. In most countries, smoking at school was more prevalent among boys than among girls who smoked daily. Only 2% -16 % of regular smokers reported that they did not smoke at all at school. Smoking on school premises daily was most prevalent in Denmark (76 %), whereas in Austria the corresponding proportion was as small as 39 %. Smoking out of school premises was most common in Finland and Scotland (61 %). In Denmark smoking out of school premises was significantly ($p=0.007$) more common among boys than girls. It was more prevalent among regular smokers to smoke at school than in their home, their friends' homes or public places. The proportion of smokers among boys and girls varied less at school than in the other arenas.

Conclusions: National bans and restrictions on smoking in schools do not seem to have worked very well. Despite the restrictions, smoking was more common on school premises than out of school premises among regular smokers in all participating countries. There were no clear differences in smoking on school premises between countries with strict school smoking policies and countries with less strict school smoking policies. When passing laws and tightening enforcement, more attention needs to be paid to possible side effects, such as smokers moving from one place to another. In order to achieve a smoke-free school environment and to investigate the impact of tobacco legislation, it is important to increase research evidence especially on adolescent smoking during the school day and related factors, such as the association between the enforcement of bans and restrictions on smoking and school children's smoking behaviour at school.

APPENDIX 5

LIST OF CAS STUDY RESEARCH MEETINGS

1998 Edinburgh 26-28 April

1999 Edinburgh 26-27 April

1999 Edinburgh 9-10 September

2000 Brussels 25-26 January

2000 Brussels 27-28 April

2001 Brussels 22-24 January

2001 Bergen 15-16 February (Workshop on multilevel modeling analysis.)

APPENDIX 6

REPORT, PARTICIPANTS AND PROGRAM FOR DISSEMINATION EVENT AT THE EU PARLIAMENT

Report of CAS International Policy Seminar, Brussels, January 24, 2001.

A major study has been undertaken in eight European countries to investigate the way in which smoking among young people is related to government tobacco policies and school smoking policies.

Results from Scotland, Wales, Austria, French-speaking Belgium, Germany (North Rhine-Westfalia only), Finland, Denmark and Norway show that rates of daily smoking among 15-year-old girls have increased in the last decade on average from 16% to 23% and among boys from 16% to 19%. In a few countries, including Scotland, the percentage of teenage girls who smoke daily has doubled in the last 10 years, in spite of recent declines in smoking among adults.

The study, called Control of Adolescent Smoking (CAS), found huge variations between countries in the extent and comprehensiveness of national smoking policies. Some countries have used legislation to ban advertising or restrict smoking in public buildings. Other countries, including Scotland, have used a non-legislative approach, and instead have established voluntary agreements between the government and the tobacco industry.

The study found that certain aspects of government policy did appear to be related to lower smoking rates among young people. In particular, countries where it was difficult for adolescents to get access to cigarette vending machines, and where cigarette prices were high, had lower smoking prevalences than countries with easy access to vending machines and relatively low prices. Students are also less likely to be exposed to teachers smoking indoors in school in countries with comprehensive national smoking policies. For example, in Finland and Norway, which have very comprehensive national smoking policies, only 5% of students in the survey reported being exposed to teachers smoking in schools, whereas in those countries with little in the way of national tobacco policy, e.g., Denmark, Scotland, Wales, about a third of young people reported that they saw or knew about teachers smoking in their schools.

The findings show that schools are playing a paradoxical role in educating young people about smoking. Lessons from health education classes are often contradicted by lessons in the school yard or toilets where smoking by pupils is commonplace in all countries. In fact, school is the place where adolescents are *most* likely to smoke, with between 50 – 90% of young daily smokers, depending on the country, smoking at school during the school day.

But, findings from the CAS study show that efforts to combat smoking in the school *can* work. In those schools in the eight countries that had smoke-free policies, only 7% of students reported being exposed to teachers smoking indoors, whereas 37% reported being exposed to teachers smoking in non-smoke-free schools. Findings from Scotland showed that

students were also less likely to see other students smoking in schools where smoking restrictions were consistently enforced. And there was some evidence from Wales that where policies in schools were both *comprehensive* and *enforced*, that actual smoking rates among students were lower. In Welsh schools where policies were strong, only 10% of students were daily smokers compared to 30% in schools where they were weak.

It has to be noted that in some countries, very restrictive national policies on indoor smoking at school can push teacher smoking outdoors, resulting in the negative and unforeseen side effect of making smoking more visible to students. But the main recommendation from the CAS study is to aim for smoke-free schools and support this aim with comprehensive national tobacco control policies.

The study also found that good teacher support for students was correlated with lower smoking rates in students. Thus, smoke-free school policies are likely to work better in supportive school environments. The development and implementation of smoking policies in schools should be a joint enterprise between pupils, staff and parents in order to maximise effectiveness and minimise the risk of any unforeseen negative side effects.

CAS International Policy Seminar, Brussels, January 24, 2001.

List of attendees.

Surname	Firstname	Organisation
Aitken	Jane	Scotland Europa Centre, Brussels
Axe	Liz	Office of Mel Read, MEP, European Parliament
Bazelmans	Christine	Université Libre de Bruxelles
Belcher	Paul	European Health Management Association, Brussels
Bornhäuser	Annette	Deutsches Krebsforschungszentrum, Heidelberg
Burness	Catriona	Office of Catherine Stihler, MEP, European Parliament
Costongs	Caroline	European Network of Health Promotion Agencies, Brussels
Currie	Candace	University of Edinburgh
Donnolly	Fergal	European Commission
Dür	Wolfgang	University of Vienna
Evans	Robert	MEP, European Parliament
Fleitmman	Sibylle	European Network for Smoking Prevention, Brussels
Griesbach	Dawn	University of Edinburgh
Grossin	Fanny	student
Hautala	Heidi	MEP, European Parliament
Haw	Sally	Health Education Board for Scotland
Hayes	Andrew	UICC/ECL EU Liaison Office, Brussels
Hentze Jensen	Lis	University of Copenhagen
Holstein	Bjørn	University of Copenhagen
Huydts	Marijke	European Union of Nonsmokers, Luxembourg
Janssen	Berenger	FARES, Brussels
Jennings	Tim	Flemish Institute of Public Health, Brussels
Kannas	Lasse	University of Jyväskylä
Logstrup	Susanne	European Heart Network, Brussels
Lütke-Spatz	Lara	
Maaten	Jules	MEP, European Parliament
Matthews	Maya	European Network of Health Promotion Agencies, Brussels
Needle	Clive	European Network of Health Promotion Agencies, Brussels
Paavola	Meri	European Network on Young People and Tobacco, Helsinki
Rice	Mary	Federation of European Cancer Societies, Brussels
Roberts	Chris	The National Assembly for Wales
Schermer	Lisette	European Commission, Public Health Research
Schmidt	Bettina	University of Bielefeld
Shorland	Louisa	Wales European Centre, Brussels
Smith	Elske	Perm. Rep. of the Netherlands to the EU: Ministry of Health, Welfare and Spor
Stihler	Catherine	MEP, European Parliament
Thomas	Lynnette	Wales European Centre, Brussels
Voseckova	Anna	Mission of The Czech Republic to the European Communities
Whiteley	Paul	European Network of Health Promotion Agencies, Brussels
Wold	Bente	University of Bergen
Zenzinger	Kirsten	Mental Health Europe / Santé Mentale Europe, Brussels
Zobrist	Stephanie	World Health Organization office at the European Union, Brussels

The University of Edinburgh,
Child & Adolescent Health Research Unit,
invites you to a seminar & reception



Smoking and Young People

Hosted & Chaired by Catherine Stihler, MEP

European Parliament, Brussels
Altiero Spinelli Building, Room A7H1
Wednesday 24 January 2001, 14h00 to 19h30

Smoking prevalence among young people and school/college students appears to be increasing in many European countries. For example, over the last decade, prevalence among adolescent boys in Belgium, Scotland, Wales and Germany has increased; has remained the same in Austria & Norway; and has decreased in Denmark and Finland. However, smoking among girls in all countries except Finland has increased. In Belgium, Scotland and Austria, figures have doubled in less than 10 years.

The project 'Control of Adolescent Smoking' (CAS), co-ordinated by the University of Edinburgh in partnership with seven academic institutes, has studied and compared national tobacco policies in eight European countries & regions, primarily in respect to the way these policies affect smoking policies and smoking restrictions in schools.

The seminar in Brussels will brief European & national policy-makers, and NGOs on the key findings of the CAS study.

Programme

- | | | |
|-------|--|---|
| 14h00 | Welcome & Chair | <i>Catherine Stihler, MEP</i> |
| 14h05 | Project overview & national presentations | <i>Candace Currie, University of Edinburgh</i>
<i>Wolfgang Dür, University of Vienna</i>
<i>Chris Roberts, The National Assembly for Wales</i>
<i>Bente Wold, University of Bergen</i>
<i>Lasse Kannas, University of Jyväskylä</i> |
| 15h00 | Responses: MEPs
European Commission
NGOs | <i>Heidi Hautala, MEP & Jules Maaten, MEP</i>
<i>Fergal Donnolly, DG Research</i>
<i>Sibylle Fleitmann, European Network for Smoking Prevention</i>
<i>Meri Paavola, European Network on Young People & Tobacco</i> |
| 16h00 | Roundtable discussion | |
| 17h00 | Conclusions | <i>Catherine Stihler, MEP</i> |
| 17h15 | End of meeting | |
| 17h30 | Reception (end 19h30) | <i>Altiero Spinelli Building, Room A7H1</i> |
-

This meeting is being organised by ENHPA
For further details and RSVP, please contact:

ENHPA

EUROPEAN NETWORK OF HEALTH PROMOTION AGENCIES

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