Women and smoking

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Smoking kills over half a million women each year and is the most important preventable cause of female premature death in several developed countries. However, in many countries, cigarette smoking still tends to be regarded as a mainly male problem. This paper explores the reasons why more attention needs to be paid to issues around smoking and women, even in countries which currently have low levels of female cigarette smoking. The article includes an overview of current patterns and trends of smoking among women, and the factors which influence smoking uptake and cessation in women compared to men. The experience of countries with the longest history of widespread female smoking is used to identify some of the key challenges facing developed and developing countries. Tobacco companies have identified women as a key target group, therefore particular attention is given to the ways in which they have attempted to reach women through advertising and other marketing strategies. It is concluded that in order to halt and ultimately reverse the tobacco epidemic among women, tobacco control policies need to encompass both gender-specific and gender-sensitive approaches. Examples are given of the types of action that are needed in relation to research, public policy and legislation, and education.

Smoking kills over half a million women around the world each year and this number is increasing rapidly[1]. It is estimated that between 1950 and 2000, 10 million women will have died from their smoking habit. In several developed countries, such as the USA and the UK, cigarette smoking is now the single most important preventable cause of premature death in women, accounting for at least a third of all deaths in women aged 35 to 69[1]. Yet, despite these figures, smoking is still regarded in many countries as being a mainly male problem. This is due primarily to two main reasons.

1. Cigarette smoking prevalence among women in many countries, particularly developing countries, is still low compared to men.
2. Because of the time lag between smoking becoming a widespread habit and the emergence of tobacco-related health problems, no country has yet experienced the full impact of smoking on women's health.

This article aims to explore each of these reasons and consider why more attention needs to be paid to issues around smoking among women, both in terms of research and action, even in countries where female smoking prevalence is currently low. In particular, it will examine the assumption that the factors which influence smoking uptake and cessation are the same for men and women and thus tobacco control programmes can be gender-neutral. Drawing on a review of the current patterns and trends of smoking among women across the world, it will be argued that unless more action is taken to address the reasons why, on the one hand, women take up smoking and, on the other, find it hard to quit, the smoking epidemic will continue to spread rapidly. The experience of countries with the longest history of widespread female smoking will be used to identify key issues in both developed and developing countries, and to argue the case for gender-specific and gender-sensitive approaches to tobacco control.

This paper will focus primarily on cigarette smoking, as this is the most prevalent form of tobacco use among women. However, when relevant, reference will be made to other types of traditional tobacco use which are common in certain parts of the world.

Patterns and trends — the growing epidemic

A cursory look at the data on cigarette smoking prevalence in different countries might suggest that there are no consistent patterns or trends among women (Table 1). Prevalence rates vary from as much as 58% in Nepal and over a third in European countries, such as Denmark and Poland, to barely detectable levels in many African countries, such as the Ivory Coast and Guinea[2]. Somewhat more consistent is the finding that cigarette smoking rates are higher among men than women. However, there is some considerable variation between countries, with equal or nearly equal rates in the USA and UK, but several-fold differences in countries such as China, where less than 6% of women are daily smokers compared to 56% of men (Table 1).

However, a more detailed examination of the data reveals that these variations are not random but rather reflect different stages of the smoking epidemic in each country. Recently, a four stage model has been developed, based on evidence from countries with the longest history of cigarette smoking, which describes the typical evolution of cigarette smoking and subsequent mortality in a country (Fig. 1)[3]. While the exact picture in each country will vary to some degree, countries can be characterised as falling into one of four different evolutionary stages:

Table 1 Prevalence of cigarette smoking among women in selected countries (Source: see[2], apart from China data[38])

Region	Prevalence (%)	Date of survey
Americas		
Bolivia	38	1986
Brazil	33	1990
Guyana	4	—
Honduras	11	1988
Jamaica	27	1988
Trinidad and Tobago	5	1986–89
USA	26	1990
Europe		
Denmark	45	1988
France	30	1991
Germany	27	1988
Poland	35	1989
Portugal	12	1988
Spain	28	1988
UK	28	1992
Africa		
Ivory Coast	1	1981
Guinea	1	1981
Nigeria	10	1990
Swaziland	7	1989
Zambia	4–7	1984
Eastern Mediterranean		
Bahrain	20	1985
Egypt	2	1981
Sudan	19	1986
Tunisia	6	1984
South East Asia		
India	0–67[a]	—
Indonesia	10	1990
Nepal	58	1991
Thailand	4	1988
Western Pacific		
Australia	27	1986–89
China	5[b]	1991
Japan	14	1990
Malaysia	5	1990
New Zealand	26	1986–89
Singapore	2	1988

[a]Depends on area surveyed; [b]Small study of rural women

Stage 1 (e.g. many developing countries mainly in sub-Saharan Africa). Male prevalence rates less than 15% but increasing rapidly, female prevalence less than 5%. Health consequences not yet apparent.

Stage 2 (e.g. China, Japan, several countries in Asia, Latin America and North Africa). Male prevalence rates rising rapidly to 50–80% with few

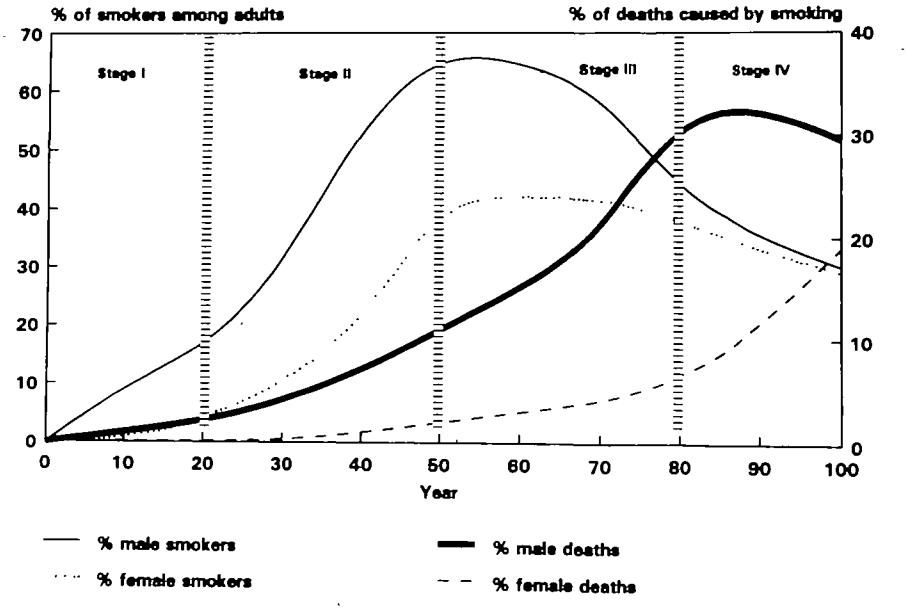

Fig. 1 A model of the cigarette epidemic (Source: see[1])

ex-smokers. Female rates lagging 10–20 years behind but increasing. Male smoking related death rates starting to increase.

Stage 3 (e.g. Eastern and Southern Europe). Male prevalence starting to decline, reaching around 40%. Female prevalence peaks and plateaus at a lower rate than among men, and starts to decline by the end of this stage.

Stage 4 (e.g. USA, UK, Canada, Western Europe). Smoking declining slowly in both sexes. Male mortality from smoking peaks as female deaths begin to rise rapidly.

This model has several important features which need to be taken into account when considering women and smoking.

1. Women generally take up cigarette smoking as a widespread habit later than men. This is mainly due to socio-cultural factors, such as it not being socially acceptable for women to be seen smoking in public, religious attitudes, and women generally being less affluent than men and, therefore, unable to afford cigarettes. However, this model indicates that countries with low female smoking rates should not be complacent. If cigarette smoking is increasing among men, then it is likely to increase among women in the future. Indeed, while in countries such as the UK and the USA there was a 20–30 year lag between smoking becoming a widespread habit in men and women, more recent evidence from several Stage 2 and 3 countries suggests

this lag may now be much shorter, particularly where there is aggressive promotion of cigarettes to women and/or there are rapid changes in women's socio-economic position. Thus the challenge for countries in Stages 1 and 2 is to take action now to counter the factors that encourage smoking among women, especially girls and young women.

2. Even in countries where smoking among women is increasing (Stages 2 and 3), there may be little awareness or concern about this trend, as female rates of smoking will be considerably lower than those in men, and the health consequences for women will not have started to emerge. However, the model predicts that unless effective action is taken, smoking is likely to continue to increase amongst women and thus become a major cause of death. This is not inevitable. For example, the approach adopted by Singapore in the 1970s, when it was at the beginning of Stage 2, showed that implementing a strong and comprehensive tobacco control policy can reverse this trend and the progression from Stages 1 to 2. Female smoking declined from 9.5% in 1978 to 3% in 1992[3].
3. The women who are most likely to start smoking in large numbers are those who are most affluent, well educated and live in urban areas (Stages 1 and 2). For example, in Costa Rica, a survey found that 24% of affluent, urban women were smokers compared with only 10% of poor, rural women[4]. Similarly, a survey carried out in Spain in 1989 showed that 21% of women smoked compared to 52% of men, and the largest number of female smokers was in the highest socio-economic group. 52% of upper class compared to 12% of working class women smoked[5]. However, more advantaged women are also more likely to show the first declines in smoking, reflecting both lower rates of uptake and higher cessation rates (Stages 3 and 4). Thus, in countries where smoking is declining, smoking is increasingly associated with disadvantage. In these countries, the typical female smoker has a limited education, a low status job or is unemployed, is on a low income and experiences high levels of other aspects of deprivation. For example, in the UK in 1992, 13% of women in socio-economic group 1 smoked compared to 35% in socio-economic group 6, and whereas 62% of professional women who had ever smoked had given up, only 36% of unskilled manual women had succeeded in quitting[6]. Also, in many countries, the highest smoking rates are found among disadvantaged ethnic minorities. For example, in Canada in 1989, 77% of Inuit women were smokers[7] and in New Zealand Maori women smoke more than white women and have one of the highest smoking rates among women in the world[2].
4. Because there is a time lag between the widespread uptake of smoking and the health effects, even countries with the longest history of female

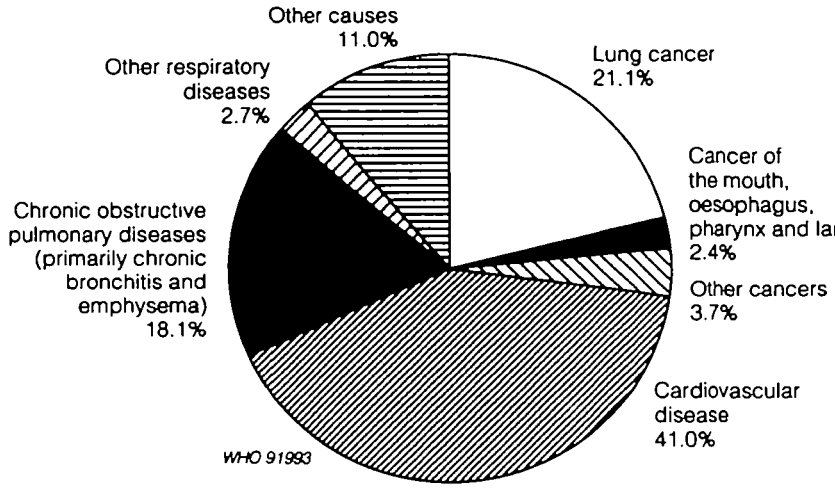

Fig. 2 Estimated distribution of deaths from various smoking-related diseases among women in developed countries, 1985. Reproduced by permission of WHO. (Source: see[2])

smoking have not yet experienced smoking's full impact on women's health. Because men in developed countries were the first to smoke cigarettes in large numbers, most of the epidemiological research has been carried out on these male populations. Thus, our understanding of the true impact of smoking on women's health in developed and developing countries is limited. There is now, however, strong evidence which indicates that where women have smoked cigarettes regularly for several decades, the percentage of female deaths which are attributable to tobacco is now approaching the male figure[1]. It is estimated that, among women in developed countries who have smoked regularly throughout their adult lives, tobacco will cause at least half, and perhaps substantially more, of all deaths in middle age. Countries which have recently seen a big increase in smoking amongst young women, (Stages 2 and 3) such as France, Spain and Poland, will experience a large increase in female mortality early in the next century.

Thus it is clear that whatever the stage of the smoking epidemic within a country, action is urgently needed to halt its progression, for there is now no doubt that smoking among women causes the same diseases as are found among men (Fig. 2). The main tobacco killers in both sexes are cancers, especially lung cancer, heart disease and chronic bronchitis. But smoking also affects women's health in ways which are specific to them. Research in developed countries[2] has found that women who smoke: (i) have a 10-times higher risk of heart disease and an increased risk of

stroke if they also use oral contraceptives; (ii) have a 2-fold associated higher risk of cervical cancer; and (iii) experience detrimental affects on their reproductive health, including dysmenorrhoea, reduced fertility and an earlier menopause. Women who smoke during pregnancy also increase by a quarter their risk of miscarriage and by a third the risk of the infant's perinatal death; they are twice as likely to have premature labour and 3-times more likely to have a low birth weight baby[8] (see also Charlton in this issue). In those developing countries, where the health of mother and baby is already jeopardised through poverty and malnutrition, the effects of smoking are likely to have an even greater impact on birth weight and perinatal mortality. In Chile, for example, it is estimated that 10% of non-accidental perinatal deaths are attributable to smoking[9].

In developing countries with high levels of traditional tobacco use among women, such as chewing or smoking with the lit end of the chutta inside the mouth, tobacco use is associated with high levels of oral cancer (see also Pershagen in this issue). For example, the highest reported rate of mouth cancer in the world is among women in Bangalore, India[2]. Indeed it is estimated that tobacco use causes around one in five of all cancers in women in India[10].

Why women smoke

The reasons why people start to smoke and quit smoking, are considered in depth in other articles in this issue. However, in order to develop effective tobacco control strategies for women, it is important to consider what is known about the extent to which the factors which influence smoking uptake and cessation differ between men and women. This section will look at some of the main findings from research which has explored these issues. Most of these studies have been carried out in developed countries which have the longest history of female cigarette smoking, and thus our understanding is somewhat limited. However, many of the issues raised are also likely to be relevant to women in developing countries (see also Mackay and Crofton in this issue).

Starting the habit

A recent WHO study of 10 European countries indicated that over a third of girls have tried smoking by the age of 13 and this increased to around 60% among 15-year-olds[11]. The initiation of smoking in girls, as in boys, is heavily influenced by social pressures and psychological needs including: environmental influences, school and peer influences, personal factors, and knowledge, attitudes and beliefs about smoking[12].

Creating the market The tobacco industry is dependent on a mass market. As smokers die or quit they are keen to recruit new young smokers to maintain their profits, particularly in new markets such as developing countries and Eastern Europe. The art of marketing is to tailor a product to appeal to specific target groups by altering its price, availability and image through packaging, advertising and promotions. Over the past few years the tobacco industry has targeted women by[13–15]:

- Promoting brands through advertisements and sponsorship using images and messages which promote smoking as being glamorous, sophisticated, romantic, sexy, healthy, sporty, fun, relaxing, liberated, rebellious and, last, but not least, slimming.
- Producing 'women only' brands, such as Virginia Slims, Kim, Charm & Eve, and other types of cigarettes which are likely to appeal to women.
- Advertising in women's magazines to reach large numbers of women and discourage reporting about the health risks — magazines that are dependent on tobacco revenues are less likely to cover the health hazards and to take anti-smoking advertisements[16,17].

The tobacco industry argues that cigarette advertisements do not encourage smoking but simply affect brand choice. Yet research in developed countries shows that children can identify the brands of edited cigarette advertisements and their awareness of cigarette brands is a strong predictor of future smoking[18]. Young teenagers who smoke are more appreciative of cigarette advertising than non-smokers; and the most heavily advertised brands are more often bought by teenagers than adult smokers[19,20].

Many developing countries have few limitations on tobacco promotion and therefore their influence on girls, who are likely to be less knowledgeable about the harmful effects of smoking, may be even more powerful. Cigarette advertising in developing countries, at present, tends to be directed at the general public, but there is evidence that women are becoming special targets. In Hong Kong, where less than 1% of young women smoke, Philip Morris launched a major campaign to promote the Virginia Slims brand — a clear attempt to create a market among young women[21]. In India, an attempt has also been made to launch a 'women only' brand. However, where widespread restrictions on tobacco promotion have been introduced, there has been an immediate fall in smoking prevalence among young people, especially girls[22].

How smoking is portrayed in the media more generally also affects the way in which young people view the habit. Glamorous models, female personalities, teenage pop idols and film stars all feature in magazines, TV soaps, plays and films which depict smoking as being part and parcel

of their success. These images reach many different audiences around the world and, particularly in developing countries, may create aspirational images of western life which are both unrealistic and harmful to their audiences' health. In South Asia, for example, concerts by Madonna and Paula Abdul have been sponsored by tobacco companies.

The social setting Adolescents are more likely to take up smoking if their parents smoke or have permissive attitudes towards smoking. In developed countries, girls, in particular, appear to be influenced by their parents' smoking habits and attitudes, although this decreases as they get older[12]. The situation is much the same in developing countries and countries where religious and cultural mores are applied more strictly to girls than boys[22]. While this pattern also holds in some ethnic communities within developed countries, this may change as girls become assimilated into the dominant culture. In countries where cigarette smoking is comparatively new among women, it is the more affluent professional women who adopt the habit first[23]. This may be due to the more liberated environment in which they live and work, their relative affluence and their urban environment which exposes them to tobacco advertisements and makes cigarettes more accessible.

First cigarettes are usually smoked with friends and having a best friend who smokes is a strong predictor of whether a young person will become a smoker, though this may be more important among boys than girls[24]. Adolescent smokers are also more likely to be underachievers at school with low academic goals. In the US, the narrowing gap in smoking rates between men and women in the 1980s was due, in part, to increasing initiation rates among less educated women. Women without a college education were over twice as likely to take up smoking as those who went to college[12].

Personal factors Many young people in developed countries experiment with drugs, such as tobacco, in an attempt to achieve the image of maturity, sophistication, attractiveness, sociability or femininity to which they aspire. Of particular importance to girls are concerns about weight and self confidence. In western countries, where the media promote an image of female attractiveness which equates being thin with desirability, weight control and dieting are major obsessions among adolescent girls[25]. This concern has been picked up and used in advertisements for certain cigarette brands aimed at women which associate smoking with slimness and glamour [26].

Research has repeatedly found that girls with low self-esteem are more likely to take up smoking. Adolescents who feel that they have a lot of control over their health and life are less likely to become smokers than those who feel they have little control[27]. Using smoking to bolster self-

confidence stems from the widespread belief that smoking can help calm nerves, control moods and alleviate stress — all important concerns during adolescence. By showing attractive young women with handsome male partners or socialising with successful and confident people, tobacco advertisements exploit young people's insecurities, and sell the idea that these desirable qualities are theirs if they smoke. There is also evidence that girls feel more dependent on cigarettes compared to boys smoking similar amounts, and imagine that they would find giving up more difficult[28].

Knowledge and attitudes Whether a girl becomes a smoker also depends on her knowledge about the health risks, whether she feels that these are personally relevant, and whether they outweigh the perceived benefits of smoking. In many developed countries, school health education programmes have been effective in increasing young people's knowledge about the health effects of smoking, increasing their awareness of influences such as advertising and social pressure, and developing their personal confidence, self-esteem and social skills to resist smoking. However, it is not clear whether they ultimately reduce smoking or simply delay its onset[12]. Since girls are more likely to believe that smoking helps them deal with stressful situations, developing their self-esteem and competency to solve problems without resorting to smoking, is likely to be an important strategy. In developing countries, girls' knowledge about smoking and health is likely to be limited due to the lack of systematic health education programmes and structural barriers, such as widespread rural populations, and high levels of illiteracy. Educational programmes are urgently needed to counteract the increasing promotional activities of tobacco companies.

Why women stay hooked

Putting up a smoke screen As public awareness about the health effects of tobacco has grown, tobacco companies have responded in many countries by increasing the amount and variety of tobacco products and promotions that are targeted specifically at women in an attempt to allay health fears[15,26]. These include cigarettes which are lower in tar, lower in nicotine or are mentholated. Many women have changed to low tar cigarettes believing that this reduces their health risks. There is, however, little medical evidence to support this view[29] . Low tar cigarettes do not lower heart disease risk. Some studies have found that people who switch to lower nicotine cigarettes compensate by inhaling more deeply or smoking more often.

The pressures on women In countries with the longest history of widespread female smoking, smoking is now most common among those

on low incomes, who have low status jobs or are unemployed, are single parents or divorced, have low levels of academic achievement and are from under-privileged ethnic groups. One reason why these women continue this habit at such cost to their health and finances is their belief that cigarettes help them cope[25,30].

A woman on a low income, tied to the home, bringing up small children on her own may smoke to deal with her feelings of stress or to calm her nerves. Although recognising that it may ultimately damage her own health, she may feel that smoking may be less damaging to her children than 'letting off steam' some other way. Similarly, women at home may structure their day with cigarettes, providing excuses for breaks and refuelling. Women in low status, repetitive and insecure jobs may also smoke to break the monotony or deal with the frustration and irritation of the work. Many women on low incomes, with little time to themselves, see cigarettes as their only luxury—the only thing they do for themselves. In reality, smoking probably does little to relieve stress, calm nerves or reduce feelings of anger, but, as long as women believe that it does, they are unlikely to feel that they can cope competently without cigarettes.

Gaining weight—the price of giving up? Many women in developed countries also believe that smoking helps control their weight and quitting leads to weight gain[31,32]. Studies have shown a weight gain around 5–10 lbs after giving up smoking among some women. Even so, the disadvantages, in terms of health, of a small weight gain are more than offset by the health benefits. Whether the weight gain is due to changes in metabolic rate, changes in palate or eating more is not certain. It is clear, however, that, for many women, a small weight gain is a high cost to pay in terms of their self-image and this needs to be recognised. There is a need to develop ways of helping women to quit without gaining weight.

An addictive habit As a young woman starts to smoke regularly, her body gets used to regular nicotine doses and she becomes physiologically dependent. She develops a pattern of daily smoking which, together with having partners and friends who smoke, and her beliefs about smoking, act to reinforce this dependency. In order to quit, women need help and support to overcome short term physiological withdrawal, and to break behavioural patterns that may have developed over many years.

Kicking the habit

Cessation clinics in developed countries have tended to show that women are less successful than men in quitting[33] but this cannot be generalised to

all women since the vast majority who quit successfully do so independently. That women in the USA, UK and Australia are now giving up at about the same rate as men also refutes this notion[34]. These figures, however, do not show the relative success of men and women in maintaining their non-smoking, for example do women have to make more attempts at quitting than men before they are successful? The differences in cessation rates between different groups of women are, however, indisputable. Disadvantaged women are less likely to give up smoking than more affluent women[2,25,30]. If these women are to be empowered to take control of their lives, it will be necessary to adopt strategies that address not only their smoking but also the social and economic circumstances that reinforce their habit[35].

In countries where smoking is on the decline, it has been generally found that most women want to give up. Many have attempted to quit at least once and most make several attempts before they are successful. Confidence in the ability to quit and the desire and resolve to succeed are of crucial importance[36]. Most people go through a process that involves precontemplation, contemplation, action, maintenance and relapse. Cessation programmes that address all stages of the giving up process are likely to be the most effective. Individual programmes will be given added support if they are backed up by measures aimed at changing the social and environmental factors which make giving up easier and cater for the needs of non-smokers.

Issues for action

Smoking is a complex issue and controlling its spread requires a comprehensive approach. However, it seems that while similar factors influence smoking among men and women there appear to be some important differences, often relating to girls' and women's own social worlds, which need to be taken into account. In order to achieve the overall aim of helping young women to resist pressures to start smoking and to help women who smoke to quit, tobacco control strategies need to be both gender-sensitive and specific. These strategies need to encompass three areas of action.

Research

Many countries lack comprehensive and reliable data about women and smoking, such as patterns and trends of smoking and smoking-related diseases. Such information is crucial for the effective development,

implementation and evaluation of programmes. Countries also need to develop their understanding of women's reasons for smoking and quitting, and, in particular, be aware of factors which might encourage smoking, such as cigarette promotion aimed at girls and women. Further research is needed to explore more fully the role that smoking plays in women's daily lives and how health promotion can help women develop alternative ways of dealing with the factors that keep them smoking.

Public policy and legislation

The aim is to create a social, economic and political climate which promotes non-smoking as the norm and reduces countries' economic dependence on the production, manufacture and sale of tobacco. This will require combined action at the international, national, and community levels. It is essential that women become more visible and that the issue of women and smoking is placed high on the health agenda. This will be facilitated through exchanging information, expertise and research. The establishment of the International Network of Women Against Tobacco (INWAT) provides an important channel for communication and support for people concerned about this issue. INWAT, for example, was instrumental in setting up the *First International Conference on Women and Smoking* in 1992, and has since published newsletters including a special issue of World Smoking and Health 'Herstories'[37]. While formal and informal networks such as INWAT have helped give a greater visibility to women and smoking, many countries have yet to acknowledge the potential seriousness of this issue. It is, therefore, important that health professionals and other concerned people seize the initiative and raise the awareness of policy makers, key professionals and the public about the threat that smoking poses to women's health.

Education and support

It is essential that girls and women have the knowledge, attitudes and skills to help them make informed decisions about smoking. To be effective, programmes need to be culturally appropriate, relevant to girls' and women's needs at different points in their lives, and related to the stage of the smoking epidemic in the country. Each country needs to design a strategy which meets their circumstances and takes into account gender differences. There is a need for gender-sensitive and gender-specific programmes. For example, women tend to have more contact

with the health service thus creating considerable opportunities for health education. This is particularly important in relation to smoking and pregnancy. Health education should also form an integral part of school education. However, education should not just be restricted to health and educational services. In many developing countries, girls have only limited access to schooling, and in Stages 3–4 countries, smoking is more common among academic under-achievers and those whose who are disenchanted with school. It is, therefore, important to involve organisations and networks which reach women in different ways, such as youth organisations, community groups and networks, women's organisations, workplaces, and the media including women's magazines, radio and TV. Many of these agencies have been largely silent on this issue.

Conclusion

Smoking is a major cause of ill-health and premature death among women in many countries and this is increasing rapidly. Even in countries where smoking is still low among women, many women's lives are already negatively affected by smoking, for example through their husbands' spending scarce resources on cigarettes, their constant exposure to second-hand smoke and, increasingly, having to cope with a spouse's death from smoking. While religious and cultural attitudes, often combined with low economic status, have kept female smoking levels low in many countries, history shows that unless strong, comprehensive tobacco control policies are implemented, female smoking prevalence will increase. The tobacco industry has identified women as a key target group around the world. Countries with newly opened markets, such as China and Eastern Europe, or which have no restrictions on tobacco promotion, are particularly vulnerable to mass targeting by the tobacco industry. Also vulnerable are girls and women in countries undergoing fast urbanisation or industrialisation, where tobacco promotion attempts to associate smoking with aspirational images such as affluence, sophistication, modernity and success. Firm action needs to be taken now to halt and ultimately reverse this epidemic.

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