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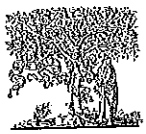

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Tobacco control — An integral component of the national action plan on non-communicable diseases in Pakistan

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Summary Pakistan is currently implementing a national programme for the prevention and control of non-communicable diseases (NCD) — the NAP-NCD program. As an integrated approach to addressing the multidisciplinary range of issues across the broad range of NCDs, this strategy has been modeled to impact a set of indicators through the combination of a range of actions capitalizing on the strengths of a public-private partnership, which is led by the NGO Heartfile and constituted additionally by the Ministry of Health, Government of Pakistan and WHO. Focused on institutional, community and public policy level change, this strategy factors integration through its Integrated Framework for Action at four levels: grouping NCDs so that they can be targeted through a set of actions, harmonizing actions, integrating actions with existing public health systems and incorporating contemporary evidence-based concepts with this approach. A range of policy and environmental strategies are part of the tobacco control component of the plan. These involve regulating access and limiting demand through restrictions on advertising, marketing, promotion and through price control and taxation; community and school interventions; cessation programmes; mass media counter-marketing campaigns for both prevention and cessation; surveillance and evaluation of efforts and operational research around tobacco and building capacity in the health system in support of tobacco control. NAP-NCD also stresses the need to develop and enforce legislation on smuggling contrabands and counterfeiting along with legislation to subject tobacco to stringent regulations as those governing pharmaceutical products. The adoption of measures to discourage tobacco cultivation and assist with crop diversification; integration of guidance on tobacco use cessation into health services and ensuing the availability and access to nicotine replacement therapy are also part of NAP-NCD.

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Background

The annual death toll attributable to tobacco is expected to rise from its current estimates of 5 million per year to 10 million by the year 2025. Parallel to this trend, there are also projections for a shift in the disease burden from its current split between the developed and the developing countries to a scenario where 70% of these deaths will occur in the developing countries by the year 2025 [1]. However, the devastation caused by tobacco goes much beyond this picture with implications for individuals, societies and health systems.

According to the national health survey of Pakistan, tobacco use was common in Pakistan, with 54% men and 20% women using tobacco in one form or other and the prevalence of smoking increased with age among both males and females. Men in the age range of 25–44 years had the highest prevalence of smoking (cigarettes and beedis) whereas in the case of women, prevalence was highest between the ages of 45–64 years. Tobacco use is known to have a strong causal association with a number of diseases in western populations [2]; association of tobacco use with diseases has also been demonstrated in the native Pakistani setting. Association of current, past and passive smoking has been documented with angiographically defined CAD in a recently reported case-control study from Pakistan [3]. Associations have also been demonstrated between tobacco use and cancer in Pakistan. A case-control study of biopsy proven carcinoma of the oral cavity and oro-pharynx and age and sex matched controls has revealed that the risk of developing cancer when pan was used was 4.2 and 3.2 times higher in males and females, respectively, compared with controls; when both pan and tobacco were chewed, the risk increased six times for males and nine times for females whereas the combination of pan, chewing tobacco and smoking caused the risk to increase 23 times for males and 35.9 times for females [4]. These demonstrations of significant causal associations in the native Pakistani setting make a very strong case for addressing tobacco as a risk factor at all levels of prevention within the country.

Reliance on revenue generated from tobacco is one of the fundamental barriers to effective tobacco control in Pakistan. This will continue to remain a hurdle, undermining any strategy that aims to address tobacco control in a comprehensive manner. The government relies heavily on revenue generated from tobacco but there are no data available on the social costs of tobacco compared with revenues earned. Clearly, this highlights a public health challenge of a significant magnitude and places the onus of responsibility on the government to institute measures to seek alternative means of revenue generation. Pakistan produced and consumed 55.3 billion cigarette sticks in 2004 not including cigarettes that were smuggled, counterfeited and produced by the tax-evaded sector; 46,000 ha of fertile land were dedicated to tobacco crops giving a yield of 86,000 tons [5]. In the year 2000, tax revenues from cigarettes totaled Pak. Rs. 19.8 billion; this represented approximately 25% of all excise revenue and more than 6% of all taxes collected in the country for that year [6,7]. This increased to 32.36 billion in the year 2003. This increase in fiscal gains has resulted in a parallel rise in the mortality and morbidity caused by tobacco consumption.

Clearly, tobacco is an enormous public health challenge. Its use appears to be a matter of a simple individual choice; however, the dynamics influencing this choice are linked to economic factors and are embedded in a complex interplay of several policy and environmental parameters with implications for growers, transporters, traders, advertisers, public authorities, the health sector and the tobacco industry. Consequently, the control of tobacco use has to be a combination of measures that integrate public health interventions to alter individual behaviours with the objective of reducing demand on the one hand. On the other hand, such measures should focus on interventions to alter the legal, social, fiscal, economic and physical environment.

The World Health Organization has responded to this challenge by taking a lead in developing the framework convention on tobacco control (FCTC) thereby exercising its constitutional right (Article 21) to negotiate a set of globally binding rules [8]. The FCTC, aimed at building an international regulatory framework, is now in force with 110 Parties to the Convention, representing 73.3% of the world's population, 168 Signatories, representing 91.4% of the world's population and 174 Participants representing 91.6% of the world's population [9]. One of the major areas where Pakistan can benefit from FCTC ratification is the issue of tobacco growing, especially in small land holdings, which were dedicated to growing food previously. Being a tobacco growing country, Pakistan would require sharing experiences from other countries for the diversification of crops and finding suitable alternatives for tobacco growers. FCTC encourages governments to promote, as appropriate, economically viable alternatives for tobacco growers in cooperation with each other, and with competent international and regional intergovern-

mental organizations. Other cross-border issues related to tobacco control like illicit trade, advertising through the Internet and opening of trade barriers to cheaper foreign brands which form a part of global cooperation for tobacco control, are all addressed by FCTC.

There are a range of policy and environmental strategies that are known to reduce tobacco consumption. These involve regulating access and limiting demand through restrictions of advertising, marketing, promotion and through price control and taxation. There is evidence globally that comprehensive tobacco control programmes are most effective when they also have community programmes including school programmes, enforcement of tobacco control policies, cessation programmes, mass media counter-marketing campaigns for both prevention and cessation, and surveillance and evaluation of efforts [10]. Smoking bans are also effective in reducing exposure to passive smoking, as well as reducing consumption and cessation [11].

Efforts aimed at tobacco control within these domains must, however, be paralleled with efforts to mitigate reliance on revenues generated from tobacco on the one hand, and must ensure alternative means of livelihood for those dependent on the tobacco trade, on the other.

A number of tobacco control measures can be instituted in the Pakistani setting. However, broad and widely targeted public health measures entail a more cost-effective use of scarce public health resources than individually oriented measures. Based on this approach, a strategy has been devised to guide future efforts aimed at tobacco control in Pakistan and forms a part of the national action plan for control of non-communicable diseases. This NAP-NCD developed by the tripartite collaboration of WHO, Heartfile and the Government of Pakistan holds immense potential to check the increasing trends of tobacco consumption in Pakistan. The need now is to ensure its effective implementation and to continue providing the political support it requires.

Priority areas for tobacco control for action in Pakistan through the NAP-NCD include the integration of surveillance of tobacco use with a population-based NCD surveillance system and monitoring trends in tobacco use and its determinants as tobacco control also features prominently as part of the comprehensive NCD behavioural change communication strategy; provide wide-ranging information relevant to all aspects of tobacco prevention and control and smoking cessation, while aiming for gradual phasing out of all types of advertising and ensuring a comprehensive ban on advertising. The NAP-NCD document puts forward specific strategies for tobacco control in Pakistan.

Restricting youth access to tobacco

Most smokers begin smoking in their teenage years and continue to smoke throughout their lives. Early starters are known to develop a stronger physical addiction, which makes it more difficult to quit [12]. This has important implications for prioritizing efforts to restrict youth access to tobacco.

Despite legislative backup in the form of the ordinance 'Prohibition of Smoking Ordinance 2002, imposing a ban on sale to minors [13], both minors that attempt to buy cigarettes and sellers can be held accountable for their actions. However, there are issues with the implementation of this Ordinance due to considerations relevant to developing country settings; these include the issue of sale to minors and sale by minors.

The trend of child labour in Pakistan has forced many children into becoming vendors; sale of cigarettes is a very profitable commodity in that respect. It is, therefore, extremely difficult to implement such legislative measures when their enforcement is dependent on a range of factors rooted in other social issues. In spite of being anecdotally aware of such practices, hardly has a case ever been reported where a minor has been booked for sale or purchase of tobacco products and clearly, there are no baseline data to guide further action in this regard. It is, therefore, a priority to look into the determinants of these behaviours and to study strategies that could potentially mitigate such trends.

Clean air policies

The promotion of clean air policies is one of the most effective public health measures. This can be enforced in different settings: public buildings, schools, restaurants, and private worksites. In the last decade, recognition of the harmful effects of passive smoking has lent an added impetus to such efforts, as a result of which many countries in the world have set into place, effective legislative measures to ban smoking in public places.

In Pakistan, the Prohibition of Smoking Ordinance 2002, bans tobacco use in all public places, transport and indoor workplaces. This legislative measure has the potential to reduce tobacco consumption to some extent and decrease exposure to second-hand smoke in public places but the successful enforcement of this Ordinance is a

multidimensional issue with implications for those enforcing it and those abiding by it. A comprehensive strategy with clear guidelines will have to be developed for this purpose. Possible lack of commitment on part of decision makers in the long term, lack of awareness about specific aspects related to its enforcement and lack of clarity relating to the mandate of the responsible officers in charge of enforcing the Ordinance, are barriers to its successful enforcement. Most importantly, the absence of resources and lack of capacity and commitment are also perceived as barriers. There is, therefore, the need to periodically assess the quality and degree of implementation of tobacco control measures as stipulated in the Ordinance.

Clean indoor air policies also need to be actively supported in the working environment. A smoking cessation programme, combined with a clearly publicised smoking policy and heath education campaign that discourages tobacco use, is one of the most cost-effective strategies for tobacco control in worksites [14]. Worksites are also excellent venues for such efforts because of the availability of a captive audience. Every support should be provided to worksites in order to enable them to adopt and implement this strategy.

Tobacco cultivation

The cultivation of high-quality tobacco in Pakistan was initiated after 1947, with initial experimental plantations in Sindh. The crop was subsequently moved to NWFP where the climate and soil were found to be most conducive for tobacco cultivation; the crop remains to-date, the major cash crop in NWFP and is the only crop grown in Pakistan whose yield per acre (currently estimated around 2400 kg) is well above the world average. This yield has consistently been on the rise since 1947. According to estimates, Pakistan grew 107,000 metric tons of tobacco on an area of 49,150 ha in the year 2002 [15]. Clearly, there have been alternative forces responsible for these trends.

There are several factors that favour tobacco cultivation. These include increase in export prices, increase in the import value, increase in demand and subsidies. The Ministry of Agriculture does not give direct subsidies to tobacco growers, and in their own words, the government neither *encourages* nor *discourages* tobacco cultivation and has left the dynamics of tobacco cultivation to market forces. A number of subsidies are permissible as part of the stipulations of the WTO Agreement on Agriculture, Article 6.2; these include input as well as investment support to farmers. However, the Government of Pakistan does not provide any direct subsidies of this nature – negative or positive – to farmers. Nevertheless, indirect mechanisms protect the interests of growers.

The tobacco industry, on the other hand, facilitates tobacco cultivation at several stages, particularly at the time of plantation with special assistance packages aimed to facilitate plantation and ensure quality. The tobacco crop has a guaranteed market; however, there are at times, disagreements between the grower and the buyer over the terms that underlie financial transaction involving issues that stem from grading and rating of the crop [16].

Developing alternatives to tobacco cultivation and crop substitution are recognized as being a part of comprehensive tobacco control efforts. However, as long as a market exists for the crop, measures aimed at regulating its plantation may not be completely effective. There are, nevertheless, several strategies that are known to discourage tobacco cultivation. These include provision of guidance to farmers, crop substitution and mixed cropping and ensuring better marketing of alternative crops. These efforts must be initiated alongside other tobacco control efforts albeit with a clear understanding that they have a limited role in tobacco control [17].

Public and professional education

The Ministry of Health has been investing in anti-tobacco health awareness campaigns for the last 40 years. However, the budgets allocated for this activity are meager compared with allocations for tobacco advertising and promotion. This is evidenced by a comparison of the tobacco-related health education budget of the Ministry of Health with the advertising budgets of companies with 98% of the market share. In the year 2002, the former amounted to Rs. 2 million whereas the latter totalled Rs. 61 million.[1]

There is a general impression that consumers are more aware of the harmful effects of tobacco today than they were decades ago. This can be attributed to investments made in anti-tobacco health education interventions over the years; however, due to the lack of a system to monitor this intervention, an assessment of its impact cannot be made. It is, therefore, imperative that future interventions should encompass sound evaluation strategies and

[1] Total health education budgets for that year amounted to Rs. 255 million.

process evaluation measures. Tobacco should be featured prominently as part of the comprehensive behavioural change communication strategy for NCD. Anti-tobacco health education interventions should also provide information on the magnitude of the damage tobacco can cause and should be able to provide critical information related to the role of tobacco advertisements in the initiation of smoking. In addition, information on quitting must be provided.

Involvement of the media is critical to the public awareness approach. In addition to drawing on their support to disseminate information relevant for health education, it is important to draw their attention to the ways in which tobacco companies have worked hard to thwart policy change over the last several years [18]. Media activities around dedicated days such as the World No Tobacco Day provide a platform for accelerating such efforts.

Advertising promotion and sponsorship

Tobacco companies in Pakistan have vast advertising budgets. The collective marketing expenses of two of the largest companies with 98% of the market share were close to Rs. 1.5 billion in 1999 [19]. Numerous sporting, cultural and social events in Pakistan have been financed by tobacco industry contributions, largely due to the perceived lack of other financial support mechanisms. Several diverse and innovative strategies are used for advertising and promoting tobacco. These range from the straightforward point of sale, print and electronic media and outdoor advertising, to other more focused efforts that aim at building incentives for wholesalers and retailers and promotional strategies that focus on sport, art, culture and cause-related sponsorships.

Statutory restrictions on tobacco advertising in Pakistan were non-existent prior to the promulgation of the Prohibition of Smoking Ordinance 2002; earlier laws dealt with the issue of sales to minors and inscription of health warnings. However, there are issues with this Ordinance as it imposes a partial ban on advertising. This creates ambiguities, making its implementation vague and exploitable. Evidence suggests that while comprehensive bans on all forms of tobacco promotion can be effective in reducing tobacco use, partial restrictions have limited or no effect [20,21].

These gaps notwithstanding, the promulgation of this Ordinance is a step in the positive direction and in line with international trends, which call for gradual phasing out of all kinds of tobacco advertising, sponsorship and promotion by 2005. The Ordinance and its preamble provide the scope around which rules of business can be drafted.

Active lobbying efforts are required by all stakeholders to push for further amendments in the Ordinance aiming for a comprehensive ban on tobacco promotion, advertising and sponsorship; The Ministry of Health acknowledges and has indicated that it is possible to aim for a total and comprehensive ban on tobacco advertising. Nothing less than that is acceptable or effective.

Health warnings

The Cigarettes (Printing of Warning) Ordinance 1979 made it binding for manufacturers to print on all cigarette packs, both in English and Urdu, the following warning *'Warning: Smoking is Injurious for Health'* [22]. A subsequent amendment of this Ordinance in 1980 exempted cigarettes meant for exports from carrying this health warning [23]. Subsequently, the 1979 Ordinance was amended in 2002 [24], making it necessary for warnings to occupy 30% of the front and back of cigarette packs. In addition, it is now mandatory for all electronic media advertisements to devote 20% of the air time to warnings. The larger and more conspicuous warnings come to the consumer at no additional cost to the government; however, they may only be marginally better than the previous pattern of warnings in altering health behaviours of smokers. It is, therefore, necessary to bring about innovations in warning styles based on feedback received from pilot studies conducted in local settings. Successful examples exist of how such innovations have been effective in bringing about behavioural changes. Studies conducted in Canada, where pictorial warnings cover 50% of the pack surface, have also suggested that such approaches are effective [25].[2] In light of this evidence, conscious and culturally relevant efforts need to be initiated to make warnings more effective [26,27]. Given the high illiteracy rate in Pakistan, this may also require pictorial representation of the warnings.

[2] Some successful examples are: "Your children imitate you"; "Cigarettes cause cancer of mouth, diseases of gums and teeth"; "Cigarettes cause strokes"; "Tobacco smoke hurts babies."

Price, excise and taxation

In terms of the price index, tobacco products are cheaper and hence more accessible in Pakistan today than they were 15 years ago. This is an inevitable consequence of the lack of use of price and tax policies as a tool to control tobacco consumption despite evidence that the demand for tobacco is strongly affected by price. Researchers have calculated that if there were a sustained and real 10% rise in the price of cigarettes over the average estimated price in each region of the world, 40 million people worldwide would quit smoking, and many more who would otherwise have taken up smoking, would be deterred from doing so [28]. This calls for the development of a comprehensive price policy for tobacco products, recognizing its special nature and appreciating evidence which points to a clear inverse relationship between cigarette prices and smoking rates. However, the optimum level of taxes for this purpose needs to be determined in Pakistan's context.

Dependence and cessation

One of the two most important measures that have the potential of impacting tobacco mortality trends is the widespread use of effective means of treating tobacco dependence, especially if cessation rate is dramatically increased [29,30]. The majority of smokers realizes the need to give up smoking but finds it difficult to do so in the absence of any organized effort on smoking cessation. Against this background, there are no smoking cessation clinics in Pakistan even in tertiary care settings; smoking cessation advice is given on an ad hoc basis in clinics. In addition, there is no formal training of healthcare providers on smoking cessation and no printed information is available to them through a structured and sustainable mechanism. Moreover, nicotine replacement therapy (NRT), which is an affordable and effective deterrent against smoking, is not registered in Pakistan.

There is, therefore, the need to integrate smoking cessation with health care delivery at all levels and to address it as a part of professional education. Investment in smoking cessation clinics with equitable outreach is also overdue. These can be developed in the setting of major public sector hospitals. In addition, it should be made mandatory for private sector hospitals to offer such services and guidance. Healthcare providers in BHUs and THQs should be provided with simple tools enabling them to assist patients with smoking cessation. In the context of cessation of tobacco use, it is also important to make NRT available in Pakistan through the process of formal registration.

Illicit trade

There are three varieties of illicit trade in tobacco: smuggling, tax evasion and counterfeiting. All three practices contribute to increasing the availability and accessibility of cigarettes in the market and incur losses to the exchequer. According to estimates in Pakistan, the tax-evaded sector has grown from holding 10% of the market share in 2001 to 20% in 2002 [31]. This results in yearly revenue losses approximating Rs. 1.2 billion.

Counterfeit cigarettes have 2.4% of the market share in Pakistan [32]. The tobacco industry tends not to acknowledge the magnitude of this issue publicly, as this would have implications for consumer confidence and brand image. Counterfeiting has public health implications as it makes cigarettes more accessible by increasing availability and reducing cost. In the case of counterfeiting, manufacturing details, retail mechanisms and trade routes are well established and, being a sustainable activity, it is hard to break. The government can address this issue by enhancing market intelligence and fixing a minimum price.

Cigarettes are the world's most widely smuggled legal consumer product. According to estimates, 4-6% of world cigarettes are smuggled [33]. Cigarettes are not imported into Pakistan. Any cigarette packing which does not have a warning in Urdu is a smuggled item. Ninety percent of the tobacco smuggling in Pakistan is due to trade arrangements with Afghanistan. This practice is becoming rampant in the absence of effective monitoring and surveillance both at the entry and sales points. The response to this issue involves effective implementation of laws that exist on smuggled contrabands and raising the economic cost of smuggling, thus narrowing the margin between the price of the legitimate and the smuggled product in the market [34]. The use of difficult-to-forge tax-paid markings, excise stickers and printing of unique serial numbers is known to be effective since any tobacco product not carrying such stickers offered for sale can be taken off the market even after it enters the country. Addressing this issue in a comprehensive manner brings in the role of Customs, the ministries of Finance, Commerce and Industries and local governments.

Liability and compensation

There are several successful examples of tobacco litigation in developed countries, the internationally recognized Minnesota trial being one of them [35]. However, there is no precedent in Pakistan where a case for liability against the tobacco industry has been filed. Public litigation is not a priority and to-date only a few product liability cases have been filed.

Many products with health benefits are often effectively banned from the marketplace due to burdensome regulatory standards. Against this backdrop, it is ironic that tobacco products are excluded from consumer protection laws, such as food and drug legislation. It is, therefore, necessary to lobby for legislation as part of which tobacco should be subjected to stringent regulations as those governing pharmaceutical products.

Research and surveillance

As Pakistan grapples with the major toll that tobacco takes on individuals, communities and the health system and establishes a concerted national tobacco control programme, it is essential that policy makers have access to data. For this purpose, data must be generated to inform the decision making process. It is essential to pursue epidemiological and behavioural research and to establish surveillance mechanisms for monitoring trends in tobacco use. In addition, it is imperative to pursue policy research of local relevance and to examine tobacco tax policies, marketing and advertising strategies with a view to promoting a smoke-free norm. Research on the impact of the non-formal tobacco sector on employment and policy also needs to be locally conducted [36].

Most importantly, however, with reference to the above-mentioned strategies, it needs to be recognized that there is inadequate capacity both within the public and private sectors in Pakistan to understand the technical and operational aspects of tobacco control. Urgent attention should be given to developing expert capacity so that an effective tobacco control community can be developed within Pakistan.

These actions also need to be backed up by a strong commitment translated into allocation of resources for policy and operational research around tobacco such that evidence-based interventions can be developed to achieve comprehensive tobacco control.

References

[1] World Health Organization. World Health Report 1999 – Making A Difference. Geneva, Switzerland: World Health Organization; 1999.

[2] Peto R, Derby S, Deo H, Silcocks P, Whitley E, Doll R. Smoking, smoking cessation, and lung cancer in the UK since 1950: combination of national statistics with two case control studies. Br Med J 2000;321(7257):323–9.

[3] Nishtar S, Wierzbicki AS, Lumb PJ, Lambert-Hammil M, Turner CN, Crook MA, et al. Waist-hip ratio and low HDL predict the risk of coronary artery disease in Pakistanis. Curr Med Res Opin 2004;20(1):55–62.

[4] Jaffrey NA, Mahmood Z, Zaidi SH. Habits and dietary pattern of cases of carcinoma of the oral cavity and oropharynx. J Pak Med Assoc 1997;27(6):340–3.

[5] Economic Survey of Pakistan 2004–05, Government of Pakistan, Finance division, Economic advisor's Wing. Islamabad. p. 13.

[6] DTZ, PIEDA UK Gallup/BRB. Economic Impact of Tobacco Industry in Pakistan. Islamabad, Pakistan; 2001.

[7] Pakistan Tobacco Board. Central Board of Revenue Book, 2001–02. Islamabad, Pakistan: Pakistan Tobacco Board, Government of Pakistan; 2002.

[8] Framework Convention on Tobacco Control; World Health Organization. www.who.int/fctc.htm [accessed 18.12.03].

[9] www.fctc.org [figures as on 09.11.05].

[10] Centers for Disease Control and Prevention. Best Practices for Comprehensive Tobacco Control Programs. Atlanta, GA, USA: Centers for Disease Control and Prevention; Office on Smoking and Health; 1999.

[11] Hopkins DP, Briss PA, Ricard CJ, Husten CG, et al. Reviews of evidence regarding interventions to reduce tobacco use and exposure to environmental tobacco smoke. Am J Prev Med 2001;20(2S):16–66.

[12] Mackay J, Eriksen M. The tobacco atlas. Geneva, Switzerland: World Health Organization; 2002.

[13] Ordinance No. LXXIV of 2002: Government of Pakistan. To provide for prohibition of smoking and other tobacco uses in places of public work or use and public service vehicles and to protect the health of non-smokers; 2002.

[14] Fielding JE. Smoking – health effects and control. In: Last J, Wallace RB, editors. Last Public Health and Preventive Medicine. East Norwalk: Springer; 1992.

[15] Tobacco Leaves Production, 2001 – FAOSTAT Database results; Food and Agriculture Organization. http://apps.fao.org/lim500/nph-wrap.pl?Production.Crops.Primary&Domain=SUA [accessed 30.10.03].

[16] Growers for abolition of tobacco cultivation. Daily The News 18.09.03, Islamabad, Pakistan.

[17] Joey de Bayer LW. Tobacco control policy – strategies, successes and setbacks. Washington, DC, USA: The World Bank; 2003.

[18] Philip Morris USA Inc. www.pmdocs.com [accessed 31.12.03].

[19] Advertising expenses of tobacco companies in Pakistan; The Network for Consumer Protection. http://www.the-network.org/tfi-pak/advertisng-expenses [accessed 31.12.03].

[20] Saffer H, Chaloupka FJ. The effect of tobacco advertising bans on tobacco consumption. J Health Econ 2000;19:1117–37.

[21] Jha P, Chaloupka FJ. Tobacco control in developing countries. New York, USA: Oxford University Press; 2000.

[22] Ordinance Number LXXIII of 1979: Government of Pakistan. Cigarette (Printing of Warning); 1979.

[23] Ordinance Number XL of 1980: Government of Pakistan. Cigarette (Printing of Warning), Amendment; 1980.
[24] Ordinance Number LXXV of 2002: Government of Pakistan. Cigarette (Printing of Warning), Amendment; 2002.
[25] Press release, 9 January 2002; Canadian Cancer Society. http//www.Ontario.ca/siteboth/English/cigarette_package_warnings.asp [accessed 15.08.03].
[26] Davis R, Kendrick JS. The surgeon general's warnings in outdoor cigarette advertising: are they readable? JAMA 1989;261(1):90–4.
[27] Richards JW, Fischer P, Conner FG. The warnings on cigarette packages are ineffective. JAMA 1989;261(1):45.
[28] Jha P, Chaloupka FJ. Curbing the epidemic: governments and the economics of tobacco control. Washington DC, USA: The World Bank; 1999.
[29] Treating Tobacco Use and Dependence: a Clinical Practice Guideline, 2000; Agency for Healthcare Research and Quality. http://www.surgeongeneral.gov/tobacco/default.htm [accessed 06.12.03].
[30] Helping Smokers Stop: Ensuring Wide Availability of Smoking Cessation Interventions, Fact Sheet #9, 1993; International Union Against Cancer. http://www.globalink.org/tobacco/fact_sheets/09fact.htm [accessed 06.12.03].
[31] AF Ferguson-CA. Annual Report of Pakistan Tobacco Company for 2002 – Financial highlights of last 5 years. Islamabad, Pakistan: Pakistan Tobacco Company; 2002.
[32] DTZ, PIEDA UK Gallup/BRB. Economic Impact of Tobacco Industry in Pakistan. Islamabad, Pakistan; 2001.
[33] Joosens L. Technical Paper on Tobacco and Smuggling. Geneva Switzerland: World Health Organization; 1998.
[34] Tackling Tobacco Smuggling. United Kingdom: HM Customs and Excise, Treasury; 2000.
[35] Legislative Analyst Office of California, USA. http://www.lao.ca.gov/initiatives/fiscal_letters/1999/990903_int.html [accessed 26.03.04].
[36] Yach D. Tobacco consumption in India. J Public Health Policy 2003;203:246–50.