

The Need for Graphic Warning Labels on Cigarettes and Vaping Products in Pakistan: A Public Health Imperative



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Abstract

In Pakistan, tobacco use is prevalent despite the alarming rates of tobacco-related mortality. Effective and comprehensive anti-smoking policies are urgently needed. The purpose of this manuscript is to examine the need for implementing graphics warning labels on cigarette packs and individual cigarettes in Pakistan, given the low literacy rate of the country. As demonstrated in countries such as Canada, Australia, the United Kingdom, and the United States, graphic warnings are effective at deterring tobacco use. Furthermore, this paper examines the undeniable link between tobacco smoking and various types of cancer, highlighting the grave public health implications. E-cigarettes are also highlighted for their increasing popularity and potential risks, emphasizing the need for regulation. It is suggested that vaping products be taxed and labeled with mandatory warnings to mitigate their use and consequent health risks. The amalgamated enforcement of these strategies, adapted to suit Pakistan's unique socio-cultural landscape, could significantly contribute to curtailing the country's tobacco usage and related fatality rates.

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Introduction

Tobacco consumption remains a formidable global health challenge, claiming over eight million deaths each year, including approximately 1.2 million non-smokers exposed to secondhand smoke (1). Developed countries across the globe, including Canada, the United States, Australia, and the United Kingdom, have adopted innovative measures in the fight against tobacco use through the policy on mandatory graphic warnings on cigarette packs (2, 3). For the first time in Canadian health policy, the government has announced plans to place health warnings directly on individual cigarettes (4). These visual cues act as powerful reminders of the severe health risks posed by smoking.

High-income countries have observed a downward trend in smoking prevalence through comprehensive tobacco control measures; however, low- and middle-income countries remain burdened, contributing to more than 80% of global tobacco deaths (5). Tobacco consumption also continues to be high in the overall context of the South and the South East Asian regions. South-East Asia Region Office of the WHO reported that about one in four adults uses some form of tobacco, thereby increasing morbidity and mortality from tobacco-related illnesses (6). The region's preventative activities face challenges from cigarette smoking, smokeless tobacco, and other products like e-cigarettes (7).

Focusing specifically on Pakistan, the situation becomes even more urgent. Recent

estimates from the Pakistan Health Research Council (2022) suggest that around 31.8% of adults in Pakistan are smokers (8), which translates into nearly 166,000 tobacco-related deaths annually (9). The country's low literacy rates (approximately 59.13%) exacerbate the challenge of conveying the health risks through text-only warnings (10). Therefore, implementing graphic warning labels and other evidence-based strategies is paramount, as demonstrated by their success in countries like Canada and Australia (2, 3).

Link between Tobacco Smoking and Cancer

Tobacco smoking is one of the leading causes of cancer, contributing to 22% of cancer deaths globally, and remains a leading cause of preventable deaths worldwide (11). It is closely associated with lung cancer, which is the most common and deadliest type of cancer worldwide (12). However, the carcinogenic effect of tobacco is not restricted to the lungs. It has been linked to a variety of cancers, including oral, throat, esophageal, pancreatic, kidney, bladder, and cervical cancers (13).

Cigarette smoke contains over 7,000 chemicals, including 70 known carcinogens such as formaldehyde, benzene, polonium-210, and tobacco-specific nitrosamines (14)(CDC, 2020). These substances can damage DNA, leading to mutations that instigate cancer development (15). Alongside the surging popularity of e-cigarettes or vaping products, there is an increasing need to regulate these devices, including implementing taxation and

mandatory warning labels (16). In a country where literacy rates are reported to be around 59.13% (10), traditional text-based health warnings on cigarette packs may not have the desired impact. This necessitates the adoption of a more universally comprehensible mode of communication, such as graphic warnings, to resonate with the population, regardless of their literacy level.

Tobacco warning labels—ranging from text-based to graphic, pictorial representations—serve as critical public health tools intended to inform consumers of the health risks associated with smoking. The World Health Organization's Framework Convention on Tobacco Control (WHO FCTC) advocates the adoption of prominent and rotating warnings that cover a substantial portion of tobacco packaging (17). These warnings, whether textual or graphic, are designed not only to provide factual health information but also to elicit strong emotional responses, thereby discouraging initiation and promoting cessation (18).

The importance of tobacco warnings lies in their potential to reach diverse audiences, including populations with varying literacy rates. By conveying messages visually, graphic warning labels transcend language barriers and appeal to universal human perceptions of harm (19). This approach ensures that critical health information resonates broadly, effectively contributing to changes in smoking behaviors and perceptions. Such warnings have been linked to enhanced risk awareness, reduced tobacco product appeal, and an increased likelihood of quitting (20).

The Effectiveness of Graphic Warnings

Multiple studies corroborate the efficacy of graphic warnings in deterring tobacco use. In Canada, for instance, smoking rates plummeted from 18% to 15% within two years following the introduction of graphic warnings on cigarette packs (21). Research by Fleischer et al. revealed that graphic warning labels significantly enhance risk perception and reduce the appeal of smoking (20). Graphical warnings on tobacco products can significantly benefit low-literacy adults in developing countries, according to a study published in the *Journal of Health Communication* (2020). The non-verbal and visceral nature of graphic warnings effectively communicates the health hazards associated with smoking to this demographic with lower health literacy (22). Comparative analyses at both global and regional levels have consistently demonstrated that graphic or pictorial health warnings on tobacco products are more impactful than text-only labels. According to a systematic review, pictorial warnings are more likely to be noticed, elicit strong emotional reactions, and effectively communicate health risks than their text-based counterparts (23). The World Health Organization (WHO) similarly advises that graphic warnings, which often include striking images depicting the consequences of smoking, have a more substantial and sustained influence on smoking behavior (5)(WHO, 2019).

In countries where large and prominently placed graphic warnings have been implemented—such as Canada, Australia, and Brazil—research has shown a marked increase in smokers' cessation-related behaviors and intentions compared to jurisdictions relying primarily on text-only warnings (24, 25). These findings highlight the global trend toward more visually striking warning labels as a key component of effective tobacco control strategies.

The Case for Taxation and Mandatory Labelling on Vaping Products

The marketing of e-cigarettes as less harmful than traditional cigarettes is misleading, as mounting evidence suggests they also carry risks. E-cigarette users had a higher risk of developing lung disease than non-users, according to a study published in the *Journal of the American Medical Association (JAMA)* (26). Furthermore, e-cigarettes have been associated with an alarming escalation in nicotine consumption among adolescents (27). Their potential to serve as a gateway to traditional smoking has raised concerns regarding the potential increase in future cancer cases.

Mandatory warning labels, taxation, and levies have come to the fore as feasible tactics to stifle the burgeoning trend of e-cigarette use. It was found in the study that a 10% surge in the cost of e-cigarettes led to an approximately 12% decrease in sales (28). Thus, the consumption of e-cigarettes could be substantially curtailed through tax imposition. Graphic warning labels on e-cigarette packaging are effective means of displaying associated health risks. The deterring effect of graphic warning labels on conventional cigarettes has been demonstrated (29), suggesting the potential efficacy of similar labels on e-cigarettes.

Recommendations for Public Health Policy in Pakistan

Hence, the enforcement of compulsory vivid warning labels on packs and individual sticks of cigarettes is of great importance in checking Pakistan's worrying mortality rates linked to tobacco use. Given the cultural diversity and the myriad languages spoken across the country, vivid warnings would offer a more uniform comprehension of the associated health hazards. Locally and culturally sensitive warnings should concentrate on the most common smoking-related ailments in Pakistan, including heart ailments, lung cancer, gum disease, and oral cancer. Moreover, scrutinizing and assessing these interventions would facilitate amendments based on their efficacy and public response. It would also counteract the strategies employed by the tobacco industry to subvert warnings.

Conclusion

Considering Pakistan's high rates of tobacco usage and related mortalities, it is crucial for the country to formulate

robust, comprehensive anti-smoking measures. Several countries have proven that graphic warnings on cigarette packs and individual sticks are effective deterrents, and they could play a pivotal role in diminishing tobacco usage in Pakistan. Owing to the established connection between tobacco smoking and cancer and the emerging data on the perils of e-cigarettes, it is vital to enact strict regulatory measures such as taxes and compulsory caution labels. This would safeguard public health by discouraging individuals from initiating or persisting with the use of these hazardous products. The health and well-being of millions of Pakistanis would be vastly enhanced by such intervention.

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