

**Passive smoking and the health of children: A primary concern in Pakistan**

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*Dear Madam*, Environmental tobacco smoke (ETS), also referred to as second-hand, involuntary, or passive smoke, is produced from the combustion of tobacco products or puffed out by active smokers. The smoke emitted from the tip of a cigarette contains about two times the concentration of nicotine, five times the concentration of Carbon monoxide, and 50 times the concentration of ammonia than active smoke.<sup>1</sup> Furthermore, amongst the exposed population, children are far more susceptible to complications associated with ETS due to their manner of exposure and developmental physiology. According to the 2014 Global Adult Tobacco Survey for Pakistan, 43.3% of households were exposed to ETS, with a significant amount of children included in that percentage.<sup>2</sup> Thus, children's health is more detrimentally impacted by ETS than adults.

Exposure of children to ETS in domestic and public settings risks a higher occurrence of respiratory and middle-ear diseases. According to numerous studies, dose-dependent exposure to ETS directs more frequent and severe asthma attacks accompanied by wheezing. Moreover, it is observed that school-aged individuals who live in a smoking household tend to develop a range of lung diseases, including bronchitis, bronchiolitis, and pneumonia. Their lungs become weak, resulting in impaired pulmonary function.<sup>3</sup> With reference to a population-based cohort study conducted by Lovasi et al,<sup>4</sup> it was evident that childhood ETS exposure from 2 or more smokers compared with none is linked with early emphysema in adulthood.<sup>4</sup> In addition, constant ETS exposure leads to swelling and obstruction of the eustachian tube, which interferes with pressure equalization leading to pain, fluid accumulation, and infection. Ear infections and middle ear fluid are the most common causes of hearing loss in children.

Being the primary reason behind several disease, ETS is also known to cause acute effects on cardiovascular function in children. Compelling evidence demonstrates that childhood ETS exposure risks the accumulation of factors associated with cardiovascular diseases, including obesity, dyslipidaemia and imbalanced systolic and diastolic blood pressure.<sup>5</sup> [Exposure to hazardous chemicals found in ETS,  
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for instance, benzopyrene, is known to accelerate the development of atherosclerosis]. Moreover, studies show convincing evidence that hypertension is common in children exposed to ETS at home. It is also observed that hypertension is a common risk factor for cardiovascular disease and cardiovascular stress hyperactivity in children with smoking parents.

In retrospect, compelling evidence suggests that ETS exposure is the leading cause of morbidity and mortality in children in Pakistan (owing to its toxic composition). However, effective strategies accompanying the collaboration between the government and people can aid in bringing ETS levels to their minimum. Raising taxation on tobacco products and smoke-free governing laws could be a great start toward reducing SHS in public places and homes. Moreover, spreading awareness through the mass media and public campaigns should be the prime objective in dealing with the exponential rise of ETS. In addition, television shows, radio broadcasts, podcasts, and interactive sessions highlighting the detrimental consequences of passive smoking can save the public from its fatal consequences. Additionally, less toxic alternatives to tobacco cigarettes, like nicotine replacement therapies and vapes, can be introduced to lessen ETS toxicity. In light of the suggestions above, it is high time for the concerned authorities and the people (especially smoking parents) to take immediate measures to protect the deteriorating health and quality of life of children before the situation becomes irreparable.

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