STUDENTS' CORNER
LETTER TO THE EDITOR

Household air pollution: A dire need of awareness in Pakistan

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Dear Editor, Household Air Pollution [HAP] has proven to be associated with an increased risk of acquiring asthma, lung cancer, pulmonary tuberculosis, and acute respiratory infections in adults and children, along with Chronic Obstructive Pulmonary Disease [COPD], cerebrovascular disease, *ischaemic* heart disease, low birth weight, and stillbirth.[1] This pollution is caused primarily by the absence of clean fuels, which includes electricity, biogas, natural gas, liquefied petroleum gas (LPG), solar, or alcohol fuels. Owing to the absence of clean fuels, individuals resort to the use of biomass to meet their needs, exposing themselves to the detrimental effects of biomass usage. Unfortunately, Pakistan is one of the worst-faring victims of this predicament. As of 2020, only 49.3% of Pakistanis primarily relied on clean fuels and technologies for cooking.[2] With only 26% of rural areas having access to clean fuels, traditional, inefficient three-stone stoves for biomass combustion are typical in rural areas.[2,3] Such stoves expel poisonous gasses, including Nitrogen oxides, Carbon monoxide, and formaldehyde, in addition to several toxic organic compounds depending on the type of biomass used, all detrimental to human health.[4] In urban areas, especially in winter, widespread gas shortages are prevalent, restricting an unknown number of citizens to biomass combustion for their day-to-day purposes. In both scenarios, the harms of HAP are imminent. Unfortunately, using gas stoves in poorly ventilated areas also shows milder effects of HAP.[5]

Alarmingly, despite the adverse impact and the high prevalence of HAP, the matter remains neglected, with only very few studies connecting the above-stated health risks with the Pakistani population, evaluating the burden Pakistan bears because of HAP, and assessing the correct strategies for intervention. Such studies would result in implementing specific research-backed mitigation strategies customized to be specifically applicable to different socioeconomic backgrounds and regions of Pakistan, for example, efficient ventilatory systems relevant to Pakistani houses designed to reduce HAP.

In the meantime, examples of general policies include, but are not limited to, television advertisements, awareness drives, and allotting larger budgets towards cleaner fuel provision. For people utilizing primitive three-stone stoves, a plancha stove, comprising simply a stove and a chimney, can also be provided. The usage of such stoves is associated with a significantly reduced exposure to HAP.[6] Individually, when operating stoves for any purpose, it is crucial to prioritize ventilation. Using a range hood or simply opening a kitchen window during cooking and the following 15 minutes may provide this necessary ventilation.[7] Advising individuals to practice caution while using biomass is also imperative.

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