



Vaping and oral health: an emerging threat to young smiles

Danish Khan Swati  ¹

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¹: Undergraduate Student, Khyber College of Dentistry, Peshawar, Pakistan

Email ✉: danish.khan@kcd.edu.pk

Dear Editor

The use of electronic cigarettes, or vapes, as a substitute to conventional smoking has surged noticeably among young individuals in recent years. Because they believe it is more secure or less dangerous, many people utilize it.^{1,2} Studies have, however, demonstrated how vaping is contributing to hidden oral health problems and damaging young smiles.

According to a cross-sectional study conducted on high school students in California, vaping use is a risk factor for xerostomia. Through a 12-months follow-up, The study assessed how e-cigarettes, cannabis, and tobacco affected young adults. The findings pointed out that 54% of the sample who consumed these resources reported regular xerostomia (consumption >5 days/month) and sporadic complaints of dry mouth (consumption <5 days/month).³

The findings of a systematic review that reviewed eight human case controls studies on the link between vaping and periodontitis indicate that e-cigarette users had more deposits of plaque, deeper pockets, less marginal bone, and less bleeding on inspection (a common sign of gum disease-which may delay early detection and treatment) than non-smokers.⁴ Similarly, another study reported poorer oral hygiene indices, higher plaque accumulation, and increased gingival bleeding among vapers, further supporting the adverse impact of e-cigarette use on periodontal health.¹

Propylene glycol, found in e-liquids, along with sweeteners and flavorings,⁵ can reduce saliva production, cause halitosis and xerostomia, lower mouth pH, and promote harmful bacteria like *Streptococcus mutans* to grow, leading to tooth damage.⁴

Nicotine in vape smoke constricts oral blood vessels, reducing oxygen flow.⁶ It also creates harmful reactive oxygen species. Depending on the brand, producers say a cartridge can deliver anywhere from 10 to 250 puffs, or five to thirty cigarettes.⁷ Vapors (temperature reaching 40-65°C) can thicken the oral mucosa, leading to lesions. Vaping disrupts saliva production due to toxic ingredients.⁸

According to a recent research in Saudi Arabia, more than half of students recognized that e-cigarettes could lead to nicotine dependence, but 62% of them thought they were fashionable substitutes for regular cigarettes.⁹ These views imply that peer-driven ideas of image and lifestyle, in addition to marketing, influence the allure of e-cigarettes.

In conclusion, many young people are attracted to vaping because of its perceived social appeal, often without recognizing its potential oral health consequences. Dental curricula rarely address vaping-related oral pathology in depth, leaving future dental professionals inadequately prepared to identify and manage these conditions. Furthermore, vaping history is frequently omitted from routine dental records, potentially delaying diagnosis and intervention. Greater awareness enhanced dental education, and systematic screening for vaping behaviors are needed to protect the oral health of young populations

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CONFLICT OF INTEREST

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KMUJ web address: www.kmu.jkmu.edu.pk
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