MSI Journal of
Medicine and Medical Research (MSIJMMR)

Electronic Cigarette Use in Nigeria: Public Health Implications and the Way Forward

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The authors declare that no funding was received for this work.

OPEN ACCESS

Received: 11-January-2025
Accepted: 25-February-2025
Published: 03-March-2026

This article is published in the **MSI Journal of Medicine and Medical Research (MSIJMMR)**
ISSN 3049-1401 (Online)

The journal is managed and published by MSI Publishers.

Volume 3, Issue 1 (Jan-Apr), 2026

ABSTRACT: Electronic cigarette (vaping) has become a fast-growing global phenomenon, particularly among adolescents and young adults. Although it is often marketed as a safer alternative to traditional smoking, emerging research suggests that e-cigarettes carry risks of nicotine dependence, respiratory irritation, and may normalize smoking behaviour. In contrast to high-income countries where patterns of use and regulation are well documented, data from Nigeria and other African nations remain limited despite increasing awareness and uptake among young people. This review critically examined existing literature on the prevalence, determinants, and public health implications of vaping in Nigeria to identify evidence gaps that can inform future research and regulation. A narrative literature review was conducted using PubMed, Google Scholar, and ResearchGate, focusing on peer-reviewed studies published between 2019 and 2025 related to vaping prevalence, determinants, and health or policy outcomes in Nigeria and comparable African settings. The evidence indicates a growing

awareness and use of vaping among Nigerian adolescents and university students, with male predominance and key influences including peer networks, curiosity, and social media exposure. Despite minimal regulation and limited awareness of health risks, e-cigarette marketing remains widespread, and the National Tobacco Control Act (2015) does not explicitly cover vaping products. Vaping therefore presents an emerging public health concern in Nigeria, compounded by regulatory gaps and weak surveillance. Strengthened data collection, youth-focused education, and policy reform aligning e-cigarette control with global standards are essential to prevent rising nicotine addiction and protect future generations.

Keywords: *Vaping; electronic cigarettes; Nigeria; tobacco control; adolescents; public health; regulation.*

1. Introduction

1.1 Overview of Vaping and Global Trends

Electronic nicotine delivery systems, also widely referred to as e-cigarettes, are a public-health issue that have emerged over the past decade. These gadgets are used to heat a liquid that may contain nicotine, propylene glycol, glycerin and flavoring to produce an inhalable spray. Although, initially marketed as a safer alternative to traditional cigarettes, recent evidence suggests that e-cigarettes still expose users to harmful and addictive substances. Studies have demonstrated that the aerosols produced contain ultrafine particles, heavy metals, and volatile organic compounds, all of which pose respiratory and cardiovascular risks (Marques *et al*., 2021).

E-cigarettes come in a range of formats, such as disposable pens, rechargeable pod systems, and modifiable ones. They are packaged and come in flavors, and are heavily advertised online, this has helped boost their popularity among the youth. Despite widespread perception of reduced harm, global health authorities continue to emphasize that e-cigarettes are neither harmless nor proven safe over long-term use all over the world (WHO, 2024).

1.2 Rise of Vaping in Nigeria

Despite the vast amount of global data on vaping, there is limited research on the subject in Africa such as Nigeria. Available studies in Nigeria indicate that e-cigarette awareness and experimentation is gradually increasing, particularly among college students and young people in cities. The most frequent reasons are curiosity, stress reduction, peer pressure, and social media advertising (Erinoso *et al.,* 2021; *Weke et al et al*., 2025).

The National Tobacco Control Act (2015) in Nigeria is rather a general guideline to tobacco regulation, without specifications regarding electronic cigarettes, leaving sales and distribution gaps. Recent evaluations also demonstrate that there is poor compliance with restrictions and easy access to vaping products in informal markets (Adegbile *et al.,* 2024). As a result, the youth are still susceptible to the focused marketing and deceit re garding the safety of such products.

Recent data in Nigeria also points to the necessity of a thorough research, surveillance, and control in order to learn and manage the vaping behavior. The need to increase awareness activities and introduce vaping education into the school health program might also be brought to avoid developing nicotine addiction in adolescents (Erinoso *et al.,* 2021).

1.3 Rationale and Aim of the Review

Globally, vaping has become increasingly prevalent, particularly among adolescents and young adults, reflecting a shift in nicotine consumption patterns. Systematic reviews indicate that e-cigarette use ranges from below 1% in low-income countries to over 20% in some high-income nations, with the highest rates observed among individuals aged 18–24 years (Tehrani *et al*., 2022). Social media influence, peer pressure, and curiosity have been identified as key drivers of initiation, while the perception of reduced harm compared to traditional cigarettes continues to fuel uptake. Public health experts warn that these trends could lead to new forms of nicotine dependency among youth, undermining decades of global tobacco control progress. Agencies such as the U.S. Department of Health and Human Services

(2016) have even referred to youth vaping as a "public health epidemic," given evidence that e-cigarette use often precedes rather than replaces tobacco smoking.

Similarly, the World Health Organization (2024) cautions that vaping may normalize nicotine consumption and expose non-users to harmful aerosols, posing long-term risks to respiratory and cardiovascular health. Within this global context, Nigeria presents a critical case where rising youth experimentation meets weak policy oversight and limited scientific evidence. This review therefore seeks to critically synthesize existing literature on the prevalence, determinants, and public health implications of e-cigarette use in Nigeria, while highlighting research and policy gaps that can inform effective regulation, targeted prevention, and future interdisciplinary inquiry.

1.4 Search Strategy and Inclusion Criteria

A narrative literature review was conducted to synthesize available evidence on electronic cigarette use in Nigeria and comparable African contexts. Electronic databases including PubMed, Google Scholar, and ResearchGate were searched for peer-reviewed articles published between 2016 and 2025. Search terms included combinations of: "vaping," "electronic cigarettes," "electronic nicotine delivery systems," "Nigeria," "Africa," "adolescents," "public health," "policy," and "tobacco control."

Given the narrative design, no formal meta-analysis or quantitative synthesis was performed. Findings were thematically categorized into epidemiology, behavioral drivers, health impacts, environmental implications, policy frameworks, and research gaps.

Studies were included if they:

- Reported empirical data on vaping prevalence or determinants in Nigeria or Africa
- Examined health, behavioral, environmental, or policy implications
- Were published in English

Studies focusing exclusively on conventional tobacco without relevance to vaping were excluded unless directly applicable to regulatory context.

2. Prevalence, Patterns, and Drivers of Vaping in Nigeria

2.1 Epidemiology of Vaping in Nigeria

Although global data show a steady rise in vaping, Nigeria lacks comprehensive population-level statistics. The few available studies, reveal that awareness of e-cigarettes among university students in Lagos was as high as 92.5%, with 7.9% reporting ever-use and 3.9% current use. Most users were young males aged 18–25, and social media was the dominant source of exposure (Erinoso *et al.,* 2021).

On a continental scale, Adeloye et al. (2024) conducted a meta-analysis across 27 African countries and found that approximately 7.9% of respondents had ever used e-cigarettes, while 3.3% were current users. The findings suggest that Nigeria's prevalence aligns with wider African patterns, where vaping is largely concentrated among urban youths and driven by digital culture. Despite this, both studies underscore major research gaps national surveys are scarce, rural populations are underrepresented, and there is no continuous surveillance to track emerging trends (Salari *et al.,* 2024).

2.2 Sociocultural and Behavioral Drivers

The rapid spread of vaping among young Nigerians reflects a complex mix of sociocultural, behavioral, and structural influences rather than purely individual choice. Evidence from continental and national studies points to the role of peer dynamics, youth identity formation, social-media marketing, and widespread misperceptions about relative harm, all of which operate within an environment of weak advertising regulation.

2.2.1 Peer and Social Influence

Across African contexts, peer behavior remains the most powerful determinant of e-cigarette experimentation. In their meta-analysis, Adeloye et al. (2024) found that adolescents who had close friends who smoked or vaped were more than twice as likely to use e-cigarettes themselves. Peer endorsement provides both access to devices and social validation for trying them. Among Nigerian university students, vaping is frequently portrayed as a symbol of belonging to a modern, cosmopolitan peer group, blurring the line between social recreation and nicotine dependence.

These findings suggest that interventions targeting individual knowledge alone may be insufficient without addressing the group norms that sustain use.

2.2.2 Urban Youth Culture and Modern Identity

The association between vaping and urban youth culture mirrors earlier patterns observed with conventional tobacco marketing. reported that more than 95 % of Nigerian adolescents were exposed to tobacco advertising and sponsorships that portrayed smokers as stylish, confident, and socially successful (Odukoya *et al.,* 2023). Such imagery continues to influence perceptions of vaping, which is now integrated into nightlife, music, and fashion scenes in cities such as Lagos and Abuja. For many young Nigerians, vaping signifies modernity, independence, and participation in a global digital lifestyle. This symbolic dimension reinforces adoption even among non-smokers who view vaping primarily as an accessory of self-expression (Odukoya *et al.,* 2023)

2.2.3 Social-Media and Digital Marketing

Digital platforms play a pivotal role in shaping vaping behavior among Nigerian youth. Odukoya et al. (2023) identified online media as a dominant channel for tobacco and e-cigarette advertising, while Adeloye et al. (2024) confirmed that social media platforms, particularly Instagram, TikTok, and YouTube, serve as major hubs for vaping promotion across Africa. Algorithms amplify visually appealing content that integrates vaping into youth culture through influencer marketing, music videos, and celebrity endorsements. In Nigeria, where enforcement of digital advertising restrictions remains weak, e-cigarette brands operate with near-total freedom online. Their marketing strategies often target young audiences using gender-neutral imagery, bright colors, and aspirational messaging. The outcome is a digital ecosystem that glamorizes vaping, portraying it as fashionable, socially acceptable, and largely without consequences.

2.2.4 Perceptions and Misconceptions of Harm Reduction

Perceptions of reduced harm significantly influence e-cigarette adoption among Nigerian youth. Adeloye et al. (2024) reported that up to 60% of African respondents believe e-cigarettes are safer than conventional cigarettes or can help users quit

smoking. These misconceptions are reinforced by marketing claims and the absence of visible health warnings on imported products. In Nigeria, awareness of scientifically validated cessation methods remains low, allowing vaping to be viewed as a "cleaner" or "modern" alternative to smoking. Such beliefs are particularly influential among young people who would otherwise avoid tobacco. However, the absence of localized research on health effects perpetuates uncertainty and undermines public health messaging. Addressing these misconceptions through evidence-based education and clear labeling is essential to counteract misleading narratives about harm reduction.

2.2.5 Gender and Socioeconomic Patterns

Vaping behavior in Nigeria displays distinct gender and socioeconomic differences. Males are three to four times more likely than females to use e-cigarettes, a disparity that reflects social norms stigmatizing nicotine use among women. Most users belong to urban, middle-income groups with access to disposable income and digital platforms that promote vaping. These individuals often purchase imported or branded vaping products, highlighting both affordability and exposure as enabling factors. In contrast, rural and lower-income populations remain underrepresented in current research, suggesting that vaping remains an urban and elite-centered trend. However, with the increasing availability of low-cost devices and online sales, the behavior may gradually diffuse across broader socioeconomic groups, warranting continued surveillance and policy attention. (Adeloye *et al.,* 2024)

2.3 The Role of Tobacco Industry Marketing and Online Influence

Five years after the enactment of Nigeria's *National Tobacco Control Act* (NTCA, 2015), which prohibits tobacco advertising, promotion, and sponsorship (TAPS) to minors, widespread exposure remains a persistent problem. A cross-sectional survey of 968 in-school adolescents in Lagos (aged 13–17 years; 55% female), using an instrument adapted from the Global Youth Tobacco Survey (GYTS), revealed that 77% of respondents had been exposed to TAPS within the previous 30 days. The most frequent exposure channels included product placements in films and television (62%), social media and Internet marketing (23.9%), point-of-sale promotions

(15.2%), event sponsorships (12.6%), and branded giveaways (3%) (Odukoya *et al*., 2023).

Despite the statutory ban, pro-tobacco attitudes remain widespread—82.3% of respondents held favorable views toward tobacco, 33.1% had accepted TAPS-related items, and 17% had ever used tobacco, with 4% reporting current use. Among those who had never used tobacco, 14.8% indicated an intention to start within a year. Multivariate analysis identified pro-TAPS attitudes (AOR = 3.5, 95% CI = 2.3–5.3), female gender (AOR = 2.0, 95% CI = 1.4–2.7), and rural residence (AOR = 1.6, 95% CI = 1.2–2.3) as significant predictors of exposure, while urban government-school students were particularly vulnerable (Odukoya *et al*., 2023).

The authors concluded that NTCA enforcement remains weak, particularly in digital and entertainment media, which provide major loopholes for indirect marketing. Tobacco companies continue to exploit these spaces through celebrity endorsements, lifestyle branding, and online influencer campaigns. They recommend stronger, technology-inclusive enforcement mechanisms, gender-sensitive interventions, and school-based awareness programs to prevent youth initiation. Although focused on conventional tobacco, these findings have direct implications for vaping and other electronic nicotine delivery systems, which currently fall outside NTCA provisions. The same digital marketing dynamics and regulatory gaps are likely accelerating vaping uptake among Nigerian youth, emphasizing the urgent need to expand policy coverage and enforcement to include e-cigarettes (Odukoya *et al*., 2023).

Although the cited findings primarily relate to conventional tobacco products, similar marketing channels and regulatory gaps likely apply to electronic nicotine delivery systems, given overlapping industry strategies and digital advertising environments.

3. Health and Environmental Implications of Vaping

3.1 Physiological and Respiratory Health Risks

The use of electronic cigarettes poses significant physiological risks, particularly to the respiratory and cardiovascular systems. Although marketed as a safer alternative to traditional smoking, evidence demonstrates that vaping exposes users to harmful

substances including nicotine, ultrafine particles, heavy metals, and volatile organic compounds that penetrate deep into the lungs (Marques *et al*., 2021; Chand *et al*., 2020). These toxic aerosols induce oxidative stress, airway inflammation, and impaired ciliary function, predisposing users to bronchitis, asthma, and potentially chronic obstructive pulmonary disease (COPD). The emergence of e-cigarette or vaping-associated lung injury (EVALI) underscores the acute respiratory hazards linked to vaping (Chand *et al*., 2020).

Beyond pulmonary effects, vaping contributes to cardiovascular dysfunction. Nicotine-mediated activation of the sympathetic nervous system increases heart rate, blood pressure, and vascular resistance, heightening long-term risk for hypertension and ischemic heart disease. Chronic exposure may also alter brain chemistry, reinforcing dependence and tolerance. The combination of chemical toxicity and addictive potential makes vaping a dual threat to both systemic and neurovascular health (Marques *et al*., 2021).

Experimental studies in humans and animals further reveal that even short-term vaping disrupts lung mechanics, reduces alveolar elasticity, and triggers inflammatory responses. Aerosol constituents have been shown to cause DNA damage and compromise immune defense, increasing vulnerability to infections such as pneumonia. While longitudinal data remain limited, accumulating evidence supports vaping as a significant contributor to respiratory and cardiovascular morbidity, rather than a benign substitute for tobacco use (Chand *et al*., 2020).

3.2 Psychosocial and Behavioral Consequences

Vaping also carries profound psychosocial and behavioral implications, especially among adolescents and young adults. Peer pressure, curiosity, and targeted social-media advertising have been consistently identified as leading predictors of initiation (Lechner *et al*., 2021). Online platforms such as TikTok, Instagram, and YouTube glamorize vaping through influencer endorsements and stylized imagery, normalizing it as fashionable and risk-free (Erinoso *et al*., 2021). These portrayals blur the perception of harm, fueling experimentation that can rapidly escalate into habitual use and addiction.

Neurodevelopmental research indicates that nicotine exposure during adolescence alters brain pathways responsible for attention, learning, and impulse control (U.S. Department of Health and Human Services, 2016). Such alterations reinforce dependency and increase the likelihood of transition to conventional smoking, a phenomenon often termed the "gateway effect" (Lechner *et al*., 2021). Dual use of e-cigarettes and traditional tobacco is gradually increasing, compounding the associated health risks (Coleman *et al*., 2021).

Behaviorally, vaping often becomes embedded in coping mechanisms for stress, particularly in academic environments. The transient dopamine release from nicotine provides short-term relief but leads to withdrawal symptoms that sustain a cycle of craving and dependence. Over time, this contributes not only to addiction but also to deteriorating mental health, including heightened anxiety, depression, and academic underperformance (Erinoso *et al*., 2021). These findings demonstrate that vaping's impact extends beyond physiology, shaping social identity, emotional regulation, and cognitive well-being.

3.3 Environmental and Public Health Concerns

Beyond its direct health implications, vaping presents growing environmental and public health challenges. The rapid increase in disposable e-cigarettes worldwide has contributed to a new form of electronic waste. Vape devices typically contain non-biodegradable plastics, lithium-ion batteries, and residual nicotine, all of which pose environmental hazards when improperly discarded (Ogunwale *et al*., 2020). These materials can leach toxic heavy metals and chemicals into soil and water systems, endangering wildlife and contaminating ecosystems. During use, atomizers emit trace metals such as tin, nickel, and chromium, which are released into the air and can persist indoors, further degrading air quality (Williams *et al*., 2019).

Vaping also contributes to air pollution and second-hand exposure risks. Studies have shown that indoor environments where e-cigarettes are used contain high concentrations of particulate matter and volatile organic compounds (Williams *et al*., 2019). Unlike conventional cigarette smoke, e-cigarette aerosols linger in the air, exposing non-users to residual toxins. Furthermore, the manufacturing, packaging,

and global distribution of vaping products carry a measurable carbon footprint, linking the practice to broader environmental issues, including climate change (Ogunwale *et al*., 2020).

In Nigeria and other low- and middle-income countries, the poor disposal of used pods, cartridges, and batteries compounds existing waste management challenges. The growing popularity of flavored disposable vapes has intensified short-term waste production, while the absence of recycling systems allows large quantities of vaping waste to accumulate in landfills and waterways. Addressing these issues demands a coordinated response involving policy, industry, and public education. Implementing recycling initiatives, enforcing labelling and disposal regulations, and holding manufacturers accountable are essential steps toward mitigating long-term ecological harm. Situating vaping waste within broader sustainability and environmental health frameworks will ensure that its environmental footprint is not overlooked in tobacco control discourse (Ogunwale *et al*., 2020).

4. Policy, Regulation, and Enforcement in Nigeria

4.1 Current Tobacco Control Frameworks and Their Gaps

In Nigeria, tobacco regulation remains weak and inconsistently enforced despite the existence of the National Tobacco Control Act (NTCA) and the country's commitment to World Health Organization Framework Convention for Tobacco Control (WHO FCTC) provisions (Lawal *et al*, 2025). Tobacco products are still placed in the same regulatory category as food and beverages, which legitimizes the industry and dilutes control efforts (African Tobacco Control Alliance, 2021). This conflation allows the tobacco industry to operate through trade unions that also represent the food and beverage sector, obscuring the distinction between harmful and less harmful products. Moreover, the Ministry of Finance (MoF) reportedly engaged the tobacco industry (TI) during policy development, contravening FCTC that prohibits industry involvement in policymaking. Such participation reflects ongoing regulatory loopholes and weak institutional enforcement, leaving Nigeria's tobacco control policies vulnerable to TI interference (Akin-Onitolo & Hawkins, 2022).

Although the tobacco tax increase in 2016–2018 marked a partial step toward compliance, the implementation fell significantly short of WHO's recommendation that tobacco taxes should constitute 75% of the retail price Nigeria's increase reached only 9%. The policy's limited scope and weak enforcement underscore the government's prioritization of economic revenue over public health goals. As a result, the NTCA's impact has been constrained by fragmented advocacy, sub-optimal policy implementation, and insufficient monitoring. To strengthen Nigeria's tobacco control framework, there is a pressing need to ensure independent enforcement of FCTC principles, exclude industry participation in policy making, and establish clear, transparent mechanisms for sustained regulation of both traditional tobacco and emerging products like e-cigarettes (Akin-Onitolo & Hawkins, 2022).

4.2 Comparative Policy Insights from Other Countries

Several countries have taken distinct approaches to regulating e-cigarettes, offering useful lessons for Nigeria. In the United Kingdom, vaping has been incorporated into the national tobacco control framework as a harm reduction tool, supported by agencies such as Public Health England (PHE) and the Medicines and Healthcare Products Regulatory Agency (MHRA). The UK's approach emphasizes smoking cessation and risk reduction, positioning e-cigarettes as a less harmful alternative for adult smokers, though it continues to monitor youth use and product safety (Berridge *et al.,* 2024).

In contrast, Australia has adopted a strict regulatory stance, classifying nicotine-containing e-cigarettes as prescription-only medicines under the Therapeutic Goods Administration (TGA). This reflects a precautionary principle, aiming to prevent nicotine dependence among youth and avoid undermining progress in tobacco control (Berridge *et al.,* 2024). The United States presents a more fragmented model due to its federal system. While the Food and Drug Administration (FDA) regulates e-cigarettes as tobacco products, policy implementation varies by state. The U.S. debate has often centred on protecting adolescents and preventing the normalization of nicotine use, leading to bans on flavoured products and restrictions on marketing (Berridge *et al.,* 2024).

Policy lessons for Nigeria include the need for a clear regulatory framework that defines the legal status of e-cigarettes, ensures product safety standards, and balances harm reduction with youth protection. Adopting elements from the UK model such as evidence-based risk assessment and inclusion of vaping in cessation programs could support public health goals, while Australia's emphasis on strict access control offers a model for managing enforcement challenges (Berridge *et al.,* 2024).

4.3 Pathways for Evidence-Based Vaping Regulation in Nigeria

Developing an effective vaping regulatory framework in Nigeria requires a coordinated, evidence-based, and multi-stakeholder approach. Weke et al. (2025) highlights that the Nigerian regulatory landscape already involves agencies such as the Ministry of Health, Standards Organisation of Nigeria (SON), and National Agency for Food and Drug Administration and Control (NAFDAC), but their efforts remain fragmented. To strengthen enforcement, collaboration among public health authorities, universities, schools, and social media platforms is essential to integrate surveillance, research, and public education. This inclusivity, while valuable, must be carefully managed to prevent the dominance of economic or industry interests over health priorities (Weke *et al*, 2025).

Evidence generation through laboratory testing and independent research is also crucial. The SON's emphasis on reviewing existing literature and conducting in-country testing underscores the need for locally generated data to inform regulatory standards. Economic measures such as taxation and product labeling, already practiced in other jurisdictions, could provide dual benefits discouraging youth initiation and generating revenue for health programs, aligning with WHO's FCTC recommendations (Weke *et al*, 2025).

The study further warns against regulatory capture, noting that industry influence has previously weakened transparency mechanisms within Nigerian tobacco control efforts (Lawal *et al*, 2025; Weke *et al*, 2025). To prevent this, Nigeria must reinforce clear conflict-of-interest rules, strengthen NTCA enforcement, and ensure that all vaping regulations are transparent and publicly accountable. Ultimately, the pathway forward lies in harmonizing research, public awareness campaigns, and fiscal

measures under a single coordinated policy framework to safeguard youth and promote national health security (Weke *et al*, 2025).

5. Research Gaps, Future Directions, and Conclusion

5.1 Current Research Gaps in Nigeria

Despite the rising popularity of e-cigarettes among young Nigerians, research on vaping remains limited and fragmented. A recent scoping review found only a few empirical studies, reporting prevalence estimates ranging from 5.8% to 19.8% and current use varies depending on sample and region (Adegbile *et al*., 2024). Most of these studies are cross-sectional and geographically restricted, offering little insight into long-term health outcomes, patterns of use, or behavioral determinants. Weak national surveillance, inadequate monitoring of product composition, and limited regulatory compliance further compound these gaps. Notably, Nigeria lacks a national strategy or evidence-based intervention programs targeting e-cigarette use, underscoring an urgent need for coordinated public health planning (Adegbile *et al*., 2024).

Moreover, the contextual understanding of vaping behavior remains shallow. While peer influence, curiosity, and concurrent alcohol or tobacco use are identified predictors of vaping among students, broader socio-economic and psychological drivers have received limited attention (Okafor *et al*., 2022). The health consequences, marketing impacts, and dual use with conventional cigarettes are also underexplored. Compounding this is the *National Tobacco Control Act (2015)*, which does not explicitly cover e-cigarettes, leaving major policy and enforcement loopholes (Global State of Tobacco Harm Reduction, 2025). Addressing these deficiencies requires large-scale, interdisciplinary research that integrates epidemiology, toxicology, behavioral science, and policy analysis to inform locally relevant regulation and prevention efforts.

5.2 Priorities for Public Health Action and Education

Bridging these knowledge and policy gaps demands three interconnected priorities, comprehensive data collection, public education, and regulatory reform. Establishing

a nationwide surveillance system under the *Federal Ministry of Health* would enable regular monitoring of vaping prevalence, user demographics, and product characteristics. Simultaneously, targeted education campaigns for adolescents, parents, and educators are vital to dispel misconceptions that vaping is a harmless or fashionable alternative to smoking. Evidence shows that many young Nigerians underestimate the risks of vaping; therefore, integrating preventive education into school curricula, enforcing digital advertising controls, and disseminating culturally tailored messages through social media and mass media are crucial steps (Ogwa *et al*., 2023).

Policy reform must also be prioritized. Civil society organizations such as Corporate Accountability and Public Participation Africa (CAPPA) have called for restricting vape advertising, banning underage sales, and applying tobacco-equivalent laws to e-cigarettes, including regulations on importation, labeling, and disposal. Recent reports of surging flavored vape sales among teenagers highlight weak enforcement. Strengthening border control, retailer licensing, and product monitoring would align Nigeria's response with WHO recommendations to protect youth from nicotine exposure and misleading marketing (World Health Organization, 2024).

Finally, sustained collaboration among universities, government agencies, and non-governmental organizations can enhance research capacity, promote context-sensitive health messaging, and coordinate a unified national response. Such multi-sectoral engagement would not only strengthen evidence generation but also embed vaping control within broader public health and youth protection agendas.

5.3 Conclusion

This review is narrative in design and therefore subject to selection bias and heterogeneity in included studies. Most available Nigerian evidence is cross-sectional and urban-centered, limiting national generalizability. Furthermore, the absence of longitudinal and toxicological studies restricts causal inference regarding long-term health outcomes. These limitations underscore the need for nationally representative surveillance and primary research.

5.4 Conclusion

Strengthening surveillance systems through integration of vaping indicators into national health surveys, explicitly amending the National Tobacco Control Act (2015) to include electronic nicotine delivery systems, enforcing digital advertising restrictions, and establishing product labeling and disposal standards are immediate policy priorities. Early, evidence-based intervention can prevent escalation into a broader nicotine dependence epidemic among Nigerian youth.

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