Ethical Dimensions of Pharmaceutical Advertising in Nigeria: Media Practices, Regulatory Oversight, and Implications for Public Health Policy

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ABSTRACT

Introduction: Pharmaceutical advertising plays a critical role in shaping medicine use, prescribing behaviour, and public perceptions of health. While ethical promotion can support informed decision-making and rational medicine use, inappropriate or misleading advertising poses significant risks to patient safety and public health, particularly in low- and middle-income countries (LMICs). This narrative review examines the ethical dimensions, media practices, and regulatory oversight of pharmaceutical advertising in Nigeria, with a focus on implications for public health and policy.

Methods: A comprehensive review of peer-reviewed literature, regulatory instruments, policy documents, and grey literature were conducted to synthesise evidence on ethical standards governing pharmaceutical promotion, dominant advertising strategies across traditional and digital media, and the effectiveness of existing regulatory frameworks. International ethical benchmarks, including World Health Organization and International Pharmaceutical Federation guidance, were used to assess Nigerian practices within a global context.

Key Findings/Discussion: The review finds persistent ethical challenges in pharmaceutical advertising in Nigeria, including exaggerated therapeutic claims, inadequate risk disclosure, exploitation of consumer vulnerability, and increasing use of digital and influencer-driven marketing with limited regulatory oversight. Although Nigeria has a multi-agency regulatory architecture involving NAFDAC, the Advertising Regulatory Council of Nigeria, and the Pharmacy Council of Nigeria, institutional overlaps, enforcement gaps, and limited capacity, particularly in digital media monitoring undermine effective governance. These challenges contribute to irrational medicine use, self-medication, antimicrobial misuse, and erosion of public trust.

Conclusion: The review highlights the need for stronger inter-agency coordination, clearer regulatory mandates, enhanced digital surveillance mechanisms, professional training, and public media literacy.

Strengthening ethical pharmaceutical advertising is essential to safeguarding public health, promoting rational medicine use, and advancing medicines governance in Nigeria and comparable LMIC settings.

Keywords: Pharmaceutical advertising, Drug promotion ethics, Medicines regulation, Public health policy, Media and health communication, Nigeria, Low- and middle-income countries (LMICs)

INTRODUCTION

The pharmaceutical industry occupies a central position within modern health systems through the research, development, manufacture, distribution, and promotion of medicines essential for disease prevention and treatment. Alongside these core functions, pharmaceutical advertising and promotion is at the centre of the

industry's operations, shaping medicine demand, influencing medication prescribing and dispensing behaviours, and also creating awareness for decision-making across diverse contexts (Fadare et al., 2018; Fulone et al., 2023). While advertising can play a legitimate role in improving awareness of therapeutic options, it also raises significant ethical and public health concerns when promotional practices prioritise commercial interests over patient safety, rational medicine use, and transparency (Ventola, 2011; Bélisle-Pipon, 2022).

Globally, pharmaceutical advertising is recognised as one of the most stringently regulated forms of commercial communication, reflecting the unique status of medicines as products capable of delivering both therapeutic benefit and serious harm. Unlike ordinary consumer goods, medicines require accurate, balanced, and evidence-based information on indications, dosage, contraindications, interactions, and adverse effects to ensure safe and effective use. Ethical pharmaceutical advertising therefore demands a careful balance between commercial promotion and responsibility to protect public health (World Health Organization [WHO], 1988; Smith, 2012). International bodies such as the WHO, the International Federation of Pharmaceutical Manufacturers and Associations (IFPMA), and the International Pharmaceutical Federation (FIP) consistently emphasise that drug promotion must be truthful, non-misleading, scientifically substantiated, and supportive of rational medicine use (WHO, 1988; IFPMA, 2019; FIP, 2020).

Despite these global standards, unethical and misleading pharmaceutical advertising remains a persistent challenge coupled with financial constraints,poor supply chain,shortage in infrastructure and human resources,and availability discrepancies(Yenet,2023) particularly in low- and middle-income countries (LMICs), where regulatory capacity is often constrained and health systems are under-resourced (Siddiq et al., 2021; Mintzes et al., 2020). Evidence show that pharmaceutical promotion can exert substantial influence on prescribing behaviour, medicine choice, and patient expectations, especially where independent drug information is limited (Spurling et al., 2010; DeFrank et al., 2020). In such contexts, advertising may disproportionately shape medicine-use behaviours among both healthcare professionals and the general public, increasing the risks of irrational prescribing, inappropriate self-medication, polypharmacy, and avoidable medicine-related harm.

Nigeria exemplifies many of these challenges. As one of the largest pharmaceutical markets in sub-Saharan Africa, Nigeria's pharmaceutical sector is driven by rapid population growth, a high burden of communicable and non-communicable diseases, and increasing demand for medicines (Ajilore et al., 2019). The industry comprises multinational corporations alongside a growing indigenous manufacturing base, supported by extensive wholesale and retail distribution networks. However, Nigeria's health system remains characterised by high out-of-pocket expenditure, limited health insurance coverage, uneven access to qualified healthcare professionals, and widespread reliance on self-care and over-the-counter medicines (Auta et al., 2018; Fadare et al., 2018). These structural features amplify the influence of pharmaceutical advertising on public perceptions of medicines, illness, and treatment.

Pharmaceutical advertising in Nigeria operates across multiple media platforms, including print, radio, television, outdoor advertising, and increasingly, digital and social media channels. Traditional broadcast media particularly radio retain strong influence due to their wide reach across urban and rural populations, while digital platforms such as Facebook, Instagram, X (formerly Twitter), and WhatsApp have become important channels for direct-to-consumer engagement (Erhun & Erhun, 2003; Mühlhoff & Willem, 2023). Although these platforms expand communication reach, they also introduce new ethical risks, including exaggerated therapeutic claims, selective presentation of benefits, inadequate disclosure of risks, and algorithm-driven targeting of vulnerable populations (Mintzes, 2006; Lupton, 2022).

Empirical evidence from Nigeria and other LMICs indicates that pharmaceutical advertisements frequently emphasise product efficacy, brand strength, and affordability while downplaying potential adverse effects, contraindications, and limitations of use (Adibe et al., 2015). This imbalance between benefits and risks may mislead consumers and healthcare professionals alike, contributing to inappropriate self-medication, delayed care-seeking, antimicrobial misuse, and erosion of trust in health systems (Momodu et al., 2018; Boltena et al., 2024). These consequences are particularly concerning in settings where medicines are easily accessible without prescription and regulatory enforcement is uneven.

In response, Nigeria has developed a complex regulatory architecture governing pharmaceutical advertising and promotion. Oversight responsibilities are distributed across multiple institutions, including the National Agency

for Food and Drug Administration and Control (NAFDAC), the Advertising Regulatory Council of Nigeria (ARCON), the Pharmacy Council of Nigeria (PCN), and the Federal Competition and Consumer Protection Commission (FCCPC). NAFDAC regulates the registration, manufacture, distribution, and advertisement of medicines, while ARCON holds statutory authority over advertising and marketing communications across all media following its redesignation under the Advertising Regulatory Council of Nigeria Act, 2022 (Federal Republic of Nigeria, 2022a). PCN regulates pharmacy practice and professional conduct, and consumer protection legislation addresses unfair and misleading market practices (Federal Republic of Nigeria, 2022b).

Although this multi-agency framework aims to ensure comprehensive oversight, it has also created institutional overlaps, regulatory ambiguities, and enforcement challenges. Weak inter-agency coordination, limited post-market surveillance of advertising content, and inconsistent enforcement across traditional and digital media platforms have been documented (Ogundele & Fadare, 2020; Ahaiwe, 2019). The rapid expansion of digital advertising ecosystems has further strained regulatory capacity, as online content evolves quickly, crosses jurisdictional boundaries, and resists conventional monitoring tools (Müller & Fugh-Berman, 2021; Ventola, 2014).

Despite its importance, scholarship on pharmaceutical advertising in Nigeria remains fragmented. Existing studies often focus on discrete issues such as the informational quality of promotional materials, public perceptions of direct-to-consumer advertising, or the influence of promotion on prescribing behaviour (Adibe et al., 2015; Ajilore et al., 2019). There remains a relative paucity of integrative narrative reviews that synthesise ethical principles, media practices, regulatory frameworks, and public health implications within a single analytical lens, particularly in light of recent regulatory reforms and the growing dominance of digital advertising platforms.

This narrative review aims to synthesise existing evidence on pharmaceutical advertising practices and regulatory oversight in Nigeria, with a specific focus on ethical standards and public health implications. Drawing on peer-reviewed literature, international ethical frameworks, and Nigerian regulatory instruments, the review examines how medicines are promoted across media platforms, how ethical norms are articulated and applied, and how regulatory institutions function in practice. Figure 1 presents a conceptual framework illustrating the interactions between pharmaceutical advertising practices, ethical standards, regulatory oversight, and public health outcomes in the Nigerian context, providing a foundation for the thematic analysis that follows.
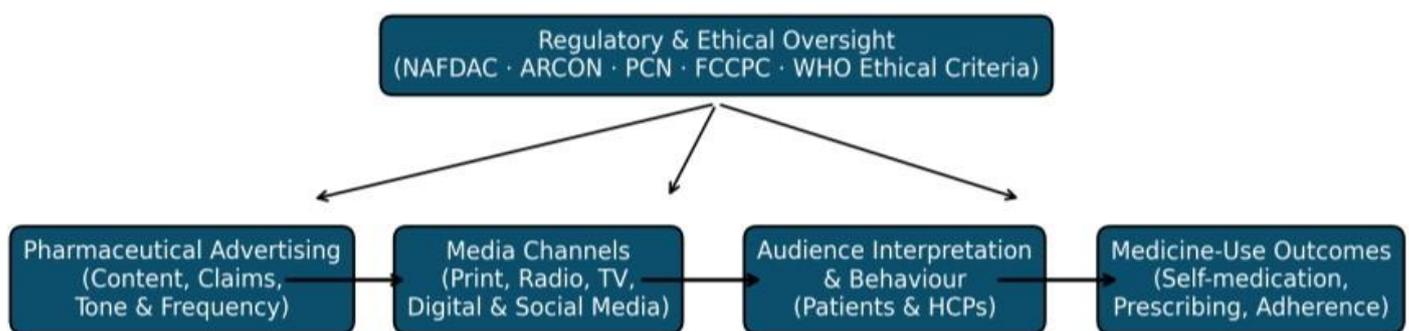

Figure 1. Conceptual framework linking pharmaceutical advertising practices, ethical standards, regulatory oversight, and public health outcomes in Nigeria.

METHODS

Study Design

This study employed a narrative review design to critically examine ethical issues, media practices, and regulatory oversight of pharmaceutical advertising in Nigeria, with implications for public health and policy. A narrative approach was selected because the research objectives required conceptual synthesis, contextual interpretation, and policy analysis, rather than statistical aggregation of effect sizes. Narrative reviews are

particularly appropriate for complex, interdisciplinary topics that span ethics, regulation, public health, media studies, and pharmaceutical policy, and where evidence is drawn from heterogeneous sources, including empirical studies, legal instruments, policy documents, and grey literature (Greenhalgh et al., 2018).

Search Strategy

A comprehensive and iterative literature search was conducted between June and September,2025 across multiple electronic databases, including PubMed, Scopus, Web of Science, Google Scholar, and African Journals Online (AJOL). Search terms were developed to capture the breadth of pharmaceutical advertising and regulatory ethics, and included combinations of the following keywords: pharmaceutical advertising, drug promotion, ethical marketing, medicine promotion, regulation, media, public health, Nigeria, low- and middleincome countries, self-medication, direct-to-consumer advertising, and digital health marketing. Boolean operators (AND/OR) were used to refine searches, and reference lists of included articles were manually screened to identify additional relevant sources.

Eligibility Criteria

Sources were included if they met the following criteria:(i)Addressed pharmaceutical advertising,(ii) promotion, or marketing practices;(iii) examined ethical,(iv) regulatory, or public health dimensions of medicine promotion;(v) focused on Nigeria, sub-Saharan Africa, or provided relevant comparative insights from LMICs;(vi) were published in peer-reviewed journals, authoritative policy reports, or official regulatory documents;(vii) published in English between 1990 and 2025, with emphasis on recent literature (2015–2025).

Exclusion criteria included: (i) Opinion pieces without analytical content;(ii) Studies unrelated to medicines or health products; and marketing communication (iii)Promotional or industry-sponsored materials lacking methodological transparency.

Data Sources and Document Types

In addition to peer-reviewed literature, regulatory and policy documents were systematically reviewed. These included: World Health Organization (WHO) ethical and medicines-use guidelines; International Pharmaceutical Federation (FIP) policy statements; International Federation of Pharmaceutical Manufacturers and Associations (IFPMA) codes; Nigerian legal and regulatory instruments, including the NAFDAC Act,

ARCON Act (2022), and PCN Act (2022); Reports from OECD and other international policy bodies. Grey literature was included where it provided authoritative insight into regulatory practice, policy evolution, or ethical standards, particularly in contexts where peer-reviewed evidence was limited.

Data Extraction and Synthesis

Data extraction focused on: ethical principles governing pharmaceutical advertising; media platforms and promotional strategies; regulatory frameworks and institutional roles; documented ethical breaches and public health consequences; policy gaps and reform recommendations. An inductive thematic synthesis approach was employed. Extracted data were iteratively coded and organised into thematic domains aligned with the review objectives: ethical standards, media practices, regulatory oversight, public health implications, and policy responses. Thematic development was informed by established approaches to qualitative synthesis and narrative integration (Braun & Clarke, 2006).

Analytical Framework

The analysis was guided by internationally recognised ethical frameworks, particularly the WHO Ethical Criteria for Medicinal Drug Promotion and FIP ethical guidance, alongside Nigerian regulatory statutes. These frameworks provided normative benchmarks against which advertising practices and regulatory performance were evaluated. Comparative insights from other LMICs were incorporated to contextualise Nigeria's experience within broader global trends in pharmaceutical marketing and regulation.

Quality and Rigor Considerations

Although narrative reviews do not employ formal risk-of-bias tools, methodological rigor was enhanced through: transparent documentation of search strategies and inclusion criteria; triangulation across empirical studies, policy documents, and regulatory texts; prioritisation of peer-reviewed and authoritative sources; reflexive consideration of contextual and regulatory differences across settings. Reporting was informed by elements of the PRISMA-ScR and best-practice guidance for narrative reviews, adapted appropriately for the study design (Tricco et al., 2018; Greenhalgh et al., 2018).

Ethical Considerations

This study involved the synthesis of publicly available literature and policy documents and did not involve human participants or primary data collection. As such, formal ethical approval was not required. Nonetheless, ethical scholarship standards were observed, including accurate citation, balanced interpretation of findings, and avoidance of misrepresentation.

Ethical Principles in Pharmaceutical Advertising

Ethical principles in pharmaceutical advertising are grounded in the recognition that medicines are not ordinary consumer products, but health interventions whose use carries inherent risks and significant societal consequences. Unlike conventional commercial advertising, pharmaceutical promotion directly influences clinical decision-making, patient behaviour, and population health outcomes. Consequently, ethical standards governing drug promotion impose obligations that extend beyond profit maximisation to include patient safety, professional integrity, and the protection of public trust (World Health Organization [WHO], 1988; BélislePipon, 2022).

At the global level, the most widely cited ethical framework for pharmaceutical promotion remains the WHO's *Ethical Criteria for Medicinal Drug Promotion*. This framework establishes that promotional materials must be accurate, balanced, evidence-based, and non-misleading, and must include essential information on indications, dosage, contraindications, precautions, and adverse effects (WHO, 1988). Importantly, the WHO criteria emphasise that promotional claims should be supported by verifiable scientific evidence and presented in a manner that does not exploit fear, vulnerability, or gaps in medical knowledge among consumers.

Complementing the WHO framework, professional and industry bodies have articulated additional ethical standards. The International Federation of Pharmaceutical Manufacturers and Associations (IFPMA) Code of Practice outlines expectations for ethical conduct in pharmaceutical marketing, including transparency, scientific integrity, and responsible engagement with healthcare professionals and the public (IFPMA, 2019). Similarly, the International Pharmaceutical Federation (FIP) underscores that ethical promotion should support rational medicine use, respect professional autonomy, and avoid practices that could compromise patient welfare or public confidence in medicines and pharmacy practice (FIP, 2020). Together, these frameworks provide a shared normative foundation while allowing for contextual adaptation at national and regional levels.

Across these international instruments, several core ethical principles recur consistently. Truthfulness and accuracy represent the most fundamental obligations. Pharmaceutical advertisements must present claims that are factually correct, scientifically substantiated, and consistent with approved product information. The selective presentation of benefits without adequate disclosure of risks, or the exaggeration of therapeutic effects, violates this principle and undermines informed decision-making (Ventola, 2011; Mintzes et al., 2020). Empirical evidence demonstrates that promotional materials frequently emphasise efficacy while minimising adverse effects, thereby distorting risk–benefit perceptions among both healthcare professionals and consumers (Spurling et al., 2010; Adibe et al., 2015).

Closely related is the principle of non-deceptiveness, which extends beyond factual accuracy to encompass the overall impression created by advertising content. Even when individual statements are technically correct, the use of emotive imagery, testimonials, or persuasive narratives may mislead audiences by implying outcomes not supported by clinical evidence. In LMIC settings, where health literacy may be uneven and regulatory oversight limited, such practices pose heightened ethical concerns (Siddiq et al., 2021). Ethical pharmaceutical advertising therefore requires careful attention not only to content, but also to framing and presentation.

Evidence-based communication constitutes another core ethical requirement. Promotional claims should be grounded in high-quality clinical evidence and aligned with recognised treatment guidelines. The WHO and FIP stress that references to scientific studies must be accurate, current, and accessible, and that unpublished or methodologically weak evidence should not be used to justify promotional claims (WHO, 1988; FIP, 2020). Failure to adhere to this principle risks normalising inappropriate medicine use and may contribute to broader public health challenges, including antimicrobial resistance and irrational polypharmacy.

Ethical pharmaceutical advertising is further guided by the principle of social responsibility, which acknowledges the broader societal implications of medicine promotion. Advertisers are expected to consider how promotional practices affect vulnerable populations, including children, older adults, individuals with chronic illnesses, and those with limited access to qualified healthcare providers. The exploitation of fear, hope, or cultural beliefs for commercial gain is widely regarded as unethical, particularly when it encourages selfmedication or delays appropriate care-seeking (Erhun & Erhun, 2003; Momodu et al., 2018). In this regard, ethical advertising aligns closely with public health objectives rather than narrow commercial interests.

Professional integrity and autonomy represent additional ethical considerations, particularly in relation to advertising directed at healthcare professionals. Promotional activities should support, rather than undermine, independent clinical judgement. Evidence indicates that exposure to pharmaceutical promotion can influence prescribing behaviour in ways that are not always consistent with best evidence or cost-effectiveness considerations (Fadare et al., 2018; Spurling et al., 2010). Ethical frameworks therefore caution against inducements, gifts, or persuasive tactics that may create conflicts of interest or compromise professional decision-making.

While these ethical principles are widely endorsed at the international level, their practical implementation varies considerably across regulatory environments. In many LMICs, ethical standards coexist with limited enforcement capacity, fragmented oversight, and weak monitoring of advertising practices, creating gaps between formal norms and actual conduct (Mintzes et al., 2020; Müller & Fugh-Berman, 2021). Nigeria illustrates this tension clearly. Although global ethical principles are recognised within national regulatory discourse, their translation into enforceable standards across diverse and rapidly evolving media platforms remains inconsistent.

Ethical pharmaceutical advertising should therefore be understood not solely as a regulatory obligation, but as a shared responsibility among regulators, industry actors, healthcare professionals, and media organisations. While self-regulatory mechanisms, such as industry codes of conduct, may play a supportive role, evidence suggests that self-regulation alone is insufficient to prevent unethical practices in competitive pharmaceutical markets (Rodwin, 2018). Effective ethical governance requires the integration of clear ethical standards, robust regulatory oversight, professional accountability, and informed public engagement.

In the Nigerian context, these ethical principles provide a critical analytical lens for evaluating contemporary pharmaceutical advertising practices. They offer benchmarks against which promotional content can be assessed and illuminate the ethical dimensions of regulatory gaps, media strategies, and public health consequences. By grounding the analysis in established ethical frameworks, this review situates Nigerian pharmaceutical advertising within a broader global discourse on medicines ethics, while recognising the specific structural and contextual challenges that shape ethical compliance in LMIC settings. This ethical foundation informs the examination of media practices and advertising strategies discussed in the following section,

Media Practices and Advertising Strategies in Nigeria

Pharmaceutical advertising practices in Nigeria reflect the country's plural and rapidly evolving media environment, characterised by the coexistence of traditional broadcast platforms and expanding digital communication channels. This diversity enables pharmaceutical companies, distributors, and informal marketers to reach wide and heterogeneous audiences, but it also introduces ethical and regulatory challenges related to message consistency, audience targeting, and effective oversight (Ajilore et al., 2019; Mühlhoff & Willem, 2023). An examination of media practices is therefore essential for understanding how advertising strategies shape medicine-use behaviours and public health outcomes in Nigeria.

Traditional Media: Print, Radio, and Television

Print media which include newspapers, magazines, posters, and promotional leaflets—has historically played a prominent role in pharmaceutical advertising in Nigeria. Advertisements in print media often target both healthcare professionals and the general public, emphasising brand identity, therapeutic claims, and affordability. However, empirical assessments of print advertisements consistently reveal deficiencies in informational quality, particularly the inadequate disclosure of contraindications, adverse effects, and precautions (Adibe et al., 2015; Oshikoya et al., 2009). These omissions raise ethical concerns about informed decision-making and align poorly with international standards for balanced pharmaceutical promotion.

Radio remains one of the most influential advertising platforms in Nigeria due to its affordability, linguistic adaptability, and extensive reach across urban, peri-urban, and rural populations. Pharmaceutical advertisements on radio frequently employ persuasive language, testimonials, and culturally resonant narratives to promote over-the-counter medicines, herbal products, and supplements. While radio advertising may increase awareness of treatment options, it also poses ethical risks when promotional messages are broadcast in local languages without adequate regulatory scrutiny. In such cases, exaggerated claims and implied guarantees of cure may encourage inappropriate self-medication and delay professional care-seeking (Erhun & Erhun, 2003).

Television advertising combines visual imagery with narrative storytelling, making it a particularly powerful medium for influencing consumer perceptions. In Nigeria, television advertisements commonly depict rapid symptom relief, restored productivity, and improved quality of life following product use. Although such portrayals enhance persuasive appeal, they may obscure important clinical information, including dosing limitations and potential adverse effects. Studies suggest that television advertisements often prioritise emotional resonance over balanced risk–benefit communication, thereby increasing the likelihood of consumer misinterpretation (Momodu et al., 2018).

Outdoor Advertising and Point-of-Sale Promotion

Outdoor advertising which include billboards, banners, vehicle branding, and shop signage is widespread across Nigerian cities, highways, and commercial centres. Pharmaceutical products, particularly analgesics, vitamins, and herbal remedies, are frequently promoted through visually striking displays that emphasise strength, speed, and effectiveness. These advertisements typically provide minimal textual information, relying on slogans and imagery to convey their message. From an ethical standpoint, the lack of contextual or safetyrelated information limits consumers' ability to make informed choices and may contribute to inappropriate medicine use.

Point-of-sale promotion within community pharmacies and patent medicine vendor outlets further reinforces messages encountered through mass media. Promotional posters, branded shelves, and verbal recommendations by sales personnel may influence purchasing decisions, especially in settings where consumers rely heavily on informal advice (Auta et al., 2018). While point-of-sale promotion can support access to medicines, ethical concerns arise when commercial incentives overshadow professional guidance or evidence-based counselling.

Digital and Social Media Advertising

Digital and social media platforms have increasingly reshaped pharmaceutical advertising practices in Nigeria. Platforms such as Facebook, Instagram, YouTube, WhatsApp, and X (formerly Twitter) enable direct-toconsumer engagement through targeted advertisements, sponsored content, and influencer partnerships. These platforms facilitate rapid dissemination of promotional messages and often operate beyond the reach of traditional regulatory review processes (Müllhoff & Willem, 2023; Müller & Fugh-Berman, 2021).

Social media advertising presents distinct ethical challenges due to its personalised, interactive, and algorithmdriven nature. Targeted advertising allows messages to be tailored based on users' demographics, interests, and online behaviour, potentially increasing exposure among vulnerable populations. Influencers and content creators some lacking formal healthcare qualifications frequently promote pharmaceutical products and supplements using testimonials and lifestyle narratives. While such strategies enhance engagement and perceived authenticity, they may blur the boundary between advertising and personal opinion, increasing the risk of misinformation (Lupton, 2022).

The informal and decentralised nature of digital communication further complicates regulatory oversight. Promotional content shared via private messaging platforms, such as WhatsApp, is particularly difficult to monitor, enabling misleading advertisements to circulate widely with limited accountability. The speed and scale of digital dissemination thus amplify the ethical stakes of pharmaceutical advertising in contemporary Nigeria.

Advertising Themes and Persuasive Strategies

Across media platforms, several recurring themes characterise pharmaceutical advertising in Nigeria. Advertisements commonly frame medicines as quick and effective solutions to complex health problems, employ "miracle cure" narratives, and associate product use with productivity, vitality, and social functioning. Affordability and accessibility are frequently highlighted, reflecting prevailing economic constraints faced by many consumers. Although these themes resonate with audiences, they may oversimplify health conditions and understate the importance of professional diagnosis and treatment.

Emotional appeal is a prominent persuasive strategy, with advertisements often evoking fear of illness, hope for recovery, or social pressure to remain functional. In contexts where health literacy is uneven, such appeals may exert disproportionate influence on consumer behaviour (Erhun & Erhun, 2003). Ethical concerns arise when emotional persuasion substitutes for evidence-based information or exploits cultural beliefs and anxieties.

Audience Vulnerability and Public Perception

The impact of pharmaceutical advertising is shaped by audience characteristics, including health literacy, socioeconomic status, and access to healthcare services. In Nigeria, high out-of-pocket healthcare expenditure and uneven distribution of qualified providers increase reliance on advertising as a source of health information (Auta et al., 2018). Empirical evidence indicates that members of the public frequently consult advertisements when making decisions about medicine use, particularly for common ailments (Momodu et al., 2018).

Vulnerable populations including older adults, individuals with chronic conditions, and caregivers of children may be especially susceptible to persuasive advertising. In such cases, misleading or incomplete information can result in inappropriate dosing, drug interactions, and delayed diagnosis of underlying conditions. These risks underscore the ethical imperative for accurate, balanced, and culturally sensitive advertising practices.

Table 1. Media Platforms, Advertising Practices, Ethical Concerns, and Public Health Implications in Nigeria

Media Platform	Common Advertising Practices	Typical Ethical Concerns	Public Health Implications
Radio	OTC drug promotion, jingles, testimonials	Exaggerated claims, lack of risk disclosure	Self-medication, misuse, delayed care
Television	Brand-focused visuals, emotional narratives	Benefit–risk imbalance, childtargeted imagery	Inappropriate medicine use
Print media	Product leaflets, magazine ads	Incomplete safety information	Misleading professional decisions
Outdoor advertising	Billboards, posters	Oversimplification, no warnings	Poor consumer understanding
Social media	Influencer marketing, sponsored posts	Hidden sponsorship, misinformation	Rapid spread of unsafe practices
Sales detailing	One-on-one promotion to HCPs	Conflict of interest	Irrational prescribing

Ethical Implications of Media Practices

Overall, media practices and advertising strategies in Nigeria reveal a complex interaction between commercial incentives, technological change, and regulatory capacity. While diverse media platforms enhance communication reach, they also create opportunities for ethical lapses and regulatory evasion. The convergence of traditional and digital media intensifies competition for consumer attention, potentially incentivising more aggressive promotional strategies.

From a public health perspective, these media practices highlight the need for regulatory frameworks that are adaptive to evolving communication technologies and sensitive to audience vulnerability. Without effective oversight, the persuasive power of media may undermine rational medicine use and exacerbate existing health system challenges. This analysis provides a foundation for examining Nigeria's regulatory framework and institutional roles governing pharmaceutical advertising, which is explored in the following section.

Regulatory Framework and Institutional Oversight of Pharmaceutical Advertising in Nigeria

Pharmaceutical advertising in Nigeria operates within a multi-institutional regulatory environment designed to safeguard public health while permitting legitimate commercial communication. This framework reflects the recognition that medicines are not ordinary consumer goods and that their promotion requires heightened ethical and regulatory scrutiny. However, as demonstrated in Section 3, the rapid diversification of advertising media particularly the rise of digital and social media platforms has exposed structural limitations within Nigeria's regulatory architecture, including institutional overlap, enforcement gaps, and challenges in adapting to new promotional practices.

Figure 2. Institutional overlaps in pharmaceutical advertising regulation in Nigeria

National Agency for Food and Drug Administration and Control (NAFDAC)

The National Agency for Food and Drug Administration and Control (NAFDAC) remains the primary statutory authority responsible for regulating medicines in Nigeria, including their advertisement and promotion. Under the NAFDAC Act and related subsidiary regulations, the agency is mandated to ensure that pharmaceutical advertisements are truthful, non-misleading, and consistent with the approved indications, dosage, and safety profile of registered products (Federal Republic of Nigeria, 2022a).NAFDAC's responsibilities in relation to pharmaceutical advertising include: pre-approval of advertisements for medicines and related health products; verification of therapeutic claims and promotional content; post-market surveillance and enforcement against misleading or unregistered products. In traditional media contexts such as print, radio, and television, NAFDAC's pre-clearance mechanisms are relatively well established. Advertisements are expected to display registration numbers and comply with approved messaging formats. However, as highlighted in Section 3, NAFDAC's oversight capacity is increasingly strained by the scale, speed, and decentralised nature of digital advertising. Online promotions, influencer endorsements, and messaging via social media platforms often bypass formal approval processes, creating regulatory blind spots that enable the circulation of misleading claims (Ogundele & Fadare, 2020; Müller & Fugh-Berman, 2021). Resource constraints, limited digital monitoring infrastructure, and reliance on reactive enforcement further weaken NAFDAC's ability to systematically police pharmaceutical advertising across all platforms. Consequently, while NAFDAC remains central to medicines regulation, its effectiveness in the contemporary advertising ecosystem is uneven.

Advertising Regulatory Council of Nigeria (ARCON)

The redesignation of the Advertising Practitioners Council of Nigeria to the Advertising Regulatory Council of Nigeria (ARCON) through the ARCON Act of 2022 represents a significant shift in Nigeria's advertising governance landscape. ARCON replaced the former Advertising Practitioners Council of Nigeria (APCON) and was granted expanded authority over all advertising and marketing communications disseminated within Nigeria, irrespective of sector (ARCON Act,2022)

ARCON's statutory mandate includes: regulation and vetting of advertising content across all media; registration and oversight of advertising practitioners and agencies; enforcement of ethical advertising standards and codes. In principle, ARCON's broad remit positions it as a central coordinating institution capable of addressing many of the ethical challenges associated with contemporary pharmaceutical advertising, particularly in digital and social media spaces. However, in practice, jurisdictional overlap between ARCON and NAFDAC has introduced regulatory ambiguity. While ARCON focuses on advertising form, messaging, and professional conduct, NAFDAC retains authority over the scientific validity and safety of medicinal claims. This dual-layer approval structure can create delays, inconsistencies, and opportunities for regulatory arbitrage.

The absence of a clearly articulated inter-agency protocol defining leadership, sequencing of approvals, and enforcement responsibilities has limited the effectiveness of both institutions (Mühlhoff & Willem, 2023). As a result, non-compliant pharmaceutical advertisements may persist across media platforms despite the existence of robust statutory powers.

Pharmacy Council of Nigeria (PCN)

The Pharmacy Council of Nigeria (PCN), reconstituted under the Pharmacy Council of Nigeria (Establishment) Act of 2022, plays a complementary regulatory role through its oversight of pharmacy practice, premises, and professional conduct. Although PCN does not directly regulate advertising content, its mandate intersects with pharmaceutical promotion through: regulation of pharmacists and pharmacy premises; oversight of dispensing practices and medicine-related communication; enforcement of professional ethical standards, PCN's relevance to pharmaceutical advertising is particularly evident at the point-of-sale level, where promotional materials and verbal recommendations influence consumer behaviour (Auta et al., 2018). In settings where advertising messages are reinforced by sales personnel or healthcare workers, the ethical responsibility of professionals becomes a critical safeguard against misuse. However, limited integration between PCN's professional oversight and advertising regulation constrains its capacity to address promotional excesses that occur within retail environments.

Consumer Protection and Competition Regulation

The Federal Competition and Consumer Protection Commission (FCCPC) provides an additional layer of oversight by addressing unfair, deceptive, or misleading market practices. Although not specific to pharmaceuticals, consumer protection legislation empowers the FCCPC to intervene where advertising harms consumer welfare or violates fair competition principles. In practice, FCCPC's role in pharmaceutical advertising remains underdeveloped. Limited sector-specific expertise and weak coordination with health regulators reduce its effectiveness in addressing misleading medicine promotions. Nonetheless, consumer protection mechanisms represent an underutilised regulatory avenue for addressing unethical advertising practices, particularly in digital marketplaces.

Institutional Overlaps, Fragmentation, and Enforcement Challenges

Despite the presence of multiple regulatory bodies, Nigeria's pharmaceutical advertising governance is characterised by fragmentation rather than synergy. Overlapping mandates between NAFDAC and ARCON, limited coordination with PCN and FCCPC, and the absence of shared monitoring systems weaken enforcement outcomes. These challenges are amplified in digital environments, where advertising content is transient, decentralised, and often generated outside formal advertising agencies (Mühlhoff & Willem, 2023).

Enforcement remains largely reactive, relying on complaints, whistleblowing, or post hoc sanctions. Proactive monitoring, systematic audits, and transparent public reporting of violations are limited. As a result, regulatory

deterrence is weakened, and unethical advertising practices may be perceived as low-risk by market actors.

Alignment with Global Ethical Standards

Nigeria's regulatory framework aligns in principle with international ethical standards articulated by the World Health Organization, the International Federation of Pharmaceutical Manufacturers and Associations, and the International Pharmaceutical Federation. These standards emphasise accuracy, balance, transparency, and the promotion of rational medicine use (WHO, 1988; IFPMA, 2019; FIP, 2020).

However, alignment at the policy level has not consistently translated into effective implementation. The gap between normative standards and operational enforcement remains a defining feature of pharmaceutical advertising regulation in Nigeria. Bridging this gap requires not only stronger institutional coordination but also adaptive regulatory strategies capable of responding to evolving media practices.

Implications for Public Health Governance

The regulatory challenges outlined in this section have direct implications for public health. Weak oversight of pharmaceutical advertising contributes to misinformation, inappropriate self-medication, and erosion of public trust in health institutions. In a health system characterised by high out-of-pocket expenditure and uneven access to professional care, the ethical quality of advertising assumes heightened importance.

Addressing these challenges requires a shift from siloed regulation toward integrated governance, combining statutory enforcement, professional accountability, media ethics, and public education. The next section examines concrete ethical concerns and illustrative case examples that demonstrate how regulatory gaps manifest in real-world advertising practices.

Table 2. Regulatory Institutions Governing Pharmaceutical Advertising in Nigeria: Mandates, Scope, and Key Gaps

Regulatory Institution	Legal Basis	Primary Mandate Related to Pharmaceutical Advertising	Scope of Authority	Key Gaps and Challenges
National Agency for Food and Drug Administration and Control (NAFDAC)	NAFDAC Act, Cap N1 LFN 2004; subsidiary regulations	Approval of medicines registration; regulation of drug promotion and advertising claims	Product-based regulation: evaluates safety, efficacy, indications, and approves advertising claims for registered medicines	Limited post-market monitoring of advertisements; weak oversight of digital and social media promotion; enforcement capacity constraints
Advertising Regulatory Council of Nigeria (ARCON)	ARCON Act, 2022 (repealed APCON Act)	Regulation of advertising and marketing communications across all media platforms	Content-based regulation: controls form, presentation, placement, and ethical standards of advertisements	Overlap with NAFDAC on pharmaceutical content; ambiguity in jurisdiction over misleading health claims; limited technical health expertise
Pharmacy Council of Nigeria (PCN)	PCN (Establishment) Act, 2022	Regulation of pharmacy practice, premises, and professional conduct	Indirect regulation: oversight of pharmacists' professional behaviour and ethical obligations	No direct mandate over advertising content; limited integration with advertising oversight; weak enforcement of promotional conflict-ofinterest rules

Regulatory Institution	Legal Basis	Primary Mandate Related to Pharmaceutical Advertising	Scope of Authority	Key Gaps and Challenges
Federal Competition and Consumer Protection Commission (FCCPC)	FCCPC Act, 2019	Protection against unfair, deceptive, and misleading commercial practices	Consumer protection and market conduct across all sectors	Underutilised in pharmaceutical advertising enforcement; weak inter-agency collaboration with health regulators
Professional Bodies (e.g., PSN)	Professional codes and guidelines	Promotion of ethical standards among members	Normative influence through professional ethics and advocacy	Non-binding authority; limited enforcement power
Media Platforms (Broadcast & Digital)	Platform policies; broadcasting codes	Dissemination of advertising content	Gatekeeping role in content dissemination	Commercial incentives outweigh ethical screening; weak accountability for misleading pharmaceutical content

Ethical Concerns and Illustrative Case Examples in Pharmaceutical Advertising

The ethical challenges associated with pharmaceutical advertising in Nigeria become most visible when abstract regulatory gaps and media practices translate into concrete promotional behaviours. As discussed in Sections 3 and 4, the interaction between persuasive advertising strategies, uneven regulatory enforcement, and audience vulnerability creates conditions under which ethical standards may be compromised. This section synthesises recurring ethical concerns identified in the literature and illustrates how they manifest in real-world advertising practices, without attributing misconduct to specific firms as representative of the entire industry.

Misleading and Exaggerated Therapeutic Claims

One of the most persistent ethical concerns in pharmaceutical advertising in Nigeria is the tendency toward exaggerated therapeutic claims. Advertisements particularly for over-the-counter medicines, supplements, and herbal products often emphasise rapid or guaranteed symptom relief without adequate qualification. Empirical studies examining promotional materials have repeatedly documented incomplete presentation of clinical information, with benefits highlighted prominently while risks, contraindications, and limitations of use are minimised or omitted (Adibe et al., 2015; Oshikoya et al., 2009).

In broadcast and digital advertisements, phrases implying certainty of cure or superior efficacy are commonly used, even where such claims are not fully supported by regulatory approval or clinical evidence. From an ethical perspective, such practices undermine the principle of truthfulness and compromise informed decisionmaking. In settings where advertising serves as a primary source of medicine-related information, exaggerated claims may lead consumers to overestimate benefits and underestimate risks, thereby increasing the likelihood of inappropriate medicine use.

Inadequate Risk Disclosure and Benefit–Risk Imbalance

Closely related to exaggerated claims is the problem of benefit risk imbalance. Ethical pharmaceutical advertising requires balanced communication that allows consumers and healthcare professionals to weigh therapeutic benefits against potential harms. However, multiple Nigerian studies have shown that advertisements frequently fail to disclose adverse effects, drug interactions, or contraindications in a clear and accessible manner (Momodu et al., 2018; Fadare et al., 2018).

Television and radio advertisements often include brief disclaimers such as advising consumers to "consult a doctor if symptoms persist" without providing meaningful information about risks. In digital media, risk disclosures may be absent altogether or buried in small print or hyperlinks. This pattern mirrors global concerns about pharmaceutical promotion but is particularly consequential in Nigeria, where self-medication is common and access to professional counselling is uneven (Auta et al., 2018).

Exploitation of Emotional and Cultural Vulnerabilities

Pharmaceutical advertising in Nigeria frequently employs emotional appeals that resonate with prevailing social and economic realities. Advertisements often depict illness as a threat to productivity, family responsibility, or social functioning, positioning medicines as essential tools for maintaining normal life. While emotional framing is not inherently unethical, concerns arise when such appeals exploit fear, anxiety, or cultural beliefs in ways that distort clinical judgment.

Radio advertisements delivered in local languages may invoke culturally embedded understandings of illness and healing, sometimes blurring distinctions between biomedical treatment and traditional remedies. When combined with persuasive testimonials or endorsements, such messaging can exert disproportionate influence on audiences with limited health literacy (Erhun & Erhun, 2003). Ethical concerns are heightened when vulnerable populations such as caregivers of children, older adults, or individuals with chronic conditions are targeted with messages that emphasise urgency without sufficient informational balance.

Influencer Marketing and Blurred Advertising Boundaries

The rise of digital and social media advertising has introduced new ethical challenges, particularly through influencer marketing and user-generated content. Influencers and content creators may promote pharmaceutical products and supplements using personal narratives or lifestyle framing, often without clearly disclosing commercial relationships or regulatory approval status (Mühlhoff & Willem, 2023; Lupton, 2022).

This blurring of advertising and personal opinion complicates consumers' ability to identify promotional content and assess its credibility. In Nigeria, where regulatory oversight of digital media remains limited, influencer-led promotions may circulate widely without prior vetting by regulatory authorities. The ethical concern lies not only in the content of such promotions but also in their perceived authenticity, which may lend undue credibility to unverified claims.

Case Illustration: Over-the-Counter Medicines and Self-Medication

A recurring illustration in the Nigerian context involves the advertising of over-the-counter analgesics, antimalarials, cough preparations, and supplements. These products are commonly promoted through radio, television, and outdoor advertising as quick solutions for common ailments. While increased awareness may improve access, the ethical risk lies in encouraging unsupervised and repeated use without adequate guidance. Studies, indicate that exposure to pharmaceutical advertising significantly influences self-medication practices, particularly in urban settings (Erhun & Erhun, 2003; Momodu et al., 2018). Inappropriate dosing, prolonged use, and delayed medical consultation have been associated with reliance on advertised products, raising concerns about medicine safety and public health outcomes.

Regulatory Gaps and Ethical Accountability

The ethical concerns outlined above persist partly because of enforcement gaps identified in Table 3. Institutional overlaps, limited monitoring capacity, and challenges in regulating digital platforms reduce the likelihood that unethical advertisements will be detected and sanctioned promptly. In some cases, advertisements may technically comply with formal approval requirements while still falling short of ethical best practices.

This gap between legal compliance and ethical responsibility underscores the importance of moving beyond a narrow regulatory lens. Ethical pharmaceutical advertising requires not only adherence to statutory rules but also proactive commitment by industry actors, advertising professionals, and media platforms to uphold public health values.

Public Health Implications

The cumulative effect of misleading claims, inadequate risk disclosure, emotional persuasion, and weak enforcement has tangible public health implications. These include increased self-medication, inappropriate medicine use, delayed diagnosis of serious conditions, and erosion of trust in health information sources. In the context of antimicrobial resistance, chronic disease management, and paediatric medicine use, the stakes are particularly high (Boltena et al., 2024; WHO, 2017).

By illustrating how ethical concerns manifest in practice, this section highlights the urgent need for stronger alignment between media practices, regulatory oversight, and ethical standards. The following section synthesises these findings and proposes policy-relevant recommendations aimed at strengthening ethical pharmaceutical advertising and protecting public health in Nigeria.

Figure 3. Ethical compliance spectrum in pharmaceutical advertising

DISCUSSION AND POLICY RECOMMENDATIONS

Synthesis of Key Findings

This narrative review highlights that pharmaceutical advertising in Nigeria operates at the intersection of expanding media ecosystems, complex regulatory arrangements, and persistent public health vulnerabilities. While advertising plays a legitimate role in disseminating information about medicines, the evidence synthesised across themes in this review demonstrates that current practices frequently fall short of ethical ideals and public health expectations. Misleading therapeutic claims, inadequate risk disclosure, emotional persuasion, and blurred advertising boundaries especially in digital media remain recurrent features of pharmaceutical promotion in Nigeria.

Meanwhile, recent study scholarship has emphasized the need to clearly distinguish pharmaceutical marketing from health communication, particularly in contexts where weak regulation and low health literacy prevail. Chikordi (2024) argues that without firm ethical boundaries, marketing activities may easily blur into misinformation, reinforcing the urgency of stronger normative and regulatory frameworks in LMIC settings such as Nigeria. These concerns mirror recent Nigerian ethical analyses which argue that pharmaceutical marketing

practices often operate in a grey zone between persuasion and public health risk, particularly in weakly regulated environments (Chikodi, 2024; Ogundele & Fadare, 2020).

These findings are consistent with international literature showing that pharmaceutical advertising can exert significant influence on medicine use behaviours, often in ways that favour commercial objectives over rational use and patient safety (Mintzes et al., 2020; Spurling et al., 2010). However, the Nigerian context amplifies these risks due to high reliance on self-medication, uneven access to healthcare professionals, and limited availability of independent medicine information (Auta et al., 2018; Fadare et al., 2018). In such settings, advertising messages may substitute for professional guidance, increasing the public health consequences of unethical promotion.

Regulatory Fragmentation and Governance Gaps

A central contribution of this review is its analysis of Nigeria's fragmented regulatory landscape governing pharmaceutical advertising. Although NAFDAC, ARCON, PCN, and consumer protection institutions possess complementary mandates, the absence of effective coordination mechanisms undermines regulatory effectiveness. Overlapping jurisdictions, unclear leadership in enforcement, and limited information sharing reduce accountability and create opportunities for regulatory evasion, particularly in digital advertising environments.

Beyond formal regulatory provisions, ethical tensions persist in how pharmaceutical marketing is conceptualised and practiced in Nigeria. Recent scholarship highlights that the absence of strong enforcement and accountability mechanisms allows ethically questionable promotional strategies to persist, with implications for rational medicine use and patient safety (Chikodi, 2024; Mintzes et al., 2020)

These governance challenges mirror experiences in other LMICs, where regulatory frameworks have struggled to keep pace with rapidly evolving advertising practices and platform-based communication (Müller & FughBerman, 2021; Siddiq et al., 2021). The Nigerian case underscores the need for regulatory models that prioritise integration, adaptability, and proactive monitoring rather than siloed oversight.

Digital Advertising as a Critical Ethical Frontier

The expansion of digital and social media advertising represents a critical ethical frontier for pharmaceutical promotion. Influencer marketing, algorithmic targeting, and private messaging platforms have fundamentally altered how promotional messages are produced and consumed. While these tools increase reach and engagement, they also weaken traditional safeguards, making it difficult to distinguish advertising from personal opinion and to ensure compliance with ethical standards (Lupton, 2022; Mühlhoff & Willem, 2023).

In Nigeria, digital advertising exacerbates existing regulatory gaps by operating across jurisdictions and outside conventional approval processes. Without targeted regulatory responses, digital promotion risks becoming a dominant channel for misinformation, particularly among younger and highly connected populations.

Implications for Public Health and Medicines Governance

The ethical deficiencies identified in this review have direct implications for public health outcomes. Inappropriate self-medication, delayed diagnosis, polypharmacy, and medicine misuse are not merely individual behaviours but systemic outcomes shaped by information environments. Weak ethical standards in pharmaceutical advertising therefore undermine broader efforts to promote rational medicine use, antimicrobial stewardship, and patient safety.

From a governance perspective, ethical pharmaceutical advertising should be understood as a core component of medicines policy and health system strengthening. Effective regulation of promotion complements initiatives aimed at improving access, affordability, and quality of medicines. Neglecting advertising ethics risks eroding public trust in health institutions and weakening the legitimacy of regulatory authorities.

Policy Recommendations

Based on the synthesis of evidence, this review proposes the following policy-relevant recommendations:

Strengthen Inter-Agency Coordination

Formal coordination mechanisms should be established between NAFDAC, ARCON, PCN, and the FCCPC, including joint guidelines, shared monitoring platforms, and clear enforcement hierarchies. A unified approval and surveillance process would reduce duplication and improve regulatory clarity.

Develop Digital-Specific Advertising Regulations

Regulators should develop and enforce guidelines tailored to digital and social media advertising, including influencer disclosures, content approval requirements, and platform accountability. Partnerships with social media companies could support real-time monitoring and takedown of non-compliant content.

Standardise Risk Disclosure Requirements

Mandatory, standardised risk disclosure formats should be required across all media platforms, ensuring that benefit–risk balance is communicated clearly and consistently. Such standards should align with WHO ethical criteria and international best practices.

Enhance Professional Accountability

Professional bodies, particularly the PCN and relevant medical associations, should reinforce ethical obligations related to medicine promotion and counselling. Continuing professional development programmes should incorporate training on recognising and countering unethical advertising.

Invest in Public Health Literacy

Public education campaigns aimed at improving health and medicine literacy can reduce susceptibility to misleading advertising. Empowering consumers to critically evaluate promotional claims complements regulatory enforcement and promotes rational medicine use.

Promote Transparency and Public Reporting

Regulatory agencies should publish periodic reports on advertising violations and enforcement actions. Transparency enhances deterrence and builds public confidence in regulatory institutions.

Limitations

This narrative review had some limitations that should be acknowledged when its findings are interpreted. Firstly, as a narrative review, the study did not employ formal risk-of -bias assessment tools or quantitative synthesis methods. While this approach was intentionally chosen to allow for conceptual integration, policy analysis, and contextual interpretation, it may introduce a degree of subjectivity in study selection and in the thematic emphasis.

Secondly, the review relied primarily on published literature, regulatory documents, and grey literature available in the public domain. Taking this into account unpublished enforcement data, internal regulatory reports, and confidential industry practices especially those related to digital marketing strategies and compliance processes which may not be captured. This, may lead to underestimation of both the scale of unethical advertising practices and the extent of regulatory enforcement efforts.

Thirdly, although the review incorporated comparative evidence from other LMICs to contextualise Nigeria's experience, the transferability of findings across these settings is limited by differences in regulatory capacity, media ecosystems, and cultural norms. Hence, conclusions drawn for Nigeria may not be directly generalised to all the LMIC environments and caution is needed when making such assertions..

Fourthly, the rapidly evolving nature of digital and social media advertising presents some amount of limitation. Some regulatory frameworks and ethical guidelines discussed may lag behind current marketing practices, particularly those which involve influencer marketing, algorithmic targeting and cross-border digital promotion. As such, certain findings may require periodic updating as advertising technologies and regulatory responses continue to evolve.

Finally, the review did not use primary empirical data from key stakeholders such as regulators, healthcare professionals, advertisers, or consumers. Future research incorporating qualitative interviews, content analyses, or regulatory audits would provide deeper insights into the enforcement realities, feedback from the field, compliance behaviours, and the lived experience of pharmaceutical advertising exposure.

Notwithstanding these limitations, the review provides a comprehensive and policy relevant synthesis of ethical, regulatory, and public health issues in pharmaceutical advertising in Nigeria which also mirrors other African and LMIC settings. This offers a robust foundation for future empirical research and regulatory reforms.

Contribution to Scholarship and Policy Literature

By integrating media analysis, regulatory review, ethical assessment, and public health implications, this narrative review advances understanding of pharmaceutical advertising in Nigeria and comparable LMIC contexts. It highlights the need to move beyond fragmented regulation toward integrated, adaptive governance models capable of responding to contemporary advertising practices. The findings provide a foundation for future empirical research and inform policy debates on ethical promotion, consumer protection, and medicines governance.

Future Research Directions

Future research on pharmaceutical advertising in Nigeria and comparable LMIC settings should move beyond descriptive assessments to more empirical and data grounded policy responsive investigations. First, there is a need for systematic content analyses of pharmaceutical advertisements across traditional and digital media platforms to quantify the prevalence of ethical violations. risk-benefit imbalances, and compliance standards. Such studies would provide objective benchmarks to support regulatory enforcement, and enable longitudinal monitoring of trends and patterns over time.

Secondly, stakeholder focused qualitative research is required to captured the perspectives of regulators, healthcare professionals, advertising practitioners, and consumers. In-depth interviews and focus group discussions could show how critical ethical standards and are interpreted in practice, identify barriers to regulatory compliance, and explain how advertising manages influence medicine-related decision related decision-making particularly among vulnerable populations. These insights would complement policy analyses and inform more content-sensitive regulatory reforms.

Thirdly, given the rapid expansion of digital and influencer driven pharmaceutical marketing, future studies should prioritise digital advertising ecosystems including social media platforms, algorithm regulatory capacity for digital marketing target and cross-border promotional content. Research examining regulatory capacity for digital surveillance, the role of platforms is especially urgent as existing regulatory frame works often lag behind technological innovation.

Fourth, comparative research across LMICs would be useful in identifying best practices and transferable regulatory models. Cross-country analysis of advertising regulation, enforcement mechanisms and outcomes especially in countries with similar health systems constraints-could inform regional harmonisation efforts and strengthen global governance of pharmaceutical promotion.

Finally, future work should explore the public health impact of regulatory interventions including preclearance requirements, sanctions, professional training and media literacy initiatives. Evaluating the effectiveness of such interventions in improving advertising quality, reducing inappropriate medicines use, and enhancing public trust would practice critical evidence to guide policy implementation and resources allocation.

Putting it together, these research directions highlight the need for interdisciplinary, methodologically diverse, and policy oriented scholarship to enhance ethical pharmaceutical advertising and protect public health in Nigeria and other LMICs.

Table 3. Mapping Ethical Challenges in Pharmaceutical Advertising to Public Health Outcomes and Regulatory Responses in Nigeria

Ethical Challenge	Description / Manifestation	Public Health Consequences	Policy and Regulatory Recommendations
Benefit–risk imbalance in advertising	Emphasis on therapeutic benefits with minimal or absent disclosure of risks, side effects, and contraindications across media platforms	Misleading consumer expectations; unsafe self-medication; inappropriate medicine use; increased adverse drug events	Mandate standardized, prominent risk disclosure templates for all pharmaceutical advertisements across media
Misleading or exaggerated therapeutic claims	Use of superlative or ambiguous claims implying rapid cure, guaranteed relief, or superior efficacy without robust evidence	Irrational medicine demand; delayed careseeking; erosion of trust in medicines and health systems	Strengthen pre- and postmarket review of advertising claims; enforce evidence-based substantiation requirements
Emotional and fear-based advertising appeals	Use of distress narratives, child-focused imagery, and urgency cues targeting caregivers and vulnerable populations	Exploitation of vulnerability; increased misuse among children and low-health-literacy groups	Restrict emotionally manipulative advertising for medicines; introduce child- and caregiver-protection guidelines
Blurring of health education and commercial promotion	Integration of disease awareness, CSR, or public health messaging within branded advertising	Confusion between neutral health information and promotion; distorted health knowledge	Enforce strict separation between public health education, CSR initiatives, and branded pharmaceutical advertising
Influencer marketing and undisclosed sponsorship	Promotion of medicines by influencers or brand ambassadors without transparent disclosure of commercial relationships	Misleading endorsements; rapid spread of misinformation via social media	Mandate clear sponsorship disclosure; regulate influencerled pharmaceutical promotion under advertising law
Weak oversight of digital	Rapidly evolving online	Regulatory blind	Develop platform-specific
Ethical Challenge	Description / Manifestation	Public Health Consequences	Policy and Regulatory Recommendations
and social media advertising	content, private messaging platforms, and cross-border dissemination	spots; unchecked spread of unethical advertising	digital advertising regulations; require cooperation of social media platforms with regulators
Fragmented regulatory governance	Overlapping mandates among NAFDAC, ARCON, PCN, and consumer protection agencies with limited coordination	Inconsistent enforcement; regulatory ambiguity; low deterrence	Establish a formal inter-agency coordination mechanism for pharmaceutical advertising governance

Limited professional accountability	Insufficient integration of advertising ethics into pharmacy and healthcare professional regulation	Conflicts of interest; compromised professional judgement	Strengthen professional ethical codes; link advertising ethics to licensure and continuing professional development
Low public media and health literacy	Heavy reliance on advertising as a source of medicine information	Increased susceptibility to misinformation and unsafe medicine use	Implement public media literacy and rational medicine use education initiatives
Weak transparency and accountability mechanisms	Limited public reporting of non-compliance and sanctions	Persistent unethical practices; reduced public confidence	Publish annual pharmaceutical advertising compliance reports and sanctions

CONCLUSION

Pharmaceutical advertising occupies a powerful yet under-examined position within Nigeria's health information ecosystem. This narrative review has shown that while advertising can play a constructive role in raising awareness about medicines, prevailing practices in Nigeria frequently fall short of ethical and public health standards. Across traditional and digital media platforms, advertising strategies often prioritise persuasive appeal over balanced information, contributing to misinformation, inappropriate self-medication, and avoidable public health risks.

The review demonstrates that these ethical challenges are not merely the result of individual or corporate misconduct but are rooted in systemic factors, including fragmented regulatory oversight, rapid digital transformation, uneven health literacy, and structural vulnerabilities within the health system. Despite the presence of multiple regulatory institutions and alignment with international ethical standards in principle, gaps in coordination, enforcement, and adaptability have limited the effectiveness of Nigeria's pharmaceutical advertising governance.

Importantly, this review situates pharmaceutical advertising ethics within the broader agenda of medicines governance and public health protection. Ethical drug promotion is not ancillary to health policy; it is a core determinant of rational medicine use, patient safety, and public trust in health institutions. In contexts characterised by high out-of-pocket expenditure and reliance on self-care, the informational quality of advertising assumes heightened importance, with direct consequences for population health outcomes.

The analysis further underscores the growing significance of digital and social media advertising as a regulatory and ethical frontier. Without deliberate and adaptive regulatory responses, digital platforms risk becoming vectors for unregulated promotion and health misinformation. Addressing this challenge requires coordinated action among regulatory authorities, professional bodies, industry actors, media platforms, and civil society.

Ultimately, strengthening ethical pharmaceutical advertising in Nigeria demands a shift from siloed, reactive regulation toward integrated and proactive governance. This includes clearer institutional roles, digital-specific regulatory tools, professional accountability, and investment in public health literacy. By embedding ethical advertising within broader medicines and public health policy frameworks, Nigeria can better protect consumers, promote rational medicine use, and reinforce trust in its health system.

This review provides a foundation for future empirical research, comparative analyses across low- and middleincome countries, and policy reforms aimed at aligning pharmaceutical promotion with public health priorities. As medicines continue to shape health outcomes and societal well-being, ensuring that their promotion is ethical, transparent, and accountable remains an essential public health imperative

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