

# Online Marketing of Falsified Drugs in Ghana: Content Analysis of Selected Drugs on Social Media

Samuel Fahren Otoo<sup>1</sup> Abena Abokoma Asemanyi<sup>2\*</sup> Belinda Osei-Mensah<sup>2</sup> Edem Cephas Cudjoe<sup>3</sup>

Stephen Osei Akyiaw<sup>2</sup> Samuel Oluwadare Adelokun<sup>2</sup>

1. Food and Drugs Authority, Ghana
2. School of Communication and Media Studies, University of Education, Winneba, Ghana
3. Department of Journalism and Communication Studies, Catholic University of Ghana, Sunyani, Ghana

\*Email of the corresponding author: [aaasemanyi@uew.edu.gh](mailto:aaasemanyi@uew.edu.gh)

## Abstract

This study investigates the marketing of falsified drugs on Facebook and Instagram. The study also examines steps that drug regulators are implementing to address this phenomenon. To holistically understand the issue, the study adopts the technique of online observation to understand how these falsified drugs are marketed online. Interviews were used to capture the regulators' point of view. Through the lens of social judgement theory, the study found that online peddlers of falsified drugs employ over-elaboration of the efficacy of the drugs to capture the interest of the target market. Lower price mechanisms are also used to stimulate the desire of their target audience. Additionally, these perpetrators also advertise door-to-door delivery services to assure clients of obtaining these drugs at their convenience. Another interesting finding from the study is that celebrities are also used as instruments of persuasive advertising. Data obtained from selected officials from the Foods and Drugs Authority (FDA) suggest that the agency has been organizing public sensitization programs to dissuade members of society from patronizing these online products. It was also found that the FDA is adopting viable strategies to track down culprits and mete out deserving punitive measures to. The study concludes that despite efforts to foil the menace of fake drug marketing on social media, these peddlers are also employing deceptive and persuasive marketing techniques. The study recommends that the FDA must optimize the use of the Internet for both sensitization and tracking purposes.

**Keywords:** *Falsified drugs, FDA Ghana, strategies, online marketing, social media*

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## 1. Introduction

The Internet, an essential technology, has ubiquitous communication and business (Kaplan & Haenlein, 2010; Slevin, 2017). With the surge in the use of the internet, online marketing has become a popular phenomenon among new-age businesses and entrepreneurs. Online marketing involves the utilization of electronic and internet tools for the promotion and sales of a product or service (Ajina, 2019; Lister, 2017). The world economy and marketplace are experiencing a fundamental shift in the way goods and services are being promoted to amass a large consumer base (Langan, Cowley, & Nguyen, 2019; Lister, 2017). Ajina (2019), for instance, emphasizes that most businesses and organizations are progressively moving away from entirely depending on the traditional approaches to promoting their products to more innovative channels. The controlling force behind these phenomena is technology and the advent of the internet and social media (Appel et al., 2020; Wymbms, 2011).

Due to the nature of the internet space for unrestricted regulation on marketing of products and services (Raman and Pramod, 2017), a lot of people tend to promote substandard, counterfeit and unregistered products through this medium (O'Hagan & Garlington, 2018). According to Lybecker (2015), although many people are finding online media a convenient place to patronize products and services, these platforms are increasingly becoming a hub for sham products. Increasingly, falsified products ranging from technological appliances, kitchen wares and furniture, clothing and beauty products, food and drugs among others have dominated the internet marketplace (Raman & Pramod, 2017). What this means is that it is quite common these days to encounter falsified products and services having a prominent online presence with enticing or attractive prices and special offers. One of the alarming categories of falsified products being promoted online is drugs or pharmaceutical products (Amoah, 2018; Lybecker, 2015). The rate at which these products have dominated online media has become more and more alarming according to researchers, regulatory bodies and health experts (O'Hagan & Garlington, 2018;

Raman and Pramod, 2017). Raman and Pramod (2018) explain that the active presence of falsified drugs on social media is more worrisome since they easily permeate and stimulate the interest of their target audience. Vorvoreanu (2009) suggested that social media platforms were initially fashioned to nurture relationships between friends and families. Still, marketing efforts have become too pervasive in these media (Ajina, 2019), to the point that falsified products have also found a space to operate without obstruction (Raman & Pramod, 2017). Also, Przyswa (2013) indicated that the availability of the Internet is aiding in the expansion of this trade by providing counterfeiters with a large consumer base. Similarly, the World Health Organisation (WHO) acknowledged that the internet is also contributing to the marketing of falsified drugs.

The alarming rate at which falsified drugs are marketed and consumed has attracted quite an extant attention throughout the world owing to their adverse effects on human health (Oluwatuyi & Ileri, 2014). Studies have found that falsified drugs are marketed and advertised on the internet and social media sometimes through spam emails or spam messages (Clarke, 2008; O'Hagan, 2018). According to Clarke (2008), internet security experts estimate that 15 billion spam emails advertising falsified drugs are sent daily and these emails have the potential of virtually reaching everyone in Europe. O'Hagan et al. (2018) admit that online pharmaceutical vendors offer attractive packages to various populations of patients. Essentially, some are easily enticed by the lower pricing packages they see on the internet. In essence, falsified drugs are sometimes strategically marketed online in light of pricing mechanisms. Based on the argument by Bostwick and Lineberry (2007), the major groups of people that falsified drug dealers thrive off include individuals who largely avoid the services of doctors and the entire healthcare system. According to O'Hagan et.al. (2018), these people may be individuals looking for self-enhancement or lifestyle drugs based on conditions like obesity, hair loss, and lack of sex drive or drug addicts looking for their fixes more covertly. In any case, these groups of people generally do not entertain the idea of consulting with qualified health personnel but prefer to resort to online drugs. According to Chaudhry (2017), tramadol, amphetamine, methamphetamine and codeine, all drugs that have an inherent risk of being dangerous to health and strongly addictive, are facilitating abuse by being readily available online Armstrong, Schwartz, and Asch (2019) mentioned that these online advertised and marketed drugs largely amplify the aspects they know will appeal to the consumer whereas being mute on the dangers and side effects or risks behind the use of the products. What this means is that these drugs are mostly given prominence through the constant publicity of their acclaimed prowess or efficacy. In contemporary times, various people are acquiring relatively low-priced falsified drugs with the mindset of increasing their capabilities and fitness, appearing younger and more good-looking, or enhancing their mood (McVeigh, Evans-Brown & Bellis, 2012). Technological advancement in communication, particularly, the advent of the internet and social media has also tremendously contributed to the availability and prominence of these drugs in today's society (McVeigh et al. 2012).

On the other hand, what regulatory bodies contribute to the discussion on the marketing of falsified drugs is important. Hamil, et al. (2019), investigating uncertainty in medicine quality in Ghana, indicated how well-established Ghana's regulatory body that inspects the quality of drugs being produced and circulated in the country is although they are somewhat under-resourced. The Foods and Drugs Authority (FDA), the regulatory body in Ghana, has also expressed concern regarding the trade of falsified drugs on online platforms and stressed that this form of marketing is fuelling the increase of this menace (FDA, 2018). The present study ropes in how regulatory bodies function concerning dealing with the existence and circulation of these drugs on social media platforms.

## 2. Rationale for the Study

Health complications and deaths as a result of consuming falsified drugs largely go uncounted and, in some cases unnoticed (O'Hagan & Garlington, 2018). Falsified drugs also adversely affect the time and finances of those who use them. The production and trade in falsified medical or pharmaceutical products are therefore impossible to keep track of. Certainly, even falsified versions compete fiercely with legitimate products in some jurisdictions (Appel *et al.* 2020). This menace continues to exist because the authenticity of drugs is not something consumers can judge with ease. According to Mackintosh (2011), "at every step of the supply chain, there is this unequal knowledge, and people are exploited because of it" (p. 2).

This phenomenon has been a bother to the World Health Organisation (WHO), national drug regulatory bodies, health-conscious people and scholars in almost every country. National drug regulatory agencies or bodies are largely in charge of assuring drug quality in their countries, a job that increasingly requires cooperation with their counterpart agencies around the world (IOM, 2012). According to Clift (2010), the World Health Organization (WHO) has put in effort to facilitate this cooperation since 1985, however, advancing an open discourse regarding this subject has proven more difficult than anyone would have predicted then. In Africa for instance, some studies indicate that an estimated population of over 100,000 die annually as a result of

consuming sub-standard or falsified drugs whereas some observations show that these drugs are relatively patronised and purchased more than the authentic drugs (Almuzaini & Sammons, 2013; WHO, 2018).

The WHO considers the African continent a major hotspot in the peddling of falsified drugs. According to the WHO, 42% of all falsified medicine reported to them between the years of 2013 and 2017 was associated with the African continent. Amoako (2018) highlights that in the previous two decades, there has been an influx and circulation of falsified drugs in Ghana and the situation is worsening at an alarming rate. According to Oneko (2018) just like many other countries, Ghana has no national data on the figure of falsified drugs in circulation in the country. However, the WHO estimates that 30% of all drugs on the Ghanaian market could be falsified (FDA, 2018). For example, in 2013, the European Union ranked Ghana as the sixth largest producer of falsified drugs in the world.

Due to its prevalent nature, some scholars have taken up the discussion of falsified drugs from several angles. For instance, McManus and Naughton (2020) conducted a systematic review of substandard, falsified, unlicensed and unregistered medicine sampling studies and placed their focus on context, prevalence, and quality. They also sought to interrogate the efficacy of laboratory testing of medicines on the market. Zulki, Aziz, Hassan, Hassali, and Bahrin (2016) conducted a study with the objective is to developing problem solving framework for dealing with unregistered drugs by exploring the pharmacist's perceptive on these drugs. Consequently, the emergence of the internet, with its peculiar characteristics as a sales platform, has brought another dimension to the problem (O'Hagan & Garlington, 2018; Oneka, 2018). O'Hagan and Garlington (2018) investigated online trading of counterfeit drugs and the dangers these drugs pose to public safety. Isah (2012) established how technological interventions can be employed to clamp down on the trade of falsified drugs. Some studies have discussed the phenomenon of falsified drugs in Africa, particularly Ghana (e.g. Amoah, 2018; Aminu, 2017; Yeboah, Owusu-Pepurah & Adjei, 2017). Amoah (2018), for instance, examined the channels through which falsified drugs end up in Ghana, the effects it has on the country and the procedures used in disposing of these drugs by regulatory bodies. Aminu (2017) delved into the dangers of falsified drugs on the African continent.

Although several studies have interrogated the phenomenon of falsified drugs in Africa, scholarly research is very minimal on the online promotion of these drugs. Meanwhile, according to experts, the online platform has boosted this trade in recent years. Research studies and articles that discussed the issue of online marketing of falsified drugs generally indicated that popular social media sites such as Facebook and Instagram are major online marketplaces where the promotion and circulation of falsified drugs is being undertaken (Nichols, 2020; Tiku, 2020; Tyrawski & DeAndrea, 2015).

The present study therefore seeks to investigate how social media, particularly Facebook and Instagram are being used by the manufacturers and traders of falsified human enhancement drugs for marketing purposes. Also, the study gains insight into the efforts being made by regulatory bodies to clamp down on the menace of falsified drug circulation, especially in the online environment based on the following research questions:

1. How are falsified drugs marketed to Ghanaians using Facebook and Instagram?
2. What strategies are used by regulatory bodies in dealing with online marketing of falsified drugs?

### **3. Online Marketing**

Yasmin, Tasneem and Fatem (2015) describe this concept as the use of electronic media by marketers to promote particular goods and services and to stimulate the interest of prospective customers by allowing them to directly interact with the product through the digital media space. Online marketing is regularly equated to digital marketing, internet marketing, search engine marketing and performance marketing. Furthermore, Schwarzl and Grabowska (2015) stressed that whilst internet marketing is a 'target-oriented' form of marketing done using emails and the World Wide Web, online marketing involves the use of marketing and packaging messages aimed to direct internet users to websites that will trigger them to make purchase decisions. Lammenett (2014) therefore emphasized that maintaining a compelling web presence is the underlying attribute of online marketing.

One of the most convincing arguments about the surge in online marketing and advertising is the spiralling growth in general internet usage and the expansion of online communities (Lammenett, 2014; Mahajan, 2014). For instance, Mahajan (2014) indicated that the evolution in internet usage since 1995 has caused companies to acknowledge the importance of the internet to their business hence the widespread migration of companies to online communities for them to maintain a significant level of online presence. In a study conducted by CMO (2014), it was found that 71% of internet users are likely to make purchase decisions about products or brands they follow in online communities. Again, Schwarzl and Grabowska's (2015) study of online marketing found that marketers spent an estimated amount of 135 billion dollars in 2014 on online marketing collateral. This

suggests that the relevance of online marketing and advertising to companies cannot in any way be underestimated. According to Schwarzl and Grabowska (2015), online marketing is transforming the ways by which companies compete among themselves. The study also found that companies are committing more resources and giving more priority to online marketing than the attention given to traditional marketing in recent years.

Javed (2013) did a study to ascertain the effectiveness of various online marketing tools on the consumer decision-making process and found that the Word-of-mouth (WOM) technique is the most impactful instrument of online marketing in that area. According to Javed (2013) although Chat Section, Email advertising, and Word-of-Mouth (WoM) are predominant online marketing tools; WOM largely generates marketing results compared to the other two. On the issue of purchasing and sales on the Internet, Lockett (2018) qualitatively investigated online marketing strategies that small retail businesses implement to drive sales. Using a multiple case study, data was sourced through semi-structured interviews, document analysis and cyber observation from 4 small retail businesses in California and it was found that E-WOM (electronic word of mouth) marketing strategy had a huge impact on sales. This finding is somewhat related to earlier findings by Javel (2013) who found that WOM had projecting impacts on marketing efforts in Tarachi. Lockett (2018) however found that the selected companies also employ social media advertising which amplified the company's sales by 25%. According to Lockett online marketing has the potential to positively affect the prospects of a business and must be optimized by businesses and marketers.

In the African context, Dhamappa (2018) studied the usefulness of online marketing in integrated marketing communication among three organizations in Nigeria. Data were sourced using questionnaires from Coca-Cola Nigeria, Uber Nigeria and ABC Paint. Findings show that online marketing was a significant method in actualizing the integrated marketing goals of the three sampled companies. The study also found that online marketing effectively impacted brand awareness, increased customer satisfaction, and facilitated the computerization of marketing activities. Dhamappa (2018) also found that the predominant online marketing tools that these large companies adopt include e-mail marketing, social media marketing, artificial intelligence and search engine marketing. Based on findings, Dhamappa (2018) recommends that organizations must optimize their use of artificial intelligence to have adequate knowledge of customer needs and preferences as well as demographic information to know how to tailor marketing messages. Mkwizu (2020), in an extensive literature review to ascertain the impact of online marketing on the tourism industry in Africa, established that digital media, mobile advertising, and content building have become some key compelling strategies pertinent to repositioning tourism in Africa. Through content analysis of research studies on tourism and digital media, Mkziwu (2020) avers that knowledge and awareness about tourist attractions in Africa can best be exported through online platforms since we are technically living in a digital era. Consistent with Dhamappa's (2018) argument, Amankwah-Amoah, Boso and Debrah (2018) indicate that African countries are steadily keeping pace with international marketing standards by adopting non-traditional marketing approaches like the use of digital media. Furthermore, Amankwah-Amoah et al. (2018), reviewing the literature on marketing research studies from Sub-Saharan Africa, asserted that digital media and devices such as smartphones and the availability of internet connections are giving a facelift to the marketing aspect of African businesses.

### **3.1 Marketing and Advertising of Drugs**

Commercial advertising is one of the most prevalent phenomena in contemporary times with adverts being placed and seen everywhere in our daily lives (e.g. Ershadpour et al., 2017; Rasool, 2014). Given this, advertising and marketing efforts are no longer limited to just producers and consumers; advertising and marketing have now taken social, cultural, economic and political dimensions (Ershadpour et.al. 2017). However, some scholars have indicated that the portrayal of the positive properties of goods and services through advertising is somewhat of a brainwashing mechanism (Gharedaghi, 2003; Williams, 1999). On the other hand, Ershadpour et.al (2017) indicated that cultural critics of advertising sustain the opinion that commercial advertising creates some uncommonly strong desire in the target audience which could only be satiated after they have purchased and used the advertised product or service.

According to Alpert et al. (2018), the pharmaceutical industry has also been experiencing aggressive advertising for a while now. Also, scholars have found that advertising has been a major cause of self-medication around the world (e.g. Biduki, 2013; Ryvark, 2019; Tiwari, 2016). The pervasiveness of drug or pharmaceutical advertisement and marketing cannot in any way be disputed because these adverts are all over the internet, radio, newspapers, journals, and word-of-mouth from doctors and physicians who do not do proper diagnosis before prescribing drugs (Rajput et al, 2017); it has been suggested that many advertised drugs subtly carry messages that exploit audiences' fear of disability or even death which make people patronize these drugs. Myriad studies have been conducted to investigate the impact of marketing and advertisement of drugs. For instance, Davati et al. (2018) who surveyed medication in Tehran, Iran found that the indiscriminate use of medication in the

country can largely be attributed to advertising efforts on the part of producers and distributors. Ryvark and Denysiuk (2019) conducted a public opinion study to ascertain the role of advertising in the selection of non-prescription drugs for self-treatment purposes in Ukraine. Based on a questionnaire survey, the study which relied on a sample size of 137 respondents of varying age groups found that advertising significantly and directly influenced the choice of non-prescribed drugs among respondents. The study also found that 88% of respondents indicated that adverts related to drugs are not objective and fair. The respondents in Ryvark and Denysiuk's (2019) study also suggested that the rate of drug advertisement should be curtailed in the country. These studies indicate an evidential escalation in the rate of drug advertisement in traditional and digital media in recent years which is largely affecting drug usage. This position resonates with Dimitrik's (2015) argument that advertising is the most effective way of promoting a pharmaceutical product. Again, Alowi and Kani (2019) studied drug promotional tools that usually influence physicians' prescription behaviour. The study concluded that there is a need to formulate legislative instruments that will modulate the way drugs are advertised on television. The study also recommended the need to scrutinize the objectivity and genuineness of drug-related adverts by regulatory bodies before they are advertised (Alowi & Kani, 2019).

### **3.2 Advertising and Marketing of Falsified Drugs**

Scores of studies have suggested that there has been a surge in the advertising and promotion of falsified pharmaceutical products on the market in recent times. For instance, the World Health Organization (2017) indicated that the surge in the manufacturing, promotion and marketing of falsified or fraudulent drug products throughout the world is tremendously frightening for the reason that these drugs pose a huge danger to human health and lives. Lee et al. (1991), in examining drug promotion and labelling in developing countries, revealed that exaggerated claims were made about the potency of some fraudulent drugs during promotional or advertising situations. According to Lee et al. (1991), multinational firms are more likely to disclose full details of their drug products including potential side effects whereas national drug companies conceal recognized dangers about their drugs. Concerning falsified drug products, Lee et al. (1991) suggested that in some cases, these drugs are created to appear exactly like the original product manufactured by multinational firms, and in some cases, these drugs contain very little amount of the purported active ingredients. According to the study, the growth in the production and promotion of falsified drugs in Brazil Indonesia and other parts of the world is increasingly becoming difficult to control as these drugs do not only find their way to private drug stores but government pharmacies and hospitals as well. Although there are regulatory bodies with measures and codes in place to inspect and sanction the promotion of drugs as well as, responsible for cleaning the system of falsified drugs, manufacturers of these drugs still go about their dubious businesses unperturbed (Lee et al., 1991).

To Isah (2013) the risks associated with the promotion and spread of falsified drugs cannot be underestimated as the usage of these drugs could cause unforeseen and extreme side effects, hypersensitive or allergic reactions, worsened medical conditions and deaths in some cases. Isah (2013) stated that in cases where these falsified drugs are duplications or counterfeits of original brands, the name of the original brand is denied which results in apathy in the marketplace against the brand and huge financial losses. Over 10% of the global medicine market is made up of falsified, counterfeit and substandard drugs, and an estimable rate of over 25% of medicines consumed in poor countries are falsified (Isah, 2013). Also, it has been found that the consumption of falsified drugs contributes to the death of over 10,000 Africans every year. On the other hand, in an article by Lybecker (2015), it was suggested that falsified drugs are more widespread on the market than real drugs. This assertion has been affirmed by several scholars.

Aminu et al. (2017) posited that despite the numerous problems facing the African continent, the production and promotion of falsified drugs is becoming one of the most disturbing occurrences which needs urgent and tactical attention. Production of counterfeit drugs appears to be recorded as a lucrative industry in the world of well-thought-out crime (Aminu et al., 2017). Amoah (2018) states that Ghana has equally been experiencing the menace of falsified drugs at an alarming rate over the past two decades. This affirms the assertions that this menace is so widespread on the African continent to the extent that its quantification becomes problematic to regulators, researchers and law enforcement agencies (Lavorgna, 2014). Some studies have however attempted to measure the rate of falsified and counterfeit drugs in some selected African countries.

Equally, the American Journal of Tropical Medicine and Hygiene (2014) on the prevalence of falsified drugs in Cameroun found that 38% of Chloroquine, 74% of quinine, and 12% of antifolites did not have the required or correct ingredient. A study by Wall (2018) disclosed that countries like Ghana, Kenya, Nigeria, Rwanda, Tanzania and Uganda had about 35% of anti-malarial drugs which had less amount of insoluble ingredients and were not effective in the treatment of malaria. Wall (2018) indicated that 38% of antimalarial drugs found in Kenya's drug market were ineffective in treating malaria cases. This implies that a lack of quality oversight and enforcement makes poorer countries the most lucrative potential markets for these counterfeiters. There is a limited study on counterfeit and substandard antimalarial drugs leading to a situation of scanty information on

the subject in Ghana. Notwithstanding, the government of Ghana is interested in fighting to curb the influx by instituting organizations such as the Food and Drugs Authority, Environmental Protection Agency and the Customs Excise and Preventive Service (Amoah, 2018).

### **3.3 Online Marketing of Falsified Drugs**

Studies have indicated that there are mostly exaggerated claims in advertisements of both prescription and non-prescription drugs. For instance, Faerber and Kreling (2014) who conducted a content analysis of advertised drugs randomly selected from the Vanderbilt Television News Archive, found that 57% of these adverts had misleading content whereas 10% made false claims about their products. The authors therefore concluded that potentially misleading claims are prevalent throughout consumer-targeted prescription and non-prescription drug advertising on television (Faerber & Kreling, 2014). Scholars have posited that the pharmaceutical industry upholds the opinion that their overall business plans and marketing that is advertising strategies, are very elemental in affecting the fortunes of their companies. Based on this notion, they invariably adopt false claims and testimonies in promoting their products.

Zulkifli et al. (2016) conducted a study in Malaysia to develop a framework to manage the rate of unregistered drugs. Based on interview data from 16 pharmacists, it was found that the sales of unregistered or falsified drugs are so widespread to the point that the rate of prevalence is unknown and tracking becomes problematic. The study also found that advertising plays a huge role in the widespread of falsified, unregistered and substandard pharmaceutical products in the country. Additionally, it was revealed that advertising contents of falsified drugs are largely compelling and interesting which makes the audience resonate with these products. According to Zulkifli et al. (2016), night markets, street markets, exclusive shops and the Internet were found to be leading outlets for marketing these products. Social media was also mentioned as one of the projecting internet tools used in the promotion of falsified drugs. In a study conducted by Amoah (2018) to examine the influx of falsified drugs in Ghana, it was found that social media and internet sales are among the leading channels through which these drugs are advertised and marketed. This finding resonates with the assertion of Finlay (2011) that the growth of internet trading and online retail markets is a major source of the spread of counterfeit and sub-standard drugs. 6 regulators and pharmacists were sampled for the study in addition to data drawn from the internet and other published materials. According to Amoah (2018), the internet is to a large extent responsible for making popular and a major source of counterfeit and sub-standard drugs. The study also established that some of the factors that lead to the influx of these drugs into the country include a lack of well-planned orderly operations and inadequate allocation of resources by the government. Amoah (2018) therefore recommended that there is a need for the government to support these agencies financially to help them execute their strategies for curbing the issue.

The inextricability of social media sites such as Facebook, Twitter, YouTube and Instagram among others to our everyday lives cannot be overemphasized (e.g. Kaplan & Haenlein, 2010; Slevin, 2017). According to the World Health Organization (WHO, 2006), up to 50 per cent of pharmaceuticals sold online are falsified. Although these websites were initially created to foster some level of interactivity and connection between families and friends, marketing efforts have taken over social media platforms (Vorvoreanu, 2009). However, just as it is indispensable for consumers to be cautious of fraudulent sales and marketing in traditional retail spaces, there is the need to exercise similar or relatively more vigilance when relying on social media as a channel to purchase products such as pharmaceutical products or medications (O'Hagan & Garlington, 2018; Raman & Pramod, 2017).

Some studies were done to understand the impact of social media on the influx of falsified drugs in our society (Ventola, 2014). Based on studies, social media has actively been used in recent years for the advertisement of drugs, particularly sub-standard, counterfeit and unregistered drugs (O'Hagan & Garlington, 2018). Also, studies have found that adverts about drugs placed on social media, particularly WhatsApp have compelling and misleading information or content that invariably influences consumer decisions and purchases (Khaja et al., 2018). Based on a content analysis of pharmaceutical or drug-related adverts/messages on social media, it was revealed that 'potentially misleading' claims were the most frequent messages with 59.1%. According to the study, social media advertisers tend to exaggerate the efficacy or safety without sufficient evidence to substantiate claims (Khaja et al., 2018). Lavorgna (2014), through the analysis of interviews and investigative cases, it was found that falsified drug marketing is on the rise through online media.

## **4 Theoretical Framework**

### **4.1 Social Judgment Theory**

The social judgement theory was propounded by Muzafer Sherif and Carl Hovland (1980) in their attempt to determine and describe the types of communicative messages as well as the conditions under which

communicated messages will lead to a change in a person's behaviour. Essentially, Sherif and Hovland (1980) established that the perception of people about their attitudes and behaviours exist on a continuum; that is latitude of rejection, latitude of non-commitment and latitude of acceptance.

The theorists posited that messages that are generally persuasive are most likely to have positive effects and succeed in events where they fall into an individual's latitude of acceptance. Within the latitude of acceptance, there will be one position that represents the person's position, the position that ideally expresses the person's outlook or is most acceptable in the sense of coming closest to such an expression. On the other hand, people who reject your message are more likely to negatively evaluate your message, not assimilate your advice, and not engage in the desired behaviour. This situation is typically referred to as the latitude of rejection. The latitude of rejection consists of the alternatives regarded as objectionable. Also, within this latitude, there will be one position that is regarded as most objectionable or undesirable.

The latitude of non-commitment consists of items or alternatives that fall within neither the latitude of acceptance nor the latitude of rejection, items responded to in a non-committal way. This sounds complex or different from most ways of analyzing and measuring attitudes, but it is not unusual. For instance, if we give people a twenty-item Likert-type scale, we could say that the items the person agrees with comprise the latitude of acceptance, the items disagreed with, the latitude of rejection, and the items to which the person responded by saying 'don't know' or 'undecided' would comprise the latitude of non-commitment. Sherif and Hovland (1980) theorized that persuasion was a matter of knowing how great the discrepancy or difference was between the speaker's viewpoint and that of the audience. If the speaker's point of view was similar to that of audience members, then persuasion was more likely. If the discrepancy between the idea proposed by the speaker and the audience's viewpoint is too great, then the likelihood of persuasion decreases dramatically.

Scores of studies have investigated the correlation between the social judgement theory and marketing or advertising (Asemah & Nwammuo, 2017; Glassman, 2015; Wigton, 1996). For instance, Asemah and Nwammuo (2017) establish that advertisers use persuasive strategies that are in line with tenets of the social judgement theory to spur the interest of the target consumers towards their products and services. Essentially, the theory illustrates the most relevant and compelling elements that motivate the purchase of a product by buyers and it also reveals the connections between motives and attributes of products or services. According to Asemah and Nwammuo (2017), an adequate knowledge of social judgement theory is important to companies in committing their resources to creating more compelling and effective advertising campaigns.

#### **4.2 Elaboration Likelihood Model**

This theory was developed by Richard Petty and John Cacioppo in 1980. The ELM is a persuasion model that proposes two categories of persuasion: the central route and the peripheral route (Petty & Cacioppo, 2018). This refers to attitude changes that occur through different levels of evaluative processing. Concerning the central route, attitudes are formed through an effortful process of scrutinizing a message. On the other hand, the peripheral route refers to attitude formation that is based on non-argument cues such as mood, source attractiveness (when not relevant to the argument quality), and heuristics (e.g., number of arguments, source expertise, message length) (Petty & Cacioppo, 2018). The ELM provides a framework that explains how communicative elements of persuasion (source, message, recipient, and context) could have varying impacts, depending on the particular route to persuasion. This implies that either the central route or the peripheral route can be evoked in various situations involving different message types, individual differences among receivers, and environmental factors. The argument here is that persuasion can be effective in both routes.

The model also sustains the argument that when people have the motivation and the ability to process the information presented in persuasive communication, there is the likelihood that message elaboration will be high and the central route will be taken. However, when the likelihood of message elaboration is low as a result of a lack of motivation or inability to process information, the peripheral route to persuasion is taken. It is worth noting that the selected route has some important implications- first, it determines which components of persuasive communication will be most effective, either the central cues (message quality) or peripheral cues (mood, expertise, source attractiveness). Furtherance to this argument is that the quality of the message may have little effect on persuasion in some cases, such as when motivation or ability to process the argument is low. That notwithstanding, there could be other trivial variables which may have strong effects on persuasion, such as liking for background music in ads. Another variable of this model is source attractiveness which is however largely considered a peripheral cue. An example would be adverts that employ attractive endorsers. In most instances, the endorser's attractiveness has little relation to the message. Be that as it may, in some situations, endorser attractiveness may be seen to be very relevant to the message. For example, the attractiveness of endorsers or models may be considered particularly relevant for certain products but not others.

The Elaboration Likelihood Model has been substantially influential in persuasion research concerning marketing and advertising. For instance one of the earliest studies in consumer behaviour to adopt the ELM examined the role of product involvement (Petty et al., 1983). In their study, Petty et al. (1983) sustained the relevance of some three factors in persuasive advertising; motivation to process the information in the ad, central cues, and peripheral cues. Shrum et al. (2012) also maintain that the ELM has proven to be a robust model for predicting the effects of advertising and marketing messages on consumer attitudes and behaviour. It provides a clear theoretical framework for understanding how marketers maximize the persuasiveness of their ads and how consumers can maximize their resistance to those ads. In essence, this theory is elemental in understanding how marketers of falsified drugs promote their trade on social media as well as investigating strategies by regulatory authorities in sensitizing the public against the promotion and use of these drugs.

## 5. Methodology

A qualitative research approach was adopted. The qualitative approach was selected for due to its exploratory nature (Creswell, 2014). According to Creswell (2014), this approach seeks to unearth the opinions, thoughts and feelings of participants. Creswell (2013) additionally argues that the exploratory characteristic of the qualitative approach gives room for the researcher to be actively involved in the study to obtain in-depth data. This approach is therefore relevant to the study because it provides the avenue to critically explore and examine how falsified drugs are marketed in the online space. The research also probed the role social media is playing in facilitating the marketing of falsified drugs hinged on the existing information and constructive interpretations of regulators who participated in this research. Taking into account the fact that this study is aimed at soliciting data from Facebook and Instagram pages; as well as from regulators under the Food and Drugs Authority, the most fitting design employed was Qualitative Content Analysis. Qualitative content analysis is one of the several qualitative methods currently available for analyzing data and interpreting its meaning (Schreier, 2012). Based on the aforementioned arguments and the nature of the study, qualitative content analysis was employed to identify and analyse recurrent codes and themes for the meanings that underlie these themes to be duly constructed. Based on the nature of this research, the purposive sampling strategy was adopted to help to deliberately or purposefully choose a participant or unit to study due to the reason that they possess certain qualities and characteristics that are relevant to the research (Wimmer & Dominick, 2006). Four interviews were conducted with four officials of the Food and Drugs Authority because their Institution deal with the monitoring of drugs on the market and they possessed adequate knowledge of the phenomenon; in addition to the online observation of 8 falsified drugs being marketed online – Pussyfy, Femoz Xtra bum, Flat tummy drink, Lady's pride, Adepa uro x, Lawgee curves butter, Infection herbal mixture, and Amuzu bitters. These drugs were purposely sampled from among the other suspicious drugs on these social media based on suggestions from our study participants that they were under investigation and punitive actions were being taken against the producers and marketers. Thematic analysis was employed to analyse the interview data as well as data drawn from the online observation and also ensured that issues of ethics were catered for.

## 6. Analysis of Data

Data obtained from social media observations and interviews with participants of the study were interpreted, discussed and analysed thoroughly based on the literature and the theory that underpinned this study.

## 7. How are falsified drugs marketed to Ghanaians on Facebook and Instagram?

This research question interrogates the approach employed to market falsified drugs online in Ghana. The accessibility of the internet is no doubt an avenue for the surge in the selling of falsified drugs. According to WHO (2017), the Internet is providing an increasingly viable option for distributing pharmaceutical products – both legitimate and counterfeit – to domestic and international consumers. The ability to hide their identity and misrepresent their products is particularly attractive to counterfeiters, providing criminals with a relatively easy point of entry into even the best-regulated markets (WHO, 2017). In probing the respondents to understand the outlook of online marketing of falsified drugs, the following themes emerged and are elaborately discussed.

### 7.1 *Over-emphasis of the Drug's Efficacy*

The data showed that peddlers of falsified drugs over-emphasize aspects of the drug that are more likely to appeal to consumers while keeping silent on the potential risks and side effects associated with the products. The observations show that posts on falsified drugs are mostly photos, showing positive transformations that characterise the use of these drugs. Also, captions that accompany these posts elaborate on the efficacy of these



drugs to entice their target population. This theme aligns with Orizio (2010) that online pharmaceuticals tend to hyperbolize the benefits of such products while overshadowing the dangers behind them. Earlier studies have also indicated that drugs that are touted as non-prescription drugs, especially those that are falsified, tend to use more elaborate advertising strategies than prescription drugs that indicate the need to consult a physician before usage (O'Hagan & Garlington, 2018). It was revealing how the online marketing of the drugs was portrayed as genuine and effective, however, they were silent on suggesting the need to consult a physician after some days of use. O'Hagan and Garlington (2018) articulate that in the quest to amplify drug efficacy, falsified drugs are either incoherent about the need to seek a physician's advice or boast about the advantages of avoiding medical professionals.

**Figure 1:** Two posts exaggerating the efficacy of the advertised drugs in its caption



The captions that accompany these identified falsified drugs are embellished in a way that will stimulate the interest of buyers (Figure 1). This is one of the marketing strategies that promoters of falsified drugs employ on Instagram to make their products marketable. This finding is largely consistent with some assertions in marketing literature which suggest that promotion of products on social media platforms is characterized by publicity and hype aimed at appealing to curious audiences and consequently induce them to make a purchase (Lybecker, 2014). According to Raman and Pramod (2018), the active presence of falsified drugs on social media is more worrisome since they easily permeate and stimulate the interest of their target audience based on the elaborate publicity that accompanies their promotion. The social judgement theory, under persuasion, concurs that these measures are meant to hype the efficacy of these drugs as a coaxing attempt by the producers and marketers. These entities are typically using embellishment strategies to permeate the latitude of acceptance of their target audiences thereby making them receptive to the products (Sherif & Hovland, 1980).

### 7.2 Door-to-door Delivery

One of the ways by which falsified drugs were marketed and promoted was through delivery or courier services. Online shoppers in their search for products are attracted to online traders that offer enticing marketing packages like delivery services. This makes accessibility of products or services through delivery to the customer's doorstep an enticing marketing strategy. The literature on falsified drugs has suggested that peddlers of falsified drugs largely employ marketing strategies that traditional pharmacies and health facilities may not offer. This is likely a trait from what has been observed on the identified falsified drug platforms. The data revealed that door-to-door delivery services were on offer for most of the products identified as falsified drugs. Offering services of this nature appeared to appeal to customers because they would be receiving their products in the comfort of their homes. The Head of the Drug Inspectorate of the FDA corroborates this finding by stating that:

*“Most of the falsified drugs that are being marketed online are presented appealingly to the customers. One of them is that these falsified drugs are being advertised offering delivery at your doorstep. These days, because everybody wants convenience these falsified drug dealers prey on this opportunity to present their products on social media. Now, there are delivery systems all over the place especially the use of ‘okada’ (motorcycle). You know, people want certain types of drugs that are not within their vicinity so when they go on social media and find out about the particular drugs*

*they want which are readily available for delivery at their home, they see it be convenient. Online marketing of falsified drugs offers door-to-door delivery service and with our observation, it is peculiar with them”.*

It is deduced here that creating a sense of convenience through the offering of such services usually attracts potential customers. Potential customers are enticed by the offer of service delivery especially in situations where the needed drugs being advertised cannot be acquired within one’s immediate surroundings. This finding agrees with Orizio (2010) that online drug sellers may also use deceptive marketing practices that prey on consumer preferences such as value, convenience and trust, yet may conceal the risks, benefits and safety concerns of their products. Also, George (2006) concluded that convenience and ease are important as the availability of medicine online means that medicines are accessible 24 hours a day 7-days a week, which has huge benefits to persons living with disability, those living in remote areas, and those who have problems travelling to a doctor or pharmacy. Equally, Wilkinson (2006) found in his study that some patients with cancer ordered medicine online because they were unable to access the treatment in the UK. The finding in this study falls in tandem with these studies (Orizio, 2010; George, 2006; Wilkinson, 2006).

Based on the social judgement theory, it can be argued that marketers of falsified drugs are largely cognizant of the latitude of acceptance of their target market and therefore tailor their marketing strategies to appeal to this latitude. Sherif and Hovland theorized that persuasion was a matter of knowing how great the discrepancy or difference was between the speaker’s viewpoint and that of the audience. If the speaker’s point of view was similar to that of audience members, then persuasion was more likely. In the case of this finding, it is evident that the advertisers of falsified drugs (speakers) know the messages that are likely to resonate with audience members and therefore tailor their messages in this regard.

### **7.3 Lower Price Mechanism**

Lower prices characterised the sale of the drugs under investigation. This alludes to the fact that since such drugs are substandard as compared to the original ones, peddlers always reduce the prices to attract a huge customer base. Customers are always looking for where to purchase their products at lower prices (Hadar, Danziger & Morwitz, 2014). This becomes fertile ground for online falsified drug dealers (O’Hagan & Garlington, 2018). This is consistent with Lybecker’s (2014) argument that online sales of products more often than not appear to be less costly. The dealers in falsified drugs resort to the use of this popular economics concept ‘the consumer is rational/utility maximization’ to prey on their potential customers (Delaney, 2020). There is a generally accepted rule that humans always act in a way that will maximize their utility for the goods and services they consume (Delaney, 2020). Utility maximization is commonly illustrated by a consumer looking to maximize their spending power by purchasing two apples for GHC 10.00 rather than one apple for GHC 7.00. This principle of utility maximization is expected of anyone who takes part in a free market economy. Portraying the nature of online marketing of falsified drugs, the Head of Product Quality Control Unit of the FDA had this to say:

*You see, these falsified online drug businesses give the customers something attractive. What do I mean by that? They always peg their prices lower than the authentic ones hence attracting customers. So, for instance, if you go to the pharmacy or hospital to buy a particular drug and later discover that you can get it online at a cheaper, you will naturally want to buy from a cheaper source hence falling into the hands of falsified drug dealers on Facebook and other social media platform. The other issue is that most people do not check the authenticity of the drugs. They simply just buy it because it is cheap. Who does not like cheap things as we always say in Ghana here? We’ve dealt with a couple of them. One thing I noticed was that all their prices were cheaper than the standard ones being sold at pharmacies or hospitals.*

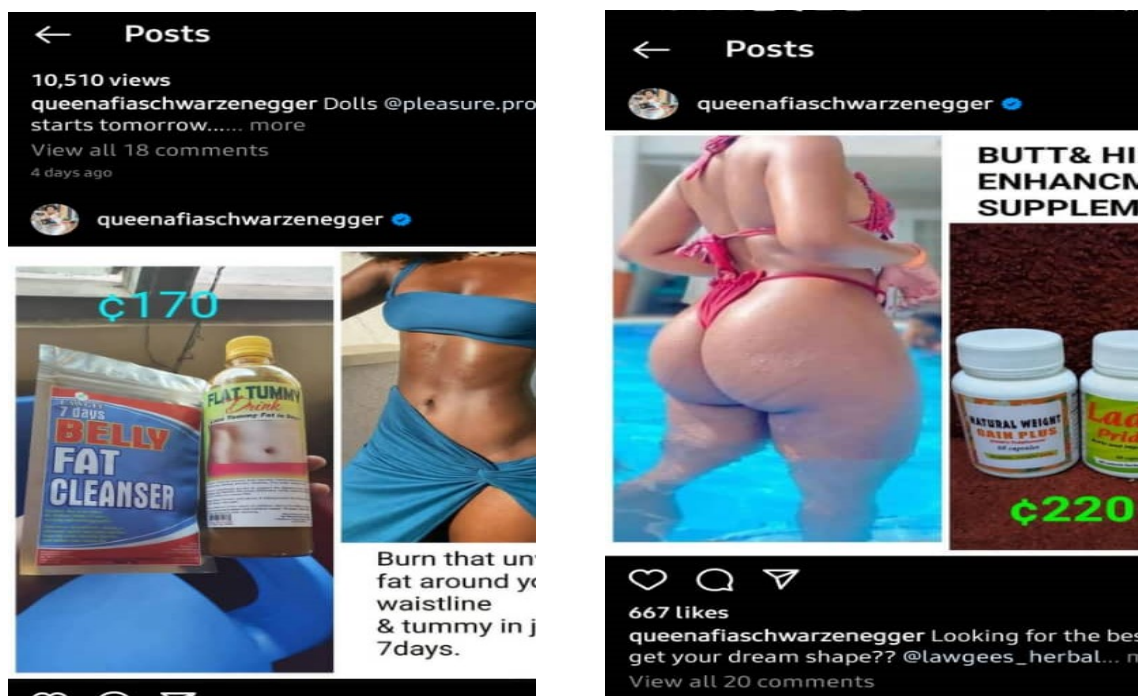
This indicates that falsified drugs marketed online are relatively cheap about the standard and approved ones. The selection of online drugs provides increased choice for consumers, which allows them to easily compare prices. The National Audit Office, UK (2003) that, cost was a prevalent factor where consumers stated that they were buying prescription medicine from the Web because it was cheaper. Added to this is the current global economic crisis that has left many uninsured and/or lacking resources to access needed healthcare services and medicines (Center for American Progress Action Fund, 2009). For these consumers, online drug purveyors represent an option for needed therapy or are viewed as an attractive alternative to traditional forms of healthcare access that may be costly. These findings resonate with earlier assertions by O’Hagan et al. (2018) who indicated that online pharmaceutical vendors offer attractive price packages to various populations of patients. Essentially, some are easily enticed by the lower pricing packages they see on the internet. In essence, falsified drugs are sometimes strategically marketed online in light of pricing mechanisms. Jiang and Srinivasan (2012), indicated that pricing is a persuasive mechanism to capture the interest of prospective customers. According to the theory of persuasion, attractive price packages can invariably stimulate the interest of the target market and influence them to make purchases.

#### 7.4 Celebrity Endorsement

Based on the observation of posts concerning the identified falsified drugs, it was found that some influential people in Ghanaian society are responsible for promoting these drugs on social media. Findings show that ‘Afia Schwarzenegger’, among other celebrities in Ghana, gets to promote some of these drugs on her verified Instagram account. A verified account is an endorsement of the credibility of the known celebrity as far as the Social Media space is concerned. Celebrity is an omnipresent feature of society, blazing lasting impressions in the memories of all who cross its path (Kurzman, et al., 2007). The use of celebrity endorsements in advertising has become a trend and a perceived winning formula of corporate image-building and product marketing. As existing media get increasingly cluttered, the need to stand out has become paramount and celebrities have proved to be the ideal way to ensure brand prominence (Crossland, 2015). The online black market of drugs is not left out of this circle. Thus, the nature of online marketing of falsified drugs carries the image of celebrity endorsement. It was reported that most of the drugs celebrities endorse were not certified by the FDA. The understanding is that most of the drugs endorsed by celebrities that are being marketed on social media are body enhancement ones. Images taken from Afia Schwarzenegger’s Instagram page below confirm this assertion (Figure 2).

The data indicated that this celebrity is being relied on by a falsified pharmaceutical company to promote their products on Instagram. Findings also indicate that most of the products that she promotes for this company are enhancement drugs.

**Figure 2:** Two posts from Afia Schwarzenegger’s Instagram page advertising drugs for flat tummy and buttocks enhancement



In shedding light on how illegal it is to sell these body enhancement drugs on the Ghanaian market, the Head of the Product Quality Unit at the FDA lamented that these drugs can pose health challenges to consumers:

*We at the FDA have not endorsed body enhancement drugs for sale in society. I want to put it on record that it is illegitimate for any celebrity to be endorsing these drugs. But to be frank with you, this is one of the nature that online marketing of falsified drugs takes. The thing is that when the dealers of these falsified drugs get the so-called celebrities to endorse them, they turn to attract a lot of customers. We are very much aware of the fact these body enhancement drugs that are being sold online are falsified and pose a threat to the customer's health.*

Celebrity endorsement, an attribute of online marketing of falsified drugs in this study, was intended to claim legitimacy as a way to woo potential customers. This agrees with Kotler and Armstrong (2000) that endorsement is a channel of brand communication in which a celebrity acts as the brand's spokesperson and certifies the brand's claim and position by extending his/her personality, popularity, status in society or expertise in the field to the brand. Again, the excerpt indicated that the dangers involved in using these falsified body-enhancement drugs will take a toll on the health of consumers. Perhaps the greatest threat these deceptive promotions pose is to the consumers' health and property. A celebrity's success is commonly generalized to all their traits, biasing public opinion to view them as reliable medical advisers (Leuthesser, Kohli, & Harich, 1995). Hence, people may consume falsely endorsed healthcare products and procedures with the same intentions. Nevertheless, these items will likely be of no benefit or even cause harm. In persuasive advertising, Asemah and Nwammuo (2017) indicated that celebrities can be relied on to send persuasive advertising messages to the target audience. Essentially, target audiences are more likely to resonate with the messages and posturing of celebrities therefore using celebrities to promote products is an identified way of arousing the interest of audiences.

## **8. What strategies are used by regulatory bodies in dealing with online marketing of falsified drugs?**

The strategies the Foods and Drugs Authority employed in dealing with the menace of online marketing of falsified drugs in Ghana were examined. Interview data from the three officials of the regulatory body concluded that public sensitization, implementing punitive measures and facilitating the tracking down of entities behind these drugs are strategies employed to deal with the online marketing of falsified drugs.

### **8.1 Public Sensitization**

Findings from the study suggest that the Foods and Drugs Authority plays an instrumental role in implementing sensitization programmes to enlighten the public about the detrimental effects associated with the purchase and consumption of falsified drugs. The participants indicated that through public education and awareness creation, they encourage members of society not to engage anyone or organization that is selling drugs on social media. It was found that the FDA employs traditional and digital media in engaging in this form of sensitization campaigns. According to the study participants, the regulatory body tends to use fliers, billboards, and newspaper publications as channels of communicating the dangers associated with the purchase and consumption of falsified drugs being marketed on social media. The study also revealed that the regulatory body relies on blogs, online news outlets and social media to caution the public against the patronage of online falsified drugs.

This finding reflects assertions by Amoah (2018) and Esseku (2015) who mentioned that public sensitization and national awareness programs are crucial methods of dealing with the menace of online peddling of falsified drugs. Given the critical role that consumers can play in the fight against online marketing of falsified drugs, it has been recommended that there is a need to develop public-private awareness campaigns (Amoah, 2018, WHO, 2017). The national public awareness campaign largely involves government agencies (the FDA) and law enforcement authorities to provide education for consumers regarding the risks of marketing falsified drugs as well as the various ways consumers can use to spot falsified products online (WHO, 2017). Equally, it was revealed by the FDA that one of the strategies employed in their public sensitization is informing the public about how the use of these drugs not only affects their personal life but also has grave repercussions on society in general. By this, a respondent recounted this:

*One of our strategies in the fight against online marketing of falsified drugs among other things is public education. We believe that some of the potential buyers of these falsified drugs online lack knowledge of the consequences. Ignorance about the falsity of these online drugs is a big issue. Therefore, we do our utmost best to always issue press releases, newsletters television advertisements and other means of communication for educating the public. We do this because these online falsified drugs will affect the health of the individual in question and society. Economic wise too, the society will lose. When people become sick, it becomes a concern of the state so we are intensifying our effort. (Head of Product Quality Unit of the FDA).*

The interview excerpts above indicate that people who buy drugs from these social media peddlers are not fully aware of the repercussions and the regulatory body is intensifying efforts to sensitize the public. This agrees with

the literature that at present, many consumers remain uninformed as to the risks of buying counterfeit and pirated products online (O'Hagan & Garlington, 2018). Again, the excerpt revealed that at a personal level, consumption of falsified drugs puts lives at risk. This corroborates the findings of Aminu, Sha'aban and Abubakar (2017) that falsification of medicines may have several clinical consequences ranging from poisoning, drug resistance, treatment failure, the masking of clinical symptoms of ailments, and ultimately death in the worst cases. As indicated earlier, the FDA also tends to publish press releases on social media warning the public regarding the patronizing of drugs on social media, particularly drugs that are not registered and licensed by the regulatory body. The participants indicated that publishing these releases on social media is relevant because the menace of falsified drugs is increasingly thriving in the virtual world than in offline spaces.

## **8.2 Implementing Punitive Measures**

The participants indicated that intensified efforts are being put in place to mete out deserving punishment to people who are dealing in falsified drugs online. Based on the interview data, it was revealed that people found guilty of peddling falsified drugs online are sometimes handed over to the police for prosecution or fined to pay some administrative charges. Considering the grave nature of the impact of the sale of falsified drugs online, there is a need to intensify punitive measures and implement these measures. At the national level, the business is booming and another strategy by the FDA to counteract this growth is the punishment of those in the business (Amoah, 2018). As indicated earlier, the punishments that are meted out to culprits range from fines to jail terms. Findings from the Public Health Act, Act 851 of 2012, suggest that these administrative charges or fines are between the ranges of 5,000 and 50,000 cedis depending on the severity of the crime. It was also found through the interview data that people who are found culpable of marketing falsified drugs on social media could be imprisoned for about 15 years. The Head of the Drugs Inspectorate recounted this:

*We have come to realize that people won't give up this falsified drug business. I'm being sincere here even though it is our responsibility as a regulator to stop them. Why do I say this? They are making a lot of money from this business. One strategy we employ is punishment. We punish those that we have arrested. Of them when we arrest them, we either destroy the products, fine you or imprison them depending on the type of drugs you are dealing with. I want to quickly say that most of these body enhancement drugs that they sell on social, we only seize, destroy and fine the sellers. We do this to deter people from engaging in the sale of these illicit drugs both in the open market and online.*

Given this, some people believe that stiffer penalties would help sharpen the attitudes of falsified drug dealers (Ratanawijitrasin & Wondemagegnehu, 2002). This is because drug counterfeiting is a grievous crime comparable to murder, hence use of lenient punishment is inadequate (Odiegwu, 2011).

## **8.3 Tracking down Culprits**

In examining measures being put in place to deal with the menace of falsified drug marketing online, interviewed participants have suggested that the FDA has been stringently involved in trailing perpetrators and bringing them to book. In essence, findings reveal that online surveillance measures are being adopted to track down those behind social media accounts that market falsified and unregistered drugs. The interviewees indicated this operation is usually carried out by Communications and Public Education in conjunction with the surveillance unit of the FDA. Findings reveal that in tracking down these online peddlers, some basic tactics are used. It was found that when falsified drugs are noticed on social media, officials of the FDA send messages to the accounts to express interest in purchasing these drugs. A meeting is then arranged to pick up these drugs and it is during these meetings that those behind the social media accounts are apprehended. Another strategy being used by the surveillance team and the communication department is taking screenshots of the online posts and copying the URL of the identified page which are forwarded to the investigative team. The investigative team then launches a full investigation into the product and how it is marketed online. Findings also suggest that the investigative team works collaboratively with the security agencies to apprehend those behind the online marketing of those drugs.

The interview data also revealed that the FDA works in collaboration with citizens. According to the participants, some private citizens are hired to assist in doing social media surveillance. These individuals

usually give tip-offs about the marketing of these falsified drugs to the FDA. Additionally, it was found that the FDA works together with international bodies like the INTERPOL in tracking down the online operation of falsified drugs. According to one of the participants, some falsified drugs are marketed on social media to the Ghanaian public while those behind the accounts are not in the country and situations like this, the INTERPOL is called on. The study found that INTERPOL assists the FDA in pulling down social media pages that market falsified drugs. The interview response below corroborated this theme.

*There are so many methods we use in tracking down the operation of falsified drugs on social media. Sometimes we contact the online vendors and ask to make a purchase. We arrest them when we meet to do the deal. We also encourage the general public to do online surveillance and give tip-offs when they find any social media account that is promoting falsified drugs. Also, we rely on a collaborative effort with the INTERPOL to track the activities of falsified drugs on social media. Sometimes the INTERPOL helps in pulling down accounts that are being operated outside the country but targeting a consumer base in Ghana.*

This finding aligns with some previous studies that suggested that regulatory bodies must be proactive in employing every viable strategy to clamp down on those who are dealing with falsified drugs (Amoah, 2018; Ehikwe, Eze & Odigbo, 2015). According to Amoah (2018), Food and Drug agencies are being compelled to intensify their raid on falsified drugs due to the widespread nature and increasing marketing efforts. A study conducted by Newton et al (2013) shows that to guard against sub-standard and counterfeit drugs massive support from regulatory agencies and enforcement authorities should be involved. In the same vein, Ebenezer (2015) makes the argument that a lot of collaborative efforts must be implemented in trying to curb this menace as seen in the case of this study concerning the FDA.

## 9. Conclusion

The study elaborated on the findings generated from the gathered data. More specifically, the study provided answers to the research questions that guided the study. The first research question examined the ways falsified drugs are marketed on Facebook and Instagram, revealing that over-elaboration on drug efficacy, price mechanism, and the use of celebrities were strategies used to market these drugs online. The second research question also revealed how the Foods and Drugs Authority is instrumental in organizing sensitization programs to deal with this menace as well as the strategies which are implemented to track down perpetrators behind the online marketing of falsified drugs.

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