

Public perceptions of counterfeit drugs in Nigeria and the European Union

Adebowale Richard Obe and Mark Button

Centre for Cybercrime and Economic Crime, University of Portsmouth, UK.

Dr Adebowale Richard Obe is a Lecturer at St Vincent College, Gosport UK.

Professor Mark Button is Co-Director of the Centre for Cybercrime and Economic Crime, University of Portsmouth.

Abstract

Purpose

The purpose of this paper is to examine the perception and experience of counter pharmaceuticals in Nigeria compared to the European Union.

Design/methodology/approach

The findings from this paper are based upon a survey of 362 Nigerians sourced in public places with the data then compared results from a survey by the European Union.

Findings

The key findings from this research showed some areas of similarity between Nigerians and Europeans on their views on the acceptability of purchasing counterfeits. However, Nigerians were more open to purchasing counterfeits despite the risks. There was also more anxiety over the risk of purchasing counterfeit medicines compared to the European Union.

Originality

This is the first survey of Nigerian citizens on this issue.

Research limitations/implications

Due to security issues survey data could only be sourced from Abuja, Lagos, and the relatively peaceful southwestern region of Nigeria. The data is therefore not representative of Nigeria.

Practical implications

The purchasing experience of counterfeit medicines by Nigerians along with their anxieties highlights the need for more enforcement action to tackle this problem and reassure the public.

Social implications

The article highlights the challenges of securing genuine pharmaceutical products in the Global South and the need for more greater cross-border action to tackle the problem.

Key words: Counterfeit drugs, drug counterfeiting trade, fraudulent and corrupt practices, regulations and enforcement, greed, Nigerian pharmaceutical market, public perception, and fear, poverty.

Introduction

Counterfeiting is a global phenomenon (De Barnier, 2014) that is increasingly gaining prominence, particularly in developing countries. Product counterfeiting, particularly of pharmaceutical products, has grown in recent years to become one of the world's largest illegal industries, posing numerous threats to consumers, legitimate businesses, and governments (Bate, 2012; Chaudry & Zimmerman, 2009). While pharmaceutical products are essential to the health and well-being of the people, consumption of counterfeited medicines poses serious danger to the health of the citizens. Over the years, the pharmaceutical system in many developing countries, like Nigeria, has become vulnerable to corruption and unethical practices by criminals for personal gain and enrichment at the detriment of the citizens. In addition to the fact that counterfeit drugs worsen the health burden of the citizens, cripple the economy of a country, and erode public trust in the government, it also leads to waste of income and exploitation of patients (Garuba et al., 2009). Therefore, when it comes to the problem of pharmaceutical product counterfeiting, fraud and criminal intent are involved because the quality, authenticity, and validity of such medicines cannot be guaranteed (Mackey & Liang, 2013).

The production and trading of counterfeit drugs is regarded as an act of employing fraudulent, dishonest means to deceive others for illegal financial gain. In Nigeria, fraud, corruption, and unethical practices have been the major significant problems confronting the pharmaceutical market, resulting in the continued proliferation of the pharmaceutical supply chain with counterfeit drugs. Due to the severity of the problem in Nigeria a few years back, NAFDAC, between 2001 and 2005, enforced a ban on several pharmaceutical companies from India, China, and Pakistan from exporting pharmaceutical products to Nigeria due to their involvement in the production and shipment of counterfeit medicines to Nigeria (Akunyili, 2005). Regrettably, attempts by the government of Nigeria over the past three decades to curb the production and importation of counterfeit drugs into the country have failed to yield much success due poor implementation of relevant laws, widespread corruption, presence of non-professionals in drug business, inconsistent government policies, greed, dishonesty, and get money quick syndrome of some dealer and importers, and high cost of production (Oseni, 2019; Akinyandenu, 2013; Garuba et al., 2009). In addition, the lack of political commitment by the government to ensure that all stakeholders in the industry adequately play by the rules by complying with all existing pharmaceutical regulations and standards in the country is also a major factor (Oseni, 2019; Akinyandenu, 2013).

Given the strategic importance of the Nigerian drug market to counterfeiters and criminals within the west Africa region, and the fact that Nigerian pharmaceutical market is regarded as a major hub for the distribution of counterfeit medicines within the region, tackling the menace of counterfeit drugs in the Nigerian pharmaceutical supply chain will have a positive impact on the pharmaceutical supply chains of other countries within the region. Though the number of existing academic literature on counterfeit drugs reflects the complexity of the problem in Nigeria, there has been little or no research on the hidden fear of Nigerians on

the authenticity of the pharmaceutical products available in the Nigerian pharmaceutical markets.

Therefore, given the alarming rate at which counterfeit drugs are spreading in Nigeria, a more comprehensive understanding of the opinion of Nigerians is needed on the issue. Specifically, this article aims to examine the magnitude of the problem of counterfeit drugs in Nigeria, with attention primarily devoted to the concern and fear of Nigerians on the quality and authenticity of medicines in the Nigerian pharmaceutical market. Therefore, based on the conceptual and empirical framework, the remaining part of the article is structured as follows. It will begin by exploring the research literature on drug counterfeiting and the magnitude of the problem and past scandals in Nigeria. The methodology will then be set out before the findings from this research reported. The analysis will include a statistical comparison of the results of public survey conducted in EU countries with the one conducted in Nigeria. The final part of the article analyses the limitations of the study as well as the conclusion and recommendations.

The magnitude of the Problem of drug counterfeiting in Nigeria

Production of counterfeit or fake drugs in the pharmaceutical industry can be described as the employment of fraudulent, dishonest, or unethical practices to gain a financial benefit at the expense of innocent victims (Marcel & Cowen, 2014). In their article "Fraud, Error and Corruption in Healthcare: A Contribution from Criminology", Brooks, Button & Gee (2012, chapter. 2) described fraud as "illegally obtaining the benefit of any nature by intentionally breaking a rule." The increasing booming of the counterfeit drug trade in sub-Sahara Africa countries, particularly in Nigeria is increasingly becoming a global concern (WHO, 2017) that can no longer be treated as a minor problem. According to a report by the Pharmaapproach (2023) report, Nigeria has about 115 registered pharmaceutical companies; however, the country still relies heavily on imported finished pharmaceutical products (Okereke et al., 2021). Unfortunately, the quality of most of the drugs has been a major cause of concern to Nigerians and other nationals of other sub-Sahara African countries (Omer, 2016), due to widespread perception of high prevalence of counterfeit medicines in the supply chain system.

Agada, Okareh, and Ugbobo (2016) argue that one of the major challenges facing the Nigerian pharmaceutical industry is the lack of effective methods to detect counterfeit drugs at the point of purchase. In addition, the limited information on counterfeit drugs, weak punitive measures and the corrupt system in Nigeria has given counterfeiters the opportunity to turn the country and other developing countries with similar regulatory problem into fertile ground for counterfeit drugs. Most consumers, particularly in Nigeria and other sub-Saharan African countries, who are unaware of the inherent dangers of counterfeit medicines can easily be deceived into thinking that the drugs that they are purchasing are genuine (OECD/EUIPO, 2019; Aminu & Gwarzo, 2017). Unfortunately, identifying counterfeit drugs is often challenging for patients and even sellers because treatment responses are somewhat subjective (Nsimba, 2009).

Despite the establishment of NAFDAC and the enactment of other regulations aimed at curbing drug counterfeiting activities in Nigeria (Akunyili, 2005), counterfeit drugs remain prevalent, as evidenced by a recent study conducted by Joda et al. (2017), which revealed that approximately 50% of the drugs available in the Nigerian market are counterfeit. According to Ekoh et al. (2022), there have been, in recent years, allegations of corruption and a decline

in the effectiveness of the National Agency for Food and Drug Administration and Control (NAFDAC). The huge profits from counterfeiting of pharmaceuticals have continued to serve as huge incentives to the counterfeiters who are willing to go any length in order to circumvent regulatory processes for their illicit gain (WHO, 2017). Furthermore, findings from the studies conducted by the Europol and European Union Intellectual Property Office (EUIPO, 2022) indicate that the enormous profit potential of selling counterfeit drugs is attracting an array of fraudsters and criminals into the trade. Though, it may be difficult to determine the precise estimate of revenues from the sale of counterfeit drugs globally, a projection by Bairu (2015) indicates that criminals generate about \$75bn annually from the sales of counterfeit medicines. The fact that the risk of arrest and prosecution for engaging in counterfeit trade is very low compared to other crimes, particularly in most developing countries, has made the illicit trade very lucrative (Mackey & Liang, 2011).

Past counterfeit drugs scandals in Nigeria

According to the World Health Organisation, counterfeit medicines cases occur are "a rare occurrence in some countries, but an everyday reality in others" (WHO, 2017), particularly in sub-Saharan African countries including Nigeria. For instance, in the early 1990s, several African countries banned the importation of medicines from Nigeria due to quality concerns (Akunyili, 2005). By the early 2000s, it was widely reported that more than 60% of the drugs available in the Nigerian pharmaceutical market were counterfeit (Akunyili, 2005). In the past, several high-profile cases, such as the 1990 paracetamol poisoning which killed 109 children and the 2009 My Pikin teething syrup poisoning, generated serious concern among the industry regulators, the public, and other industry stakeholders in the industry (New York Times, 2009; BBC, 2013). Similarly, the Nigeria government, in an attempt to assist the government of Niger Republic in 1995 when there was an outbreak of meningitis in the country, donated 88,000 meningitis vaccines made by SmithKline Beecham and Pasteur Merieux to the Niger Republic. However, some Nigerian health officials fraudulently substituted the vaccines with counterfeit ones before reaching the final destination in Niger Republic. By the time it was discovered that the drugs were counterfeit, over 50,000 people had been vaccinated with the fake drugs, resulting in the death of about 2,500 patients (Bate, 2012; Attaran et al., 2011). These scandals and many other recent ones have continued to generate unease and uncertainty in the country.

Recently, a Bloomberg report published by the Nigerian Guardian newspaper on the 9th of April 2023 identified Nigeria as one of the most counterfeited markets in the developing world, occupying a top seat among African countries, losing thousands of citizens annually to fake drugs. For instance, the committee set up by the Nigerian government (the Anti-Counterfeiting Collaboration of Nigeria (ACC) to tackle the problem of counterfeiting in collaboration with NAFDAC reported that about 29-billion-naira worth of counterfeit drugs were destroyed by the committee between 2015 and 2017. In 2004, three hospitals in Nigeria reported adverse reactions caused by contaminated infusions produced by four Nigerian companies. It was found that the infusions were heavily contaminated with microorganisms, and out of the 149 screened water brands used for injection, only two were sterile (Adedayo, 2017). Furthermore, a report published by the Punch newspaper Nigeria on August 3rd, 2022, stated that officers of the Nigeria Customs Service, in collaboration with the National Agency for Food and Drug Administration and Control (NAFDAC) and the National Drug Law

Enforcement Agency, destroyed 48 containers of counterfeit drugs being imported into the country.

Method

The aim of this research was to explore Nigerian citizens' attitudes, awareness, and perception of counterfeit medicines by undertaking a survey. The questionnaire used for the public survey titled "European Citizen and Intellectual Property: Perception Awareness and Behaviour." was designed by the European Union Intellectual Property Office (EUIPO) in 2013 and updated in 2016. The EU survey was adopted for this study because it covers a broad range of topics related to drug counterfeiting, including legislation, anti-counterfeiting actions, market control, and national and international collaborations. The survey was commissioned by Deloitte as part of the European Union drug counterfeit awareness programme. The findings of the EU survey showed that most EU countries value intellectual property rights and disapprove of the purchase of counterfeit products. This study aims to determine Nigerian citizens' perception of counterfeit medicines, the reasons for the proliferation of counterfeit drugs in the country, and the increasing demand for such drugs.

The original plan was to conduct the research fieldwork in each of the six geo-political regions in Nigeria. However, it was impossible to conduct fieldwork in the northern region of the country due to the deteriorating security situation caused by growing cases of killings and kidnappings by the Boko Haram terrorist group and other terrorist and bandit groups operating in the region. Additionally, the eastern region of Nigeria has seen a rise in kidnapping activities, making the area too risky for the research study. As a result, fieldwork was mainly carried out in Abuja, Lagos, and the relatively peaceful southwestern region of Nigeria. The researcher chose a paper-based survey method (Nulty, 2008) to ensure a high response rate from participants since most Nigerians have little or no knowledge of how to respond to an online survey. The researcher employed volunteers to distribute the questionnaire papers to respondents to minimise costs (Greenlaw & Brown-Welty, 2009). After the fieldwork, a total of 362 responses were obtained from participants with almost gender parity, as indicated in the tables 1 and 2 below.

Table 1

Surveys	Number of respondents
Public survey	362
Total	362

Note: This table was created by authors

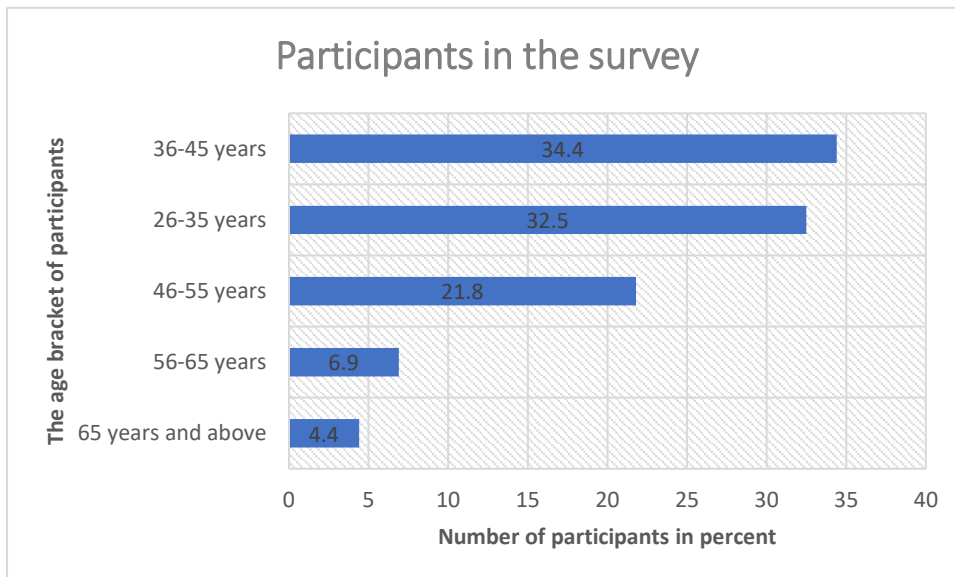
Table 2 (gender of participants)

	Gender	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Valid	Male	175	48.2	48.2	48.2
	Female	187	51.8	51.8	100
	Total	362	100	100	

Note: This table was created by authors

Though participants were selected using convenience sampling method, however, the above analysis clearly shows that both genders were well represented in the survey with almost equal numbers of male and female participants.

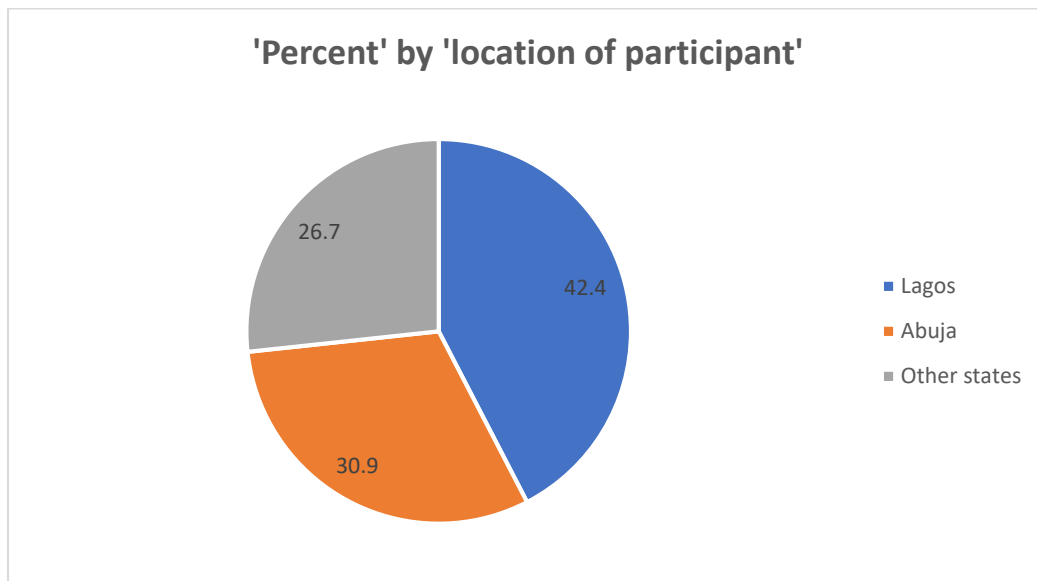
Figure 1 (descriptive statistics of the age bracket of participants)



Note: This figure was created by authors

According to the 2020 United Nation population data base, Nigeria currently has a population of about 212 million people. The country has a very high young population with the larger percentage of the population fall within the age of 18 and 45 years. Of the total number of participants that participated in this survey, 66.9 percent fall within 26-45 years age bracket as indicated in Figure 1.

Figure 2 (geographical location of participants)



Note: This figure was created by authors

Due to the worsening security situation in some parts of Nigeria, especially in the northern and eastern parts of the country, the research fieldwork was done in a relatively peaceful region, as shown in Figure 2. Lagos is the commercial/economic capital of the country, with more than one-tenth of the Nigerian population residing in the state, according to the United Nations 2020 population report. The unique feature of Lagos in terms of population and economic status makes the state a good research ground for the exercise. Abuja, just like Lagos, is the executive capital of Nigeria, and nearly all tribes in Nigeria reside in the city, which also makes the city a good choice for the research fieldwork. Other states where the fieldwork was carried out are in the country's southwestern cities. Therefore this study presents only a partial picture of small parts of Nigeria where security and order are relatively good.

Findings

As noted above this study adapted a survey designed in 2013 and updated in 2017 by the European Union Intellectual Property Office (EUIPO, 2013 & 2017). The EU countries designed the EUIPO questionnaire to provide further evidence of how EU citizens perceive IP rights (IPR) at a time when economic policy is changing towards prioritising the promotion of innovation and creativity. To fully understand the data, descriptive statistics were used to describe and analyse the basic features of the public survey data using SPSS. The public survey contained 19 questions, and a total of 363 participants participated in the public survey.

Table 3: Statistical comparison of the results of public survey conducted in EU countries and Nigeria using same questionnaires.

	EUIPO (2017) Research Findings Conducted in EU Countries			Findings from Research Conducted in Nigeria	
	Agreed %	Disagreed %	N/A %	Agreed %	Disagreed %
It is acceptable to buy counterfeit products when it concerns luxury products	17	81	2	87.6	12.4
It is acceptable to buy counterfeit products when the quality of the product does not matter	17	81	2	73.6	26.5
It is acceptable to buy counterfeit products when the original product is not or not yet available where you live	24	74	2	59.5	40.5
It is acceptable to purchase counterfeit products when the price for the original and authentic product is too high	27	71	2	54.6	45.5
Buying counterfeit products ruins businesses and jobs	78	20	2	93.4	6.6
Buying counterfeit products supports child labour and illegal trafficking	68	28	4	93.4	6.6

Buying counterfeit products poses a threat to health	66	30	4	92	8
Buying counterfeit products discourages companies from inventing new products and introducing them to the market	49	48	3	83.7	16.3
Buying counterfeit products is an act of protest and a way to resist to the market driven economy and the large premium brands	34	62	4	28.7	74.3
Buying counterfeit products allows making a smart purchase that enables you to have the items that you wanted while preserving your purchasing power	30	67	3	49	50.1

Note: table created by authors, but some of the data originating from EUIPO (2017)

Table 3 above first illustrates that in Nigeria the respondents were much more open to purchasing counterfeits in general, compared to their EU counterparts. Regarding luxury products 87% in Nigeria thought it was acceptable to purchase compared to 17% in the EU. When the issue of ‘quality doesn’t matter’ there was a slight fall in Nigeria to 73%, but still only 17% in the EU. For products not available to purchase yet where you live the EU scores slightly rose to 24% and fell further for Nigeria to just under 60%, but still a clear majority in favour of purchasing. A further narrowing between the two countries occurred on the issue of purchasing counterfeits when the authentic product is too high: 55% agreed in Nigeria, compared to 27% in the EU.

Respondents were also asked about a number of statements on counterfeits and on this the views of the EU and Nigerian citizens were much more similar. In the EU 78% thought ‘Buying counterfeit products ruins businesses and jobs’, compared to 93% in Nigeria. Regarding ‘Buying counterfeit products supports child labour and illegal trafficking’, 68% agreed in the

EU, compared to 93% in Nigeria. 'Buying counterfeit products poses a threat to health', was much more agreeable statement to Nigerians with 92% agreeing compared to 66% in the EU. On the issue 'Buying counterfeit products discourages companies from inventing new products and introducing them to the market', only 49% agreed in the EU, compared 83% in Nigeria. On these questions it can be seen the Nigerians and EU respondents agreed counterfeits had several negative impacts, but these feelings were much more widespread in Nigeria.

Respondents were also asked whether they agreed that 'Buying counterfeit products is an act of protest and a way to resist to the market driven economy and the large premium brands' and in both the EU and Nigeria only around a third agreed with this statement. However, when they were asked whether they agreed, 'Buying counterfeit products allows making a smart purchase that enables you to have the items that you wanted while preserving your purchasing power', almost 50% agreed in Nigeria, compared to 34% in the EU.

Table 3 therefore illustrates some interesting findings. Nigerians are much more open to purchasing counterfeit products than EU citizens, but also more recognise the damage that is done as a result of this. The EU respondents also recognise this, but not to the same extent. There is little traction in both Nigerian and EU to the idea of purchasing counterfeits as a protest. There is also more recognition that purchasing counterfeits could be a smart decision in some circumstances in Nigeria. However, when we view table 4 we have data on actual admitted purchases of counterfeit products and this contrasts with the data from table 3.

Table 4: During the past 12 months, which of the following have you done?

	Findings from the EUIPO (2017) Study Conducted in EU Countries	Findings from The Study Conducted in Nigeria
	Response in %	Response in %
Bought any counterfeit products intentionally	7	1.9
I Bought counterfeit pharmaceutical/medicine products intentionally	7	0.3
I bought counterfeit products as a result of being misled	10	4.1
I bought counterfeit pharmaceutical/medicine products as a result of being misled	10	10.7
Wondered if a product you bought was genuine or counterfeit products	24	82.9

Note: table created by authors, but some of the data originating from EUIPO (2017)

Table 4 shows that only 0.3% of Nigerians buy counterfeit products intentionally. 10.7% of the respondents buy pharmaceutical products because of being misled. Table 4 also shows a greater number of EU citizens admit to potentially buying counterfeit pharmaceutical drugs by being misled with 10% in the EU compared to 4.1% in Nigeria. The same question, but related to medicines alone, however, had the same responses from the two countries at around 10% each. However, the most significant and important difference is that in Nigeria 82.9% wondered if products they bought were genuine, compared to only 24% in the EU. Nigerian citizens clearly have much greater anxiety over the authenticity of products compared to EU citizens.

Discussion

This research raises some interesting findings. Nigerians are more agreeable to concept of buying counterfeits, but admission of doing it similar to EU. Nigerians more clearly recognise harms of counterfeits to society and business than EU, but are also much more open to the risk of actually deliberately purchasing them. Perhaps the past scandals involving counterfeit drugs are closer to the minds of Nigerians, compared to EU citizens who have had much less exposure to such scandals. It is also interesting that despite the stronger regulation in the EU, still similar numbers purchase counterfeit medicines to those in Nigeria. Perhaps this is driven more by necessity for the Nigerians and for economic reasons among some Europeans. A very interesting finding is that many more Nigerians than Europeans wonder if they have purchased counterfeit medicines. There is clearly much more anxiety on this issue, than in EU. Illustrating a fear in that many in Nigeria and the Global South regularly encounter compared to those in Europe. This is an area which requires much more research. Anxieties over crime is an issue that has secured significant scholarly attention (see Hale, 1996). However, concerns over what could be considered 'white collar crimes' or 'economic crimes' have not been considered in depth, if at all for counterfeit related issues in the Global South. One only has to imagine being ill and then facing the additional concern that the drugs prescribed might be fake and wont work – this is not something many in the Global North worry about. Therefore this area should be a much higher priority for scholars.

Conclusion

This paper has explored the problem of counterfeit medicines and examined the public perceptions relating to this in Nigeria and European Union. The paper began by exploring the literature on counterfeit medicines in Nigeria. The paper then set out the methodology for this paper before presenting the results. The key findings from this research showed some areas of similarity between Nigerians and Europeans on their views on the acceptability of purchasing counterfeits. However, Nigerians were more open to purchasing counterfeits despite the risks. There was also more anxiety over the risk of purchasing counterfeit medicines compared to the European Union, highlighting differences between the Global South and North. Counterfeit medicines are clearly a menace to society and much more needs to be done to tackle the problem in countries such as Nigeria and we need more research to understand some of the many issues related to this such as fear and anxiety.

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