



Stakeholders Perceived Activities of National Agency for Food, Drugs Administration and Control in combating the Sales of Counterfeit and Substandard Medicines

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Abstract

Medicine counterfeiting is a global public health problem, because the effects can be felt by both the country of manufacturer to the recipient countries. This study investigated pharmacist and patent medicine vendors' perception of NAFDAC activities to combat the sales of counterfeit and substandard medicines. Purposive sampling technique was used to select Oyo, Lagos and Ogun States in the south-west geopolitical zone. The psychometric properties of the instrument were established through face validity and expert judgement. The result shows that NAFDAC carry out routine visit to most of the pharmacies at least once in a year except few pharmacies they rarely visited. The study reveals that majority of the patent medicine sellers were rarely visited. Moreover, the study affirms that pharmacists' and patent medicine vendors supported the view that NAFDAC has been very effective in their work and their work has reduced the proliferation of counterfeit and substandard medicines.

Keywords: Stakeholders, Counterfeit medicines, Combat, NAFDAC, Pharmaceutical.

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INTRODUCTION

The development of medicines (pharmaceuticals) has undergone serious evolution. Over time, medicines have taken on many forms, from traditional medicines (large concoctions) infused from a cocktail of leaves, fruits, barks etc. to tablets, capsules, syrups, injections and drips etc. made through either chemical synthesis or extracted from plants and/or animals (Akinola, 2007). Modern science and technology has turned medicines into extremely valuable products and continues to aim at delivering them in forms that are increasingly smaller, more precise in action, more effective and safer. This poses a great challenge to the pharmaceutical industry, as there is always the need to improve previous inventions and develop even better medicines (Akinola, 2007).

The World Health Organization (WHO) (2011) defined counterfeit medicines as “medicines that have been deliberately or fraudulently mislabelled with respect to identity and/or source”. The products could include incorrect ingredients, may mistake the amount of the active ingredients, or are manufactured under circumstances that lack quality control. Example of counterfeit medicines in Nigeria include preparations without active ingredients, toxic preparations, expired medicines that are re-labelled, medicines issued without complete manufacturing information and medicines that are unregistered with the National Agency for Food and Drug Administration and Control (NAFDAC), the national agency responsible for regulation of medicines in Nigeria (WHO, 2011).

Medicine counterfeiting is a global public health problem, because the effects can be felt from both the country of manufacturer to the recipient countries. In Nigeria, counterfeit medicine is a nerve-racking problem of great concern to the government and the governed. Counterfeit medicines proved a major factor in contributing to high death rates. For example, over 150 children in Nigeria died in 1989 as a result of formulation error in paracetamol syrup containing diethylene glycol (Ehikwe, Eze & Odigbo, 2015). The problem of counterfeit medicines was so severe that neighbouring countries such as Ghana and Sierra Leone officially banned sales of medicine, food and beverage products made in Nigeria (NAFDAC, 2013). The need to tackle this problem is part of the reasons for the establishment of National Agency for Food and Drug Administration and Control in 1994 which would help create a counterfeit-medicine-free environment (NAFDAC, 2013). The intent was to ensure effective registration of good quality medicines that are inexpensive in Nigeria.

Buttressing the importance of NAFDAC, Asiegbu and Ogbuji (2015) asserted that NAFDAC is one of the efforts put in place by government to effectively protect economy, safe-guarding public health, property and environments and managing natural disasters. One of such policies is national medicine safety policy, which focuses on addressing specific medicines needs and priorities of countries. It is worthy of note that national medicine control schemes vary according to nations, but they comprise mainly medicine registration and regulations, policy and institutional frameworks, medicine inspection and monitoring, medicine laboratory services, involvement of all stakeholders and communication of medicine standard to the consumers (Omojokun, 2013). All medicines manufacturing and distributing firms operating in Nigeria must seek and obtain NAFDAC approval that confirms that their products are safe for human consumption before distributing them to the public. On the other hand, NAFDAC communicates the approval information to the general public by the registration number given to these medicine companies to be included in the information they communicate on their products labels. Also, NAFDAC puts in place phone-in programme which provide the consumer the opportunity to make inquiries and be more enlightened about the quality of medicines (Omojokun, 2013).

Medicine counterfeiting has led to the loss of lives and enormous economic loss which appears to be increasing annually. In order to mop up the counterfeit medicines already in circulation, NAFDAC has been collaborating with registered manufacturers, confiscated and destroyed expired and counterfeit medicines thereby increasing the cost of obtaining such illicit medicines (Naik, 2004 in Lybecker, 2007, Akunyili, 2007). NAFDAC has engaged in raids leading to confiscation and destruction of a wide range of counterfeit and substandard products; destroying over US\$35,753,014 worth of medicines found to be counterfeit or substandard between 2001 and 2004 (Ebenezer 2015 and Akunyili, 2005b cited in McGinnis, 2010).

A study carried out by Erhun in 2001, showed that 6 out of 7 respondents believed that the presence of non-professionals in medicine business is a major contributing factor to the availability of counterfeit medicines in Nigeria. Under the Nigeria medicine law, pharmacists have the authority to manufacture, sell, distribute, import, export, dispense and compound medicines (Ogbonna, 2016; Erhun, 2001). Community or retail pharmacists can acquire premises for sale and medicine dispensing and such premises are usually registered. However, there are also non-pharmacists such as the licensed medicine vendors that are holders of “patent and proprietary medicine vendors’ right” which is granted to them by government, they are non-professionals who might be less capable of identifying genuine from counterfeit medicines. The minimum academic requirement for them to obtain a license is the first school-leaving certificate (Ogbonna, 2016). These vendors are only allowed to sell over the counter (OTC) medicines but rather they sell different categories of medicines both prescription and over the counter medicines as long as they will make profit from it. Such medicines can include antibiotics, narcotics, toxoids and antihypertensive for profit purposes with no adequate monitoring systems in place to check them (Ogbonna, 2016). Sometimes, they are seen prescribing medicines to their customers or even treating them and giving injections (Okeke, Uzuchukwu & Okafor, 2006). These vendors are supposed to be monitored by the state ministry of health (MOH) pharmacy division.

However, the war against adulterated and counterfeit medicines has been a relentless one. No doubt, remarkable success has been recorded in the quest to keep such medicines off the market (Ogunlela, 2011). From time to time tons of counterfeit and sub-standard medicines are intercepted by NAFDAC and are destroyed (Ayozie, 2013; Ogunlela, 2011).

According to estimate by the WHO about 10% of medicines circulating worldwide and 25% in less developed countries are counterfeit. Africa and some parts of Asia are the most affected regions followed by Latin America. In Nigeria, the problem of counterfeit medicines has significantly reduced from 41% in 2002 through 16.7% in 2006 (Akunyili, 2007; NAFDAC score card, 2013) to 10% 2010 (Amadi, 2014), and 6.4% in 2012 (NAFDAC SCORE CARD 2013). Ofuani, Kuye and Ogundele (2015) assess the efficiency of government regulatory agencies in Nigeria. It was concluded that NAFDAC has efficiently fulfilled its mandate of effective administration and control of quality of foods, drugs, cosmetics, medical devices, chemicals and packaged water; thereby protecting the consumers from grievous effect of expired, counterfeit and substandard foods, medicines among other products.

However, sanitising Nigeria market to checkmate the proliferation of illicit medicine by NAFDAC may be a difficult task. This research, therefore, investigated various NAFDAC activities in combatting sales of counterfeit and substandard medicines in the circulation. Likewise, the efficiency of NAFDAC in ensuring that medicines in circulation are safe for use was assessed. This investigation will provide all stakeholders in health sector with necessary information on the extent to which the main objectives of NADFAC have been met.

Research Questions

- What are the various activities of NAFDAC to combat sales of counterfeit and substandard?
- How often does NAFDAC visit pharmacies and patent medicine stores?
- What are the indices NAFDAC check during her visits to pharmacies and medicines stores?
- What was the perception of pharmacists and patent medicine vendors on the efficiency of NAFDAC in combating the sales of counterfeit and substandard medicines?

METHODOLOGY

This study adopted the phenomenological research design. The population for this study comprised of all the Pharmacists and Patent medicine vendors in South-West Nigeria. Three States (Oyo, Lagos and Ogun State) from the six states in the South-west geopolitical zone were purposively selected because they share international boundaries where counterfeiting activities of the importers and exporters are heightened. From each of these states, the researcher purposively selected the cities (Ibadan, Isolo and Abeokuta) where NAFDAC offices were situated. The purposive sampling technique was employed to select 6 (six) NAFDAC principal officers, fifteen (15) pharmacists and thirty (30) patent medicines vendors for interview from the above sample. The instrument used for this study was Key Informant Interview Guide (KIIG) that elicited information from the pharmacists and patent medicine vendors on NAFDAC activities and the effects on the reduction of counterfeit and substandard medicines. The psychometric properties of the instrument were established through face validity and expert judgement.

RESULTS

Research Question 1: What are the various activities of NAFDAC to combat sales of counterfeit and substandard?

Various Activities NAFDAC to Curtail Sales of Counterfeit and Sub-standard Medicines

Investigation about the various activities NAFDAC uses to curtail sales of counterfeit/sub-standard medicines was also considered. The respondents who were NAFDAC principal officer expressed clearly various measures employed by NAFDAC to curb all forms of counterfeit or substandard medicines sales. Some of the activities were mentioned by one NPO who said:

The activities NAFDAC uses to curtail sales of counterfeit/substandard medicine are: Investigation, closure of medicine store, arrest of the culprit, handover of the culprit to law enforcement agents, holding of press conference, laboratory analysis, confiscation of counterfeit/expired products, and destruction of counterfeit, expired and substandard medicines (NAFDAC principal officer, 2019).

Another NPO supporting the statement also pointed out other activities such as raid on hawkers, fortification survey, destruction exercise, Good Manufacturing Practices (GMPs)

Road Map inspections of medicine manufacturing facilities, investigation, beefing up of surveillance, sensitization, meeting/training clients, counselling and sanctions. Furthermore, another NAFDAC principal officer (NPO) in addition to what has been said also talked about other activities that can be used by NAFDAC to control the sales of counterfeit and substandard medicine. The NPO said:

NAFDAC use the following activities to checkmate the unit sales of counterfeit and substandard medicines: organizing public enlightenment, raids on hawkers, sealing up of suspected medicine store/Pharmacy, intercepting and prosecution of counterfeit, substandard and expired medicines (NAFDAC Principal Officer, 2019).

Putting together the responses of the interviewees about what NAFDAC do to reduce counterfeit and sub-standard medicine sales, it can be deduced that NAFDAC uses about fourteen measures. These activities include confiscation of such medicines, destruction of counterfeit and substandard medicine, handing over those involved to law enforcement, closure of any medicine store involved in such illegal activities, raid on hawkers of such medicine, registration of products inspection of pharmacies and patent medicine store, sensitizing clients about counterfeit and substandard medicine.

Research Question 2: How often does NAFDAC visit pharmacies and patent medicine stores?

Pharmacists Responses about NAFDAC Routine Visits

The researcher made further enquiry by asking the pharmacists about how often NAFDAC officials carry out routine visit to their pharmacies. This question was raised to confirm what was gathered from NAFDAC staff concerning frequency of their visit to Pharmacies. Information from most of the Pharmacists was that NAFDAC routine visit to them was twice in a year, some said quarterly, once in a year, while some claimed they hardly visit them. One pharmacist said:

When I was practicing at Lekki, NAFDAC never came for the period of 18 months that I stayed there (Pharmacist, 2019).

Another pharmacist smiled sarcastically and said:

I do not know because in my over 7 years of practice I have not witnessed any inspection (Pharmacist, 2019).

This confirms that NAFDAC carry out routine visit to most of the pharmacies at least once in a year except few pharmacies they rarely visited. This may be attributed to the location of their area of practice or a change in their address. NAFDAC visit to a particular pharmacy normally does not exceed twice in a year. The frequency of check is a pointer that the pharmacist or medicine vendor has not complied with the standard rules and regulations. This finding is in line with what was gathered from NAFDAC staff when they were interviewed. The NAFDAC staff said routine visit was usually carried out on daily or weekly basis to Pharmacies but once or twice in a year to a particular pharmacy while the Pharmacists claimed that the routine visit to their pharmacies is either once in a year, twice in a year, quarterly or not at all.

There were divergent responses about from the Patent Medicine Vendor with respect to how often NAFDAC officials visit their stores. Some of the respondents complained that they have never been visited by NAFDAC since the time they have opened their Patent Medicine Store. A respondent said:

NAFDAC have never come not even once (Patent medicine vendor, 2019).

Another respondent in the same shoe also said,

They have not come for once since last ten years that i open this medicine store (Patent medicine vendor, 2019).

Close to these are those who said NAFDAC rarely visit their store. A respondent said:

The last time NAFDAC visited my medicine store was 5 years ago (Patent medicine vendor, 2019).

A medicine vendor experiencing the same situation explained the reason why some of the patent medicine vendors are not being visited or rarely visited by NAFDAC; he said it was because they registered under Pharmacists Council of Nigeria and not directly under NAFDAC. NAFDAC rarely visited medicine stores, because we got our registration under pharmacists' council of Nigeria which was responsible for the regulation of our practice.

Some patent medicine vendors who claimed they were being visited by NAFDAC said the visits are usually yearly, some said bi-annually, there are those who mentioned quarterly visit. Just one or two of the respondents mentioned rarely situations such as six times in a year, once in two months, thrice in a year and monthly.

Research Question 3: *What are the indices NAFDAC check during her visits to pharmacies and medicines stores?*

Indices NAFDAC officials check during routine visits to Pharmacies

The Interviewees were further asked about the indices NAFDAC looked for during any visit. One pharmacist said:

NAFDAC Officials check Pharmacy location and outlook, pharmaceutical manufacturing outlet (Environment), Pharmaceutical centre ingredients and components, Standard equipment, Product registration and Manufacturing and Expiry dates (Pharmacist, 2019).

Another pharmacist explained further that:

NAFDAC check product label, prohibiting selling product with label without NAFDAC number, ask for record of expired drugs, checked the shelf for expired medicine and ensure that expired medicine are remove" (Pharmacist, 2019).

A pharmacist summing up the duty of NAFDAC officials during routine visit mentioned that *"NAFDAC simply check for deviation from compliance with standards"*

From the responses of the Pharmacists, it can be deduced that during NAFDAC visit, the officials check the practicing license, check the shelf for unregistered products and expiry medicines, check for counterfeit drugs, products with registration lapses, they check for storage temperature, record of disposal of expired medicines, confirm compliance with drug rules and regulations; check the location, environment. All what the respondents said concurred with information gathered from NAFDAC staff that were interviewed.

Their responses were similar to those mentioned by NAFDAC officials and pharmacists that were interviewed. A medicine vendor said:

The indices the agency look out for are the storage conditions of medicine for appropriate temperature, expiry date of medicines, check the shelf for appropriate expired drugs (Patent Medicine Vendor, 2019).

Another medicine vendor added to this by saying that:

They look for unregistered products, they look for arrangement of the medicines, they look for expired medicine, they look for the record of how expired medicine have been destroyed (Patent Medicine Vendor, 2019).

One common thing mentioned by nearly all the respondents is the NAFDAC registration numbers. Other indices that the patent medicine vendors mentioned are checking for substandard products, arrangement of medicine in the shelf, unregistered product, expired medicine and expiry date. Nevertheless, some of the patent medicine vendors who have not been visited by NAFDAC were unable to express view about what NAFDAC look out for during visits to patent medicine stores. One of such medicine vendors said:

they have not come for once since last ten years that I open this medicine store, since they have not visit we don't know what they check (Patent medicine vendor, 2019).

Another patent medicine vendor also said:

They have never visited, since I have never seen them I cannot say what they are out for (Patent Medicine Vendor, 2019).

Research Question 4: What was the perception of pharmacists and patent medicine vendors on the efficiency of NAFDAC in combating the sales of counterfeit and substandard medicines?

Most of the pharmacists when interviewed about their views with regards to how NAFDAC activities have reduced the proliferation of counterfeit and substandard medicine, responded by mentioning those activities NAFDAC engages in to curb the proliferation of counterfeit and substandard medicine. A pharmacist said:

NAFDAC activities have greatly reduced the importation of counterfeit medicine. It has also helped to curtail the activities of local counterfeiters because many of them have desisted from the act (Pharmacist, 2019).

Another pharmacist, who also supported the statement said:

Incidence of counterfeit and substandard medicine has reduced through un-remitting routine inspection and strict enforcement (Pharmacist, 2019).

A pharmacist, who likewise have positive opinion about the activities of NAFDAC said:

They have immensely discouraged questionable sources of medicines (Pharmacist, 2019).

While another pharmacist expressed it thus,

Those medicines that do not have NAFDAC registration number are off the shelves (Pharmacist, 2019).

All the pharmacists who agreed that NAFDAC activities have reduced the proliferation of counterfeit and substandard medicine mentioned some of those activities. This include making Pharmacies adhere to stocking of registered medicine by NAFDAC, places caution on manufacturers for sales, influence the community on what to watch out for while procuring and creates awareness, strictly monitoring and controlling medicine; any medicine that does not merit the standard is confiscated and destroyed.

Contrary to the opinions of majority of the respondents, one pharmacist said:

In my opinion, NAFDAC activities has reduced the proliferation of counterfeit and substandard medicine but they are performing below the expectation because their routine check is poor and the patent medicine store are just selling control medicine anyhow, they just rely on the whistle blowers before they do visits to medicine stores most of the time and focus their activities majorly on the port inspections. If I should rate them I will give them 50% (Pharmacist, 2019).

His expression was backed up by another pharmacist who said:

NAFDAC activities has not reduce the proliferation of counterfeit, substandard medicine because there is influx of counterfeit, substandard medicine in the market and making the market porous (Pharmacist, 2019).

Also, there are other pharmacists that have the contrary opinion that NAFDAC has not done enough or has not done up to expectation.

Inquiry about the effectiveness of NAFDAC from the patent medicine vendors revealed that most of the interviewees agreed that NAFDAC is doing a great job and their work has brought about reduction of counterfeit and substandard medicine. One of the Patent Medicine Vendors said, *“They are doing a wonderful work, the larger percentage of medicine in the market now are efficacious”*. The statement was backed by another respondent who said:

NAFDAC activities reduce the proliferation of counterfeit medicine by reducing in death rate, reduction in consumption of narcotic medicines and reduction of illicit medicine in the market (Patent Medicine Vendor, 2019).

Yet, other medicine vendors felt that there is still need for improvement, one medicine vendor said, *“They are really trying because they have brought sanity to the market to some extent but can still do more”*

On the other hand, few of the medicine vendors mentioned that NAFDAC is not effective. A respondent said:

There has not been reduction in the prevalence of counterfeit and substandard medicine so far, because they are still more in the market (Patent Medicine Vendor, 2019).

Another medicine vendor having the same view said:

NAFDAC activities has not reduced counterfeit and substandard medicine because there is influx of counterfeit, substandard medicine in the market and making the market porous” (Patent Medicine Vendor, 2019).

On a general note, most of the patent medicine vendors supported the view that NAFDAC has been very effective in their work and their work has reduced the proliferation of counterfeit and substandard medicine.

DISCUSSIONS

Putting together the responses of the interviewees about what NAFDAC do to reduce counterfeit and sub-standard medicine sales, it can be deduced that NAFDAC uses carry out these activities which include: confiscation of such medicines, destruction of counterfeit and substandard medicine, handing over those involved to law enforcement, closure of any medicine store involved in such illegal activities, raid on hawkers of such medicine, registration of medicine products, inspection of pharmacies and patent medicine stores, sensitizing clients about counterfeit and substandard medicine. This result corroborate the conclusion of Lybecker (2007) and Akunyili (2007) that NAFDAC has been collaborating with registered manufacturers, confiscated and destroyed expired and counterfeit medicines thereby increasing the cost of obtaining such illicit medicines. Moreover, McGinnis (2010) submitted that NAFDAC has engaged in raids leading to confiscation and destruction of a wide range of counterfeit and substandard products.

In summary, the responses from those interviewed revealed that NAFDAC Personnel do visit Pharmacies on regular basis which can be daily or weekly. Their responses also revealed that NAFDAC rarely visit patent medicine stores, they do this twice in a year or when they are being given alert by the consumers. The findings confirm that NAFDAC carry out routine visit to most of the pharmacies or patent medicine store at least once in a year except few pharmacies they rarely visited. This may be attributed to the location of their area of practice or a change in their address. NAFDAC visit to a particular pharmacy normally does not exceed twice in a year. The frequency of check is a pointer that the pharmacist or medicine vendor has not complied with the standard rules and regulations. Some patent medicine vendors who claimed they were being visited by NAFDAC said the visits are usually yearly, some said bi-annually, there are those who mentioned quarterly visit. Just one or two of the respondents mentioned rarely situations such as six times in a year, once in two months, thrice in a year and monthly. This may be due to the fact that operations of patent medicine vendors is being regulated and control by pharmacy councils of Nigeria.

The responses from pharmacists and patent medicine vendors in this study agree with what was gathered from NAFDAC principal officer on NAFDAC routine visits when they were interviewed. The NAFDAC staff said that routine visit was usually carried out on daily or weekly basis to Pharmacies but once or twice in a year to a particular pharmacy while most of the Pharmacists claimed that the routine visit to their pharmacies is once in a year some said twice in a year, quarterly while few of them said “not at all”. Some patent medicine vendors who claimed they were being visited by NAFDAC said the visits are usually yearly, some said bi-annually, there are those who mentioned quarterly visit. Just one or two of the respondents mentioned rarely situations such as six times in a year, once in two months, thrice in a year and monthly.

Summing up all the indices pointed out by the NAFDAC principal officer. It is revealed that the respondents unanimously mentioned unregistered products and expired products, counterfeit medicines, batch details, storage temperature of vaccines, label information, records of disposal of expired medicine, mobile authentication services and NAFDAC registration number. Pharmacists and patent medicine vendors mentioned the following indices: the officials check of the practicing license, check the shelf for unregistered products and expiry medicines, check for counterfeit drugs, products with registration lapses, they check for storage temperature, record of disposal of expired medicines, confirm compliance with drug rules and regulations; check the location, environment.

From the responses of the Pharmacists and patent medicine vendors, it can be deduced that during NAFDAC visit, all what the respondents said concurred with information gathered from NAFDAC staff that were interviewed. This implies that there are required indices that NAFDAC look at whenever they go out for routine visits, which means that the agency is committed and devoted to his routine visits to pharmacies and medicine stores.

From the responses of the interviewees it can be concluded that the agency is efficiently carrying out its routine check to pharmacies and to patent medicine stores, especially when there are alerts or reported cases of counterfeit and substandard medicines. The result agrees with Ogbonna (2016) that, patent medicine vendors are only allowed to sell over the counter (OTC) medicines but rather they sell different categories of medicines both prescription and over the counter medicines as long as they will make profit from it. Such medicines can include antibiotics, narcotics, toxoids and antihypertensive for profit purposes with no adequate monitoring systems in place to check them. Sometimes, they are seen prescribing medicines to their customers or even treating them and giving injections (Okeke, Uzuchukwu & Okafor, 2006). These vendors are supposed to be monitored by the state ministry of health (MOH) pharmacy division. However, they are not monitored adequately because the officials can be corrupt and overlook many issues or may be incapable to do the work (Okeke, Uzuchukwu & Okafo, 2006).

The researcher takes a step further by validating the responses from the respondents through interviewed, most of the pharmacists and patent medicine vendors when interviewed about their views with regards to how NAFDAC activities have reduced the proliferation of counterfeit and substandard medicine. The respondents’ unanimously agreed that without mincing words, NAFDAC has done a great job in reducing the instances of counterfeit and substandard medicines.

This assertion support Ofuani, Kuye and Ogundele (2015) who assess the efficiency of government regulatory agencies in Nigeria. It was concluded that NAFDAC has efficiently fulfilled its mandate of effective administration and control of quality of foods, drugs, cosmetics, medical devices, chemicals and packaged water; thereby protecting the consumers from grievous effect of expired, counterfeit and substandard foods, medicines among other

products. Moreover, Ogunlela (2011) reported that NAFDAC has recorded success in his fight against counterfeit and substandard medicine by intercepting and destroying them from time to time. This is supported by Amadi and Amadi (2014) and NAFDAC (2007, 2013) that the problem of counterfeit medicines has greatly reduced from 41% in 2002 to 16.7% in 2006 to 10% 2010 and to 6.4% in 2012.

This contradicts Lybecker (2007) which opined that genuine medicine suppliers are greatly affected by this menace as it has been shown that consumers have a particular preference for these counterfeited medicines because they are relatively cheaper leading to lower patronage of genuine medicine. There is however a need for NAFDAC to gear up on the areas they have deficiency, to make room for improvement. This is because some consumers, patent medicine sellers and pharmacists rating of some items show that there is still room for improvement for NAFDAC.

CONCLUSION

The study investigated the stakeholders' perception of NAFDAC activities to combat the sales of counterfeit and substandard medicines. It was revealed that NAFDAC carry out various activities to reduce the incidence of counterfeit and substandard medicines. These include: confiscation of such medicines, destruction of counterfeit and substandard medicine, handing over those involved to law enforcement, closure of any medicine store involved in such illegal activities, raid on hawkers of such medicine, registration of medicine products, inspection of pharmacies and patent medicine stores, sensitizing clients about counterfeit and substandard medicine. Likewise, from the study it was shown that NAFDAC has done a great job in reducing the sales of counterfeit and substandard medicines.

REFERENCES

- Akinola, B. O. (2007). Nature of Drugs. *NAFDAC Consumer Safety Bulletin* 6(1).
- Amadi, L., & Amadi, M. (2014). Sustainable Medicine Consumption, Regulatory Dynamics and Counterfeit Medicine Repositioning in Nigeria: A Case of NAFDAC 1999-2007. *African Journal of Scientific Issues, Research and Essay*, 2(9), 414-419.
- Asiegbu, I. F., & Ogbuji, C. N. (2015). Regulatory Activities of National Agency for Food, Drug Administration and Control (NAFDAC) and Compliant Buying Decision Of Low and Medium Income Earners in South-East, Nigeria: The Packaged Water Context. *Journal of Marketing and Consumer Research*, 13, 2015.
- Ayozie, D. O. (2013). Consumerism the Shame of Marketing in Nigeria: Challenges to Corporate Practices. *Universal Journal of Management and Social Sciences*, 3(3).
- Ehikwe, A. E., Eze, F. J., & Odigbo, B. E. (2015). Social Marketing Communications for Checkmating Sales of Counterfeit and Adulterated Drugs in Nigeria. *British Journal of Marketing Studies*, 3(7), 30-49.
- Erhun, W. O., Erhun, M. O., & Babalola, O. O. (2001). Drug Regulation and Control in Nigeria: The challenge of counterfeit drugs. *Journal of Health and Population in Developing Countries*, 4(2), 23-34.
- Lybecker, K. M. (2007). Rx Roulette: Combating Counterfeit Pharmaceuticals in Developing Nations. *Managerial and Decision Economics*, 28(4), 509-520.
- McGinnis, M. A. (2010). Matrix of Medicine Quality Reports Affecting USAID-Assisted Countries by the Promoting the Quality of Medicines program. Retrieved from <http://www.usp.org/pdf/EN/dqi/ghcMedicineQualityMatrix.pdf>.
- NAFDAC (2013). Curbing the Influx of Substandard Regulated Products. *Score Card 2013*.

- Naik, G. (2004). Battling Counterfeit Drugs in Nigeria. Retrieved from http://www.mongabay.com/external/counterfeit_medicines_Nigeria.htm.
- Ogbonna, B. O. (2016). National Drug Distribution in Nigeria; Implication for the Goals of Nationals Drug Policy. *European Journal of Pharmaceutical and Medical Research*, 3(1), 1-4.
- Ogunlela, Y. I. (2011). An appraisal of Nigeria's health sector and its healthcare delivery system. WFL Publisher. *Journal of Food, Agriculture & Environment*, 9(3), 81-84.
- Ofuani A. B., Kuye, O. L., & Ogundele, O. J. K. (2015). An Assessment of the Efficiency of Government Regulatory Agencies in Nigeria. Case of the National Agency for Food and Drugs Administration and Control. *Academic Journal of Economic Studies*, 1(3), 9-26.
- Okeke, T. A., Uzochukwu, I. B., & Okafor, H. (2006). An in-depth study of patient medicine vendor's perspectives on malaria in rural Nigeria community. *Malaria Journal in Pubmed Central*, 5(9).
- Omojokun, J. (2013). Regulation and Enforcement of Legislation on Food Safety in Nigeria. Mycotoxin and Food Safety in Developing Countries. Retrieved from <http://www.intechopen.com/books/mycotoxin-and-food-safety-in-developing-countries/regulation-and-enforcement-of-legislation-on-food-safety-in-nigeria>.
- WHO (2011). General Information on Counterfeit Medicines. Retrieved from <http://www.who.int/medicines/services/counterfeit/overview/en/>.

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