

Consumers' Response toward Counterfeit Medicines in Dar Es Salaam City, Tanzania: A Comparative Analysis

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Abstract

Medicine counterfeiting is a growing problem and has been repeatedly reported to flourish elsewhere in the world including Tanzania. This paper provides an analysis of consumer awareness and responses towards counterfeit medicines in Tanzania by comparing the 2008 study to 2015 study. Both studies adopted a cross-sectional research design using a questionnaire to collect data from 100 consumers in Dar es Salaam region who were selected using quota sampling technique. Descriptive analysis was employed to analyse data. Results from both studies consistently show that majority of the consumers are aware of the existence of counterfeit medicines in Tanzania. The 2008 study indicates out 57.6% of consumers who had encountered counterfeit medicines, only 3.5% of them reported to the police. Similarly, in the 2015 study, it was further revealed that the majority of consumers who encountered counterfeit medicines took no any action other than throwing the medicine or telling the pharmacist. This may suggest that consumers in Tanzania have not significantly adopted measures to shield themselves from counterfeit medications. The studies consistently conclude that consumers lack awareness and understanding of how and where to report cases of counterfeit medicines. This paper recommends that the Tanzania Foods and Drugs Authority (TFDA) and other governmental authorities should establish partnership with Non-Government Organizations (NGOs) to jointly create and disseminate educational messages on counterfeit medicines.

Key Words: *Consumer response, Counterfeit medicines, Dar es Salaam City, Tanzania*

1. Introduction

1.1 Background of the Study

Medicine counterfeiting is a growing problem and has been repeatedly reported to flourish and pose threats to health of consumers and pharmaceutical industry in many countries across the world. According to the World Health Organization (WHO) report of 2006, medicine counterfeiting represented approximately 45 billion euros in sales thereby representing 10% of the world pharmaceutical market. This proliferation of counterfeit medicine is apparently the case of Tanzania where half of substandard human medicines entering the country are said to be fake (Tanzania Foods and Medicines Authority (TFDA), 2012). Despite the efforts being made to make the market to be supplied with medicines that meet standards, Tanzania is still facing the problem of fake medicines (TFDA, 2012).

According to the WHO definition, a counterfeit medicine is “*a medicine which is deliberately and fraudulently mislabelled with respect to identity and/or source*”. This applies to the product, its container or packaging or labelling. It can also apply to both generic and branded products. Accordingly, counterfeit medicines may include those with the correct active ingredients in the incorrect proportions, medicines with correct active ingredients but with wrong dosage, medicines without correct ingredients or medicines with impurities or toxic ingredients.

Counterfeit medicines pose a significant danger to public health in developing as well as developed countries (WHO, 2010). It has been difficult to assess the extent of the problem of counterfeit medicines in many settings because of the lack of resources/skills to detect counterfeit medicines, the absence or weak medicines regulatory systems, the different definitions of counterfeit medicines in different countries worldwide, as well as the variations in the distribution systems. As such the actual extent of the problem may vary from country to country.

In Tanzania there is no reliable statistic on the level of incidence of counterfeit medicines. Instead a few recorded cases are available (TFDA, 2013). In May 2000, counterfeit Ampicillin capsules (250mg) in tins of 1000's were found circulating in some retail pharmacies. Laboratory analysis confirmed the capsules contained only potato starch. The genuine antibiotic that was counterfeited was produced by Ely's Chemical Industries, in neighbouring Kenya. In June 2001, expired chloroquine Injection (from an unregistered Indian Company) was labelled as Quinine Dihydrochloride Injection 600mg / 2ml from a company in Cyprus. In 2001, expired Chloroquine injection from unregistered manufacturer was relabelled as Quinine Dihydrochloride injection 600mg/2ml purported to be from a manufacturer in Cyprus.

In March 2005, fake Halfan ® tablets were detected in circulation on the market. Counterfeiters extended shelflife of expired Halfan tablets by 2 years, (from 2004 to 2006). In January, 2005, fake Gentrison Cream (a product of Shin poring South Korea) was reported. In this case the active ingredient was replaced with hand and body lotion. Public was alerted through Press Release and batches were recalled from the market. In March, 2009, fake Metakelfin tablets were found on the market.

The above stated cases reveal that the problem of counterfeit medicines continues to be on the rise. Hence, appropriate measures ought to be taken to curb the problem. The government of Tanzania has taken a lot of efforts in order to combat counterfeit medicines. Such efforts taken include establishment of regulatory authorities like TFDA, Fair Competition Commission (FCC), establishment of joint effort among different government agencies and authorities including TFDA, FCC, Tanzania Bureau of Standards (TBS), Business Registration and Licensing Agency (BRELA), Tanzania Revenue Authority (TRA), Attorney General's Chambers and Police Force (ESRF, 2010).

In line with the efforts made by the government to curb medicine counterfeiting in Tanzania, the role of consumers cannot be underestimated. Consumers have a vital role to play by taking protective and reactive measures against marketing of counterfeit medicines. The study conducted by Bwemelo (2008) revealed that majority of the consumers were aware of the existence of the medicine counterfeiting and had encountered the same but only a few of them took legal action. To date there still exists little literature on this matter. Accordingly, another same study was conducted to ascertain the findings of the 2008 study.

1.2 Problem Statement

Despite the regulatory environment created by the government and various provisions, the problem of medicine counterfeiting is still a major threat Tanzania. Perhaps, one of the major contributing factors is low level of consumer awareness about the existence of counterfeit medicines in the domestic market. This automatically leads to poor commitment of consumers to participate fully in the fight against counterfeit medicines. In Tanzania, little is still known about the level of consumer awareness and reactions towards counterfeit medicines in the country. Accordingly, the study was designed to analyse the level of consumer awareness of the existence of counterfeit medicines in Tanzania. The study further, intended to assess the responses / reactions of consumers towards counterfeit medicines.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of the study was to assess the level of consumer awareness and reactions toward counterfeit medicines.

1.3.2 Specific Objectives

Specifically the study intended to:

- a) determine whether consumers are regularly informed of the existence of counterfeit medicines in Tanzania
- b) examine consumers' protective and reactive measures against counterfeit medicines

2. Literature Review

Counterfeiting of medicines is a growing problem in many countries and increasingly constitutes a major threat to the health of consumers and business. This has led to variety of countermeasures based on lawful, political, administrative or business techniques. For these countermeasures to be effective, consumers have a key role to play.

From consumerism and consumer protection perspectives, both marketers and consumers are granted certain rights and both have a degree of power. As pointed out by Kotler (2005), the rights of sellers include the right to introduce any product in any size and style provided it is not hazardous to personal health or safety; or if it includes proper warning controls, the right to charge any price for the product provided no discrimination exists among similar kinds of buyers, the right to spend any amount to promote the product provided it is not defined as unfair competition, the right to use any product message provided it is not misleading or dishonest in content or execution and the right to use any buying incentive schemes provided they are not unfair or misleading.

In 1962, John .F. Kennedy the former President of United States of America, proclaimed a four point bill of rights for consumers to include the right to be protected from harmful products (right to safety), the right to be provided with adequate information about products (right to be informed), the right to be offered a choice that includes the product those consumers truly want (right to choose) and the right to have a choice in the making of major marketing decisions (Right to be heard).

The Department for Business, Innovation and Skills (BIS, 2012) assessed the hypothesis that more empowered, confident and protected consumers result from simplified and better understood consumer rights. The findings of the study revealed that for simplified consumer rights to have a significant impact on consumer awareness, other factors such as consumer education, knowledge and awareness raising measures should operate in tandem with simplified rights. Cseres (2006), Cullum (2010) and BIS (2012) support this view in the theoretical, empirical and policy respectively. This implies that in Tanzania, the efforts taken by the government to combat counterfeit medicines cannot effectively work unless the regulatory actions go in hands with serious consumer education, knowledge and awareness raising campaigns. Hence, this study was designed to assess whether or not Tanzanian consumers are adequately educated about counterfeit medicines.

From the literature we recognize that consumers have not only the right but also the responsibility to protect themselves instead of leaving this function to someone else. Consumer rights and responsibilities are about the individual's ability to respond to and influence things that happen in the market. The consumer movement has spread internationally and has become very strong in Europe and America, (Kotler 2005).

The International Organizations such as WHO have devised specific measures to combat the counterfeit trade. The WHO has developed guidelines for the development of measures to combat counterfeit medicines. The guidelines require that consumers should buy medicines only from licensed pharmacies and drug outlets, be suspicious of heavily discounted medicines, and not buy from peddlers or market places. It is further recommended that consumers should insist to get receipts when buying medicines, check packaging carefully if it is properly sealed, check if the packaging indicates the batch number, manufacturing date, expiry date and the manufacture's name and/or report to the health worker or doctors any lack of improvement after taking a drug. Consumers who believe they got a bad deal have several remedies available, including contacting the company or the media; contacting regulatory agencies; and going to claim to courts of law. It is questionable whether consumerism exists in Tanzania. Hence, this study intended to explore the magnitude of consumerism with a specific objective of assessing the level of consumer awareness and response toward counterfeit medicines.

3. Research Methodology

This paper uses a cross-sectional research design to examine consumer awareness and responses toward counterfeit medicines in Dar es Salaam, Tanzania in which all three municipalities of Dar es Salaam city (Kinondoni, Ilala and Temeke) were involved. Dar es Salaam was selected because it is the major distribution centre for imported and locally made pharmaceutical products (Bwemelo, 2008). A questionnaire survey of 100 consumers of pharmaceutical medicines using quota sampling technique was conducted in order to collect quantitative data in which respondents with the age above 18 years were involved. Descriptive analysis was employed to analyse data in which tables and frequencies were used to present findings which were matched with the available literature during discussion of findings.

4. Findings and Discussion

4.1 Consumer Awareness of Counterfeit Medicine Existence in Tanzania

To determine whether or not respondents were aware of the existence of counterfeit medicines in the Tanzanian market, respondents were asked to state 'yes' or 'no' on the question "Are you aware of the prevalence of counterfeit medicines in Tanzania?" The study findings are summarized and presented in Table 1.

Table 1: Consumer Awareness of Counterfeit Medicine Existence in Tanzania

Are you aware of the prevalence of counterfeit medicines in Tanzania?"	2008		2015	
	Frequency (n = 100)	Percent	Frequency (n = 100)	Percent
Yes	85	85.9	91	91
No	14	14.1	9	9
Total	99	100	100	100

From the data in Table 1, the following observation was made. On overall, awareness of the existence of counterfeit medicines in the Tanzanian market was very high with only 14.1% in the 2008 study and 9% in the 2015 study not aware. It can be hypothesized that consumers got information about the existence of counterfeit medicines in the Tanzanian market. However, the findings of the 2008 study found that only 31.3% of the surveyed respondents very often encountered an alert, 48.5% encountered the alert occasionally and 20.2% had never encountered the alert on counterfeit medicines from any pharmaceutical personnel, company or media.

These findings may lead to a conclusion that the marketing of counterfeit medicines in Tanzania is underreported and there are no adequate public warnings to protect the consumers relative to their large impact on public health. Clearly, these findings demonstrated a need for taking further initiatives of conveying regular information about counterfeit medicines to the public.

4.2 Counterfeit Medicine Encounter

The study further sought to find out if respondents had encountered counterfeit medicines. Findings are summarized and presented in Table 2.

Table 2: Counterfeit Medicine Encounter

Have you ever suspected or encountered counterfeit medicines?	2008		2015	
	Frequency (n = 99)	Percent	Frequency (n = 100)	Percent
Yes	57	57.6	30	30
No	42	42.4	70	70
Total	100	100	100	100

Source: Field Data (2008 & 2015)

The findings presented in Table 2 indicated that in the 2008, majority of the respondents had encountered or suspected counterfeit medicine. The findings indicated decrease in counterfeit medicine encounter in the 2015 study. The decrease is certainly attributed to the efforts made by TFDA in combating medicine counterfeiting. Among the efforts include implementation of medicines quality assurance programme, establishment of the drug quality control laboratory, implementation of structured post-marketing surveillance programme and public education programmes on public health implications of counterfeit medicines (TFDA, 2013). However, the level of counterfeit encounter of 30% is still high. The findings suggest

that counterfeit medicines in Tanzania are still widely spread. This supports the literature in that countermeasures based on lawful, political, administrative or business techniques cannot effectively work unless they go in hands with serious consumer education, knowledge and awareness raising campaigns.

4.3 Consumers’ Protective Measures Against Counterfeit Medicines

Study further sought to assess the measures adopted by medicine consumers to protect themselves against counterfeit medicines. When asked to explain how they assured themselves of the quality of medicines they purchased from local pharmacies and shops, respondents gave multiple answers as summarized in Table 3.

Table 3: Consumers’ Protective Measures against Counterfeit Medicines

Protective measure adopted	2008		2015	
	Frequency	Percent	Frequency	Percent
Check if expiration date has been reached	24	24.2	30	30
Check if the medicine has been approved by TBS	36	36.4	35	35
Keep the packaging for future comparison of size, colour and shape	1	1	4	4
Buy medicine from hospitals or reputable pharmacies only	42	42.4	39	39
Rely on information provided by the pharmacist or seller	56	56.6	54	54

Source: Field Data (2008 & 2015)

NB: Percentages do not add up to 100 because one respondent might have responded by giving more than one answer.

From the data in Table 3 it was found that majority of the consumers were reliant on the information from the retailers. This implies that most of the consumers were reliant on incomplete or wrong information since the literature reveals that most of the retailers in local pharmacies are not fully trained. The impulsive nature of most consumers when making purchase of medicines is contrary to consumers’ responsibility for their protection. This suggests the need for public education on common and reliable methods to use to identify counterfeit drugs. It is also commendable that majority of the consumers preferred buying medicines from reputable pharmacies or hospitals. This would protect them from the danger of counterfeit medicines.

4.4 Consumers Reaction When Encountering Counterfeit Medicines

This study further sought to examine consumers’ reactions when encountering counterfeit medicines. Respondents who had encountered counterfeit medicines were asked to tell the action they took. Table 4 summarizes the findings.

Table 4: Consume Reactions when Encountering Counterfeit Medicines

Response	2008		2015	
	Frequency (n = 57)	Percent	Frequency (n = 30)	Percent
Told the pharmacist	27	47.4	8	27
Told the doctor	7	12.3	4	13
Reported to police	2	3.5	0	0
Reported to TFDA	0	0	0	0
Threw the medicine and did nothing	21	36.8	18	60
Total	57	100	30	100

Source: Field Data (2008 & 2015)

From the results of the studies presented in table 4, the following observations were made. The majority of consumers who had encountered counterfeit medicines neither reported to police nor TFDA. Giving the reasons as to why they didn't report cases of counterfeit drugs to the regulatory authority most of the respondents (45.6%) said that they did not know that agency and others (38.4%) said that they didn't know how to report (Bwemelo, 2008). This suggests that most consumers had no tendency of reporting counterfeit drugs cases due to the fact that they were unaware of the existence of the regulatory agency and some did not know the steps to follow. This is disheartening considering the fact that the problem of counterfeit dugs is growing from day to day. This prevents any possible arrest or prosecution of the culprit as well as encourages subsequent distribution of the product.

4.5 Consumers Opinions on the Current Countermeasures against Counterfeit Medicines

Table 5 presents findings regarding opinions of respondents pertaining to countermeasures against counterfeit medicines taken by the TFDA in order to raise consumer awareness about counterfeit medicines. Respondents were asked to respond to six statements by stating the extent to which they agreed or disagreed. Regarding efforts taken by TFDA to raise consumer awareness on counterfeit medicines, the findings indicate that the majority (44.4%) of respondents disagreed compared to 35.4% who agreed. These findings imply that TFDA has not taken enough efforts to raise awareness of consumers on counterfeit medicines. These findings are in harmony with those in the WHO (2010) study which reveals that, worldwide including Tanzania, information on counterfeit medicines is hardly shared with National Medicines Regulatory Authorities (NMRAs) or WHO. Moreover, the findings show that the majority (62.6%) of respondents agreed that there is inadequate government support to TFDA in order to improve regulatory processes. These findings suggest that there is inadequate government support to TFDA in order to executive its regulatory functions. These findings are supported by WHO (2010) study which point out that there is inadequate cooperation between NMRAs and the government departments like police and customs due to

lack of tradition to cooperate, limited resources or lack of legal framework for cooperation. Similarly, ESRF (2010) supports these findings by pointing out that lack of funds, manpower and good governance are challenges which weaken the struggle against counterfeits in Tanzania.

Regarding poor public involvement, the findings indicate that 57.5% of respondents agreed that there is poor public involvement in the fight against medicines whereas 35.3% disagreed. These findings suggest that there is poor public involvement in the fight against counterfeit medicines. These findings are consistent with those in WHO (2010) which indicates that there is a weak cooperation among various key players at national, regional and global level. Furthermore, the findings regarding poor handling of court cases indicate that the majority (63.6%) of respondents agreed that there is poor handling of court cases and actions taken against counterfeiters whereas only 21.2% disagreed. The implication of these findings suggests that handling of court cases and actions taken against counterfeiters is poor. Regarding non-deterrent penalties and sanctions to counterfeiters, the findings reveal that 59.6% of respondents agreed that penalties and sanctions are not deterrent to counterfeiters whereas only 26.3% of respondents disagreed. These findings imply that the current penalties and sanctions are not deterrent to counterfeiters. Regarding alert notice by TFDA on counterfeit medicines, the findings indicate that the majority (44.6%) of respondents disagreed whereas 36.3% agreed with the statement that there is timely alert notice by TFDA on counterfeit medicines. The implication of these findings reveals that alert notice by TFDA on counterfeit medicines is not timely produced; as the result, consumers remain unaware of the counterfeit medicines.

Table 5: Consumers Opinions on the Current Countermeasures against Counterfeit Medicines

Statement	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Total
TFDA has taken special efforts to raise awareness	15.2%	20.2%	20.2%	21.2%	23.2%	100.0%
Inadequate government support to TFDA	39.4%	23.2%	6.1%	19.2%	12.1%	100.0%
Poor public involvement	24.2%	33.3%	7.1%	22.2%	13.1%	100.0%
Poor handling of court cases	32.3%	31.3%	15.2%	13.1%	8.1%	100.0%
Non-deterrent penalties to counterfeiters	33.3%	26.3%	14.1%	18.2%	8.1%	100.0%
Timely alert notice by TFDA on counterfeit	14.1%	22.2%	19.2%	25.3%	19.3%	100.0%

Source: Field Data (2008)

4.6 Proposed Ways to Ensure Medicine Sellers Are Honest and Trustworthy

Table 6 presents findings regarding the best ways to be adopted by the government and other stakeholders in order to ensure that medicine sellers are honest and trustworthy. According to Rumanyika and Mashenene (2015), only proposed ways with 50% and above were considered significant. The findings indicate that the best ways to ensure medicine

sellers are honest and trustworthy are pharmacies should be inspected regularly (80%), stern measures should be taken against counterfeiters e.g. cancellation of business license (66%), medicine sellers should be professionals or trained (56%), regular seminars should be provided to personnel concerned with medicines (60%) and consumers should be educated in the area of identifying and reacting to counterfeit medicines (78%). The implication of these findings reveals that joint efforts need to be harmonized from different stakeholders in order to maximize honest and trustworthy among medicine sellers in Tanzania.

Table 6: Proposed Ways to Ensure Medicine Sellers are Honest and Trustworthy

Proposed ways to ensure medicine sellers are honest and trustworthy	Frequency
Strict policies to ensure that all pharmacies are licensed	47%
Pharmacies should be inspected regularly	80%*
Stern measures should be taken against counterfeiters e.g. cancellation of business license	66%*
The government should adopt new modern methods to identify counterfeits	30%
Medicine sellers should be professionals or trained	56%*
Regular seminars should be provided to personnel concerned with medicines	60%*
Medicine selling should not be equated with normal business	24%
Consumers should be educated in the area of identifying and reacting to counterfeit medicines	78%*
Timely public alert notice should be given TFDA when counterfeit medicines are found	40%
Surprise inspections of pharmacies should be adopted	28%
Consumers should be very keen when making purchase of medicines	44%
Medicine users should obtain prescription from the doctors before they make purchase of medicines	40%

Source: Field Data (2008) (* indicates significant cases with > 50%)

5. Conclusion and Recommendations

The study concludes that consumers lack awareness and understanding of how and where to report cases of counterfeit medicines. Evidently, the findings indicate that consumers who encounter counterfeit medicines just tell pharmacists and some throw medicines and do nothing. As the result, consumers' decisions of not reporting to police force and regulatory authorities weaken the national efforts of fighting against counterfeit medicines. The findings indicate that no rigorous effort was taken to confirm as well as report suspected fake and counterfeit medicines to regulatory authorities. This was attributed to lack of knowledge about the existence of the agencies and how to report. These findings lead to conclude that the problem of counterfeit medicines has not received the desired attention relative to its scale and large impact it has on public health.

The study recommends that the Tanzania Food and Medicines Authority (TFDA) and other governmental authorities should establish partnership with Non-Government Organizations (NGOs) to jointly create and disseminate educational messages on counterfeit medicines. Furthermore, establishment of the pharmaceutical security systems consisting of pharmaceutical companies should cooperate to combat the fight against the counterfeiting of medicines. The alliance of these companies in collaboration with the TFDA should conduct a constant search of sourcing and supply chains of spurious medicines and locate their selling

points. Similarly, the fight against counterfeit medicines requires collaboration among all nations. International co-operation is important if trans-national criminal networks are to be dismantled. Tanzania needs to collaborate with foreign stake holders such as WHO and Interpol to develop strategies to deter and detect counterfeit globally. More resources should be allocated to improve the enforcement of international intellectual property standards at the local level, such as the minimum standards set by the Trade – Related Aspects of Intellectual Property Rights (TRIPS) Agreement. The Government should support awareness raising efforts among law enforcement agencies to ensure that counterfeiting at a commercial scale is perceived and deal with as serious crime. Sanction structures should be reviewed to ensure that they are strong enough to serve as effective deterrents and courts of laws and competent administrative authorities should be encouraged to use criminal sanctions. Also, enough funds need to be allocated by the government for training and law enforcement in order to combat counterfeit of medicines in Tanzania.

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