



RESEARCH ARTICLE

KNOWLEDGE AND FACTORS INFLUENCING DRUG REVOLVING FUND SCHEME AMONG CLIENTS ATTENDING SELECTED HOSPITALS IJEBU ODE, OGUN STATE NIGERIA

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ABSTRACT

Introduction: Drug Revolving Fund (DRF) is a scheme whereby drugs and medical consumables are sold at an affordable cost (addition of the cost price plus a mark-up) to generate revenue which is used to replenish stocks. The implementation of the DRF scheme at a maximum capacity, promotes accessibility, availability, affordability, and sustainability of quality drugs and medical consumables. However, there has been reports on knowledge and certain factors towards the effectiveness of the DRF scheme. This study was therefore conducted to determine knowledge and factors influencing drug revolving fund scheme among clients attending selected hospitals in Ijebu Ode, Ogun State, Nigeria. **Methodology:** Cross sectional descriptive research design was used for the study. The study population were clients attending selected hospitals in Ijebu Ode. A formula was used to calculate the sample size, arriving at 132 respondents. Multistage sampling technique was used to select respondents for the study. Experts validated, structured questionnaires, with each divided into five sections were used to collect data. Analysis of the generated data was done using Statistical Package for Social Sciences (SPSS) version 25.0 and the results were presented using descriptive statistics. **Results:** The study revealed a mean age of 37±1. Findings shows that clients attending selected hospitals at Ijebu-Ode Ogun State have good knowledge 79(59.8%) of the DRF scheme. However, it was discovered that some factors inhibit the utilization of DRF scheme among patients as most of them 113 (85.6%) affirmed that there is ineffective system of drug administration and control. **Conclusion and Recommendation:** Based on the results of this study, it was concluded that despite good knowledge of the DRF scheme, some factors militate against effectiveness of the scheme among patients attending selected hospitals in Ijebu Ode, Ogun State, Nigeria. The study recommended that, the Government should subsidize essential drugs to improve patients' access and prevent over charge in drug prices and that health workers should ensure regular and adequate procurement of essential drugs in the health facility.

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INTRODUCTION

The maiden National Drug Policy (NDP) was launched and adopted by the Nigerian government in 1990 (FMOH, 2005). After ten years of the adoption and implementation of the NDP, it has recorded progress in publication of an Essential Drug List and a National Drug Formulary (NDF). The goal of the policy is to ensure regular supplies of drugs that are effective, affordable and safe as well as rational use of such drugs to the Nigerian populace. The Drug Revolving Fund (DRF) is a financing mechanism that is used for health care to improve access to essential drugs (Tukur, 2023). The fund helps to provide accessibility to quality, affordable medicines and health care services, ensure equity in accessing health care

services, increase patients' turnout and improve their confidence. The primary goal of DRF is to ensure a steady supply of quality medications and to prevent stockouts or shortages in public health facilities. Drugs are used as therapies for the management of patients in the health care facilities. Drugs save lives and improve health. The availability and accessibility of drugs have been proven to reduce morbidity and mortality rates most especially in developing countries. The Drug Revolving Fund (DRF), a Bamako initiative was adopted in 1988 with financial and technical support from donor and supporting agencies like WHO, UNICEF and United Kingdom DFID (Ogbonna & Nwako, 2016). In 2018, USAID through its project (GHSC-PSM) began the support of implementation of a DRF scheme in three states in Nigeria – Bauchi, Kebbi and Sokoto (Saleh, 2022).

The aim of the initiative is to improve access to drugs used for maternal and child health by addressing poor financing for drugs. Thereafter, several stakeholders were engaged in the scheme which led to the DRF being an intervention to improve drugs availability. Drug Revolving Funds (DRF) is a scheme where drugs and medical consumables are sold at cost-price, plus a mark-up, and the revenue is used to replenish stocks, while ensuring that the drugs remain affordable to those who need them (Ohaju-Obodo *et al.*, 2006). The fund starts with an initial contribution by the government, international donors, or other sources and this is used to do a bulk purchase of drugs and medical supplies at discounted prices. This bulk purchase is then distributed to public health care facilities at affordable prices. The health care facilities sell the purchased drugs and medical supplies to patients at cost-recovery prices adding a mark-up with the total costs lower than the market prices but covers the medicine costs. The funds accrued from the sales of the drugs go back into the revolving fund, thereby creating a self-sustaining mechanism to purchase replenish depleted stocks of drugs and medical supplies. The experience from several health institutions in the country, however, has shown that its advantages have not been apparent. This is due to a variety of reasons which include poor management, misapplication of the fund, purchasing of drugs at exorbitant prices and lumping of the proceeds of the fund into a general account as well as non-reimbursement of the cost of drugs from patients, (Ogbonna & Nwako, 2016).

A multitude of factors have been linked to irrational use of drug, thereby affecting various levels at which drugs are handled (Okeke, *et al.*, 2021). The weak economic conditions in developing countries that resulted in general poor infrastructure and other economic indices are a cause of lack of access to drugs by many in these countries (Ohaju-Obodo *et al.*, 2006). Research studies conducted by International Health Organization such as WHO revealed that weak laws and regulations at the national level in a country encourages dubious individuals with selfish interest to get involved in improper drug handling and supplies, with resultant counterfeit or substandard drugs. Similarly at the health facility level, unreliable source of drug supplies, poor planning of drug needs, poor infrastructure for storage, poor information management system and lack of information and training of the prescribers coupled with heavy patient load, pressure from patients and peers alike and lack of diagnostic tools has contributed to irrational drug use (Adeosun, *et al.*, 2022). While at the consumer level, patient's cultural beliefs, the communication skill and attitude of health workers, accessibility to and nature of health service points, community belief about efficacy of certain drugs, route of administration affect patient's decision about whether to seek health care, where to seek it, what medicine to take and at what interval or for what duration (Le Grand *et al.*, 2019). Other factors affecting inappropriate use of drugs include drug shortage, presence of large quantities of expired drugs and presence of drugs that are not required by a health facility. Also, the use of drug when no drug is needed, use of wrong drug and poor prescribing habits, which include too many drugs for a patient, referred to as 'Poly pharmacy' or over prescribing of particular drug or dosage form are manifestations of inappropriate use of drugs (Uzochukwu, Onwujkwe and Akpala, 2020). Drugs commonly used incorrectly include antibiotics, anti-diarrhoeal, injection and anti-malarial drugs are seen in many communities (Le Grand, 2019). The problems of financing health service stems

from the growing belief that people ought to receive medical care for humanitarian reasons, regardless of their ability to pay. As a result, the preamble to the constitution of World Health Organization (WHO) states "the enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being" (Karamagi, *et al.*, 2023). Therefore, many countries have attempted to provide comprehensive health care services. The resources used in health services consist of building personnel, materials, such as drugs and equipment and all these require funding (Nakaijama, 2020). The provision of access to affordable and acceptable quality drugs is probably the most crucial element in implementing Primary Health Care (PHC) (Velasquez, 2022). As a result, many developing countries have made it a principle to provide drugs free of charge based on social ideals, have no intention to collect costs and have often defrayed the expenses by drawing money out of the national treasury. Unfortunately, few countries have the resources to fully implement such a policy. Significant demand, limited funds and high drug prices contribute to frequent shortages. Thus, the cost of drugs becomes a scarcity of drugs and disillusionment. Health professionals were dispirited by trying to provide services without the resource they have been trained to use and the people were frustrated by receiving so much less than they were promised (Velasquez, 2022).

Studies conducted by Uzochukwu, Onwujkwe and Akpala, (2020) on Evaluation of Drug Revolving Fund in General Hospital in Cameroon and Nigeria, also indicated that drugs are a valuable resource in developing countries and their availability is considered an indicator of the quality of care. Furthermore, Uzochukwu Onwujkwe and Akpala, (2020) indicated in their study about access to drugs in Nigeria, that patients' visit dropped by 50% to 75% when the most commonly drugs run out. In developing countries, pharmaceuticals generally account for a more significant share of overall health expenditures than in developed countries (for which this share is about 15%). In several African countries and other developing countries, 50- 90% of the overall pharmaceutical's expenditures are privately financed, which is considerably higher than in developed countries (median is 34%) (Velasquez, 2018). Therefore, this study examined the knowledge and factors influencing the DRF scheme among clients attending selected hospital in Ijebu Ode, Ogun State, Nigeria.

MATERIALS AND METHODS

A descriptive cross sectional research design was employed for the study to determine the knowledge and factors influencing the DRF scheme. The study was conducted in selected hospital located in Ijebu Ode. Ijebu Ode is a town in Ogun State that is located along the highway between Shagamu and Benin City. The respondents for the study were clients attending selected hospitals in Ijebu Ode. The sample size for the study was calculated using Taro Yamane formula to arrive at 132 respondents to be used for the study. Multistage sampling technique was used to select 6 out of the 11 wards in Ijebu Ode first. This was followed by using simple random sampling to select hospitals within the 6 wards who are using the DRF scheme. The third stage was to select clients through simple random sampling who are attending the selected hospitals. These clients were selected based on their willingness to participate in the study. The instrument for the collection of

data was validated by research experts and a pilot study analysis. Three research assistants with the researcher collected the data for the study. Institutional ethical approval was obtained. Entry of results obtained from the collection of data was done into an SPSS software package 25.0. This was coded and analyzed using descriptive statistics.

RESULTS

Table 1. Socio-demographic Characteristics of Respondents

| | | | |
|---------------------------|----------------------|-----|-------|
| Gender | Male | 26 | 19.7% |
| | Female | 106 | 80.3% |
| | Total | 132 | 100% |
| Age | 15-24 | 17 | 12.9% |
| | 25-34 | 24 | 18.2% |
| | 35-44 | 57 | 43.2% |
| | 45 and above | 34 | 25.8% |
| | Total | 132 | 100% |
| Marital status | Never married | 27 | 20.5% |
| | Married | 45 | 34.1% |
| | Divorced | 10 | 7.6% |
| | Widow | 19 | 14.4% |
| | Separated | 15 | 11.4% |
| | Co-habiting | 16 | 12.1% |
| | Total | 132 | 100% |
| Religion | Islam | 62 | 47.0% |
| | Christianity | 35 | 26.5% |
| | Traditional | 35 | 26.5% |
| | Total | 132 | 100% |
| Occupation | Farmer | 37 | 28.0% |
| | Trader | 44 | 33.3% |
| | Civil servant | 13 | 9.8% |
| | Others | 38 | 28.8% |
| | Total | 132 | 100% |
| Level of Education | Non formal education | 36 | 27.3% |
| | Primary | 14 | 10.6% |
| | Secondary | 61 | 46.2% |
| | Tertiary | 21 | 15.9% |
| | Total | 132 | 100% |

The mean age of the respondents was 31±1.1 with the majority being females (80.3%) and married (34.1%). Out of the respondents 46.2% had secondary school education and 9.8% are civil servants (Table 1). Moreover, on the results collected and analysed on knowledge of respondents on DRF scheme, it revealed that majority 95(72%) has high knowledge on the modus operandi of the scheme and why it was instituted (Table 2). Among the factors that were mentioned by the respondents as the ones influencing the DRF scheme include ineffective system of drug administration and control 113(85.6%), inadequate funding of drug supply 111(84.1%) as well as lack of stronger measures or policies (74.2%) influencing availability and overcharge of drug prices higher than normal (71.2%) – Table 3.

DISCUSSION

This study revealed high knowledge of the DRF scheme 95(72%). This is in agreement with the findings in a study conducted by Itanyi and Tayo, (2023) using questionnaire to determine the extent of awareness and acceptability of the Nigerian Essential Drugs List and its effect on drug procurement and prescription pattern in some health institutions. Analysis of the responses showed that there was 100% awareness on the part of professionals involved in the survey. However, medical doctors prescribe drugs without due consideration for the list while pharmacist stock and dispense drugs on a similar basis, and that the essential drug supplied by manufacturers in Nigeria was inadequate. Furthermore, findings of this study revealed that several factors influence the effectiveness of Drug Revolving Fund Scheme among clients.

Table 2. Knowledge of Drug Revolving Fund Scheme Among Clients

| VARIABLES | RESPONSE | FREQUENCY | PERCENTAGE |
|---|----------|-----------|------------|
| Do you know that Drug Revolving Fund (DRF) scheme is a system whereby the revenue generated from the sale of drugs to patients is used to purchase new drugs and ensure availability, effective and efficient system? | Yes | 90 | 68.2% |
| | No | 42 | 31.8% |
| Do you know that Drug Revolving Fund (DRF) scheme has the potential to promote access and ensure the availability, affordability, and sustainability of quality drugs and medical consumables? | Yes | 79 | 59.8% |
| | No | 53 | 40.2% |
| Do you know that Drug Revolving Fund (DRF) scheme promote equity as limited public funds can be targeted to helping the most needy through discounts and exemptions while the rest pay? | Yes | 95 | 72.0% |
| | No | 37 | 28.0% |
| Do you know that Drug Revolving Fund (DRF) scheme is an effective strategy for ensuring uninterrupted drug supply in the health care delivery system? | Yes | 93 | 70.5% |
| | No | 39 | 29.5% |
| Do you know that Drug Revolving Fund (DRF) scheme is an important part of Bamako Initiative to tackle unavailability of drugs especially in low-income countries? | Yes | 87 | 65.9% |
| | No | 45 | 34.1% |

Table 3. Factors Influencing Utilization of Drug Revolving Fund Scheme Among Clients

| VARIABLES | RESPONSES | FREQUENCY | PERCENTAGE |
|---|-----------|-----------|------------|
| Do you think that ineffective system of drug administration and control, influence utilization of Drug Revolving Fund scheme services? | Yes | 113 | 85.6% |
| | No | 19 | 14.4% |
| Do you think that inadequate funding of drug supply influence availability and utilization of Drug Revolving Fund scheme services? | Yes | 111 | 84.1% |
| | No | 21 | 15.9% |
| Does overcharge with drug prices higher than normal discourage you from patronage and utilization of Drug Revolving Fund scheme services? | Yes | 94 | 71.2% |
| | No | 38 | 28.8% |
| Does poor communication skill and attitude of health workers discourage you from utilization of Drug Revolving Fund scheme services? | Yes | 105 | 79.5% |
| | No | 27 | 20.5% |
| Does route of administration of drugs affect your decision of utilization of Drug Revolving Fund scheme services? | Yes | 97 | 73.5% |
| | No | 35 | 26.5% |
| Do you think that lack of stronger measures or policies affects availability of drugs and medical consumables? | Yes | 98 | 74.2% |
| | No | 34 | 25.8% |
| Do you think that poor storage infrastructure, affects availability of essential drugs and its utilization? | Yes | 98 | 74.2% |
| | No | 34 | 25.8% |

These factors include an ineffective system of drug administration and control, availability, affordability and accessibility.

CONCLUSION

The respondents had good knowledge and perception on weaning practices and are willing to continue with it.

Declarations

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Conflict of interest: None declared.

Ethical approval: Institutional approval obtained.

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