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EXPLORING SOME ISSUES IN COMMERCIAL DRUG DISPENSING IN A NIGERIAN URBAN CENTRE.

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ABSTRACT

Responses to a self-report questionnaire of 85 Commercial drug dispensers in Uyo township of South-Eastern Nigeria were used to analyze some issues in drug abuse control in Nigeria. Among other things, the findings revealed that; (1) self medication is reported to be widespread among clients;(2) over and under dose of common drugs are frequent in managing common ailments. Furthermore, the frequency of complaints of non-effectiveness of drugs dispensed at commercial outlets is generally high, to which sellers reported adopting specific actions. Whereas the drugs are said to be obtained from reputable agents/distributors, many of the dispensers are not registered with professional bodies nor professionally trained and have received intermediate formal education. The inherent dangers in unethical conduct of professionally unregulated practice were discussed. It is suggested that the activities of commercial drug dispensers be properly monitored to check/control the occurrence of inappropriate drug uses in the population.

KEY WORDS: Drug Abuse, Self Medication, Drug Dispensing, Epidemiology, Professional Ethics in Drug Dispensing and Public Safety

INTRODUCTION

Medicinal drugs have certainly benefited humanity, but when used above or below dosage as in the case of self-prescription, can be harmful. Obiora and Awaritefe (1985), have observed that, many people as a result of ignorance abuse non-prescriptive drugs such as Aspirin, Paracetamol (Tylemol, Panadol) and other off – the – counter drugs such as the drugs in sedative family. The danger involved in drug misuse in terms of its separate and interactive effect, and the damage this can do to tissues of the body is unknown to most users (Bello and Otesanya,1986). This is an important premise upon which the continued increase in drug misuse could be explained.

The issue of drug use and misuse had for a long time constituted and still remains an intractable problem for the government of most countries, particularly in Nigeria. Olumodeji (1993), observed that the magnitude of the Nigerian drug problem is no longer an issue for debate, as it is clear that drug abuse is on the increase with the same rapidity with which new social legislation are formulated and backed up by the instruments of the law. The problem has also prompted the government into investment of large sum in establishments and parastatals, that are mandated to control drug usage, such as National Agency for Food, Drug Administration and Control (NAFDAC) and the National Drug Law Enforcement Agency (NDLEA).

However, most of these National Drug Control Agencies have been set up with predominantly law enforcement functions (Obot, 1992). In our opinion even though the effort of government is laudable, it has brought little or no result, lending credence to Obot (1992) assertion that there is an urgent need for a coordinated demand reduction activities, including a programme of regular national epidemiological surveys.

It is difficult to estimate how widespread the abuse of drug is in Nigeria. The majority of studies in this field differ from area to area and region to region and even in interest. Most of the epidemiological studies available on drug use and misuse were carried out using students, (see for instance, Abiodun, Adelekan, Ogunremi, Oni and Obayan, 1994; Abidoye and Bankole, 1998; Ahmed, 1986; 1989 and Elegbeleye and Femi-Pearse, 1976). There are also researchers who have studied drug abuse using the urban and the rural population as participants. Amongst these are, Obot, 1993; Ohaeri and Odejide, 1994; Osayuki, 1981; Pela, 1989. A major problem is that much research in this area have focused on users of drugs, with the intent to uncover the underlying motivation for the behaviour (see Obot, 1993 for a comprehensive collection of papers). For sure, a lot can be gained by studying individual motivation for drug use but it is equally necessary to consider external inducements responsible for drug use.

Sogunro and Ogunremi (1980), the incidence of self – medication was studied among students of Obafemi Awolowo University, Ile-Ife, Nigeria with a student population of 10,000. A self-administered 34 – item questionnaire was distributed to 300 randomly selected students. The questionnaire collected information on the personal, social and family life history of the students. The habit of self-medication among the respondents in relation to a large number of drugs classified under ten main categories was also inquired into. The data obtained revealed a wide – spread incidence of self-diagnosis and self-medication among the students. In addition to psychoactive drugs, the respondents used antimalarial drugs, analgesics,

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antibiotics and haematinics. Male students were found to use antibiotics more often than females, while the female used analgesics to a greater extent. The problems posed by inadequate treatment of infective conditions were highlighted. The dangers of over dosage were also discussed. The need for restricting the availability of drugs and improved Public Health Education among the Youths were emphasized.

A major shift from the studies mentioned above are those researchers who considered the activities of commercial drug dispensers as possible source of drug abuse. For instance, Obiora and Awaritefe (1985) attempted to identify types and range of drugs obtained and used by the general public in an urban area, without authorized prescription. The procedure used was a face-to-face interviewing of randomly sampled households. It was found that practically everyone interviewed has illicitly procured and self – administered drugs at one time or the other. Altogether the research studied the pattern of abuse of 23 different types of drugs. It was found that 52% of all the drugs abused are analgesics and 26% are psychoactive drugs. From the list, Panadol brand of Paracetamol tops the list of analgesics mostly abused while Valium tops the list of Psychoactive drugs. It was reported that the onset of illicit use of drug is estimated to coincide with the onset of puberty. Thus, the authors argued that a reasonable course of action towards alleviating the suffering of the general public is to make adequate drug information available to everyone, so that rational choices could be made that would reduce harm to themselves.

More recently Obot (1992) in a study of the pattern of drug use and abuse in Nigeria pointed out the abuse use of psychoactive drugs with Cocaine and Heroine on the rise. He found the lifetime use rates of Cocaine and Heroine/Morphine at 16% and 2.3%, respectively, among University Students, and 0.8% and 0.2% in the general population. It was also reported that about 50% of both students and adults drink alcohol regularly; 1.3% of students and 2.4% of the general population smoke Indian Hemp. The abuse also found in a wide variety of other drugs, such as inhalants, central nervous system stimulants, hallucinogens, and prescription drugs was also reported. The study revealed that the analysis of file data showed that drug abuse accounted for 9.1% of admissions into four Psychiatric Hospitals in 1984 and 15.1% in 1988.

A look at the past studies on drug use and abuse, has shown that there is an important gap in research on drug use abuse as it relates to source of drug self administered. None of the earlier studies has focused attention on the activities of the very important component of drug dispensing in Nigeria: commercial drug sellers. Commercial drug dispensing has become a major outlet for obtaining drugs in Nigeria, due largely to the near collapse of Public Health Care Sector/Infrastructure. In this largely illiterate society, the activities of such people need to be carefully monitored as they can become agents for obtaining illicit and/or fake drugs. In otherwords, their operation raises critical questions relating to drug use and abuse such as: How are drugs sold in these outlets? What are the determinants of drug quantity bought? Are there ethical considerations in the dispensing of drugs in these outlets? Who are the people dispensing these drugs. These broadly are the questions addressed in this study.

More specifically, this study was designed to explore the following issues:

(a) Are there professional considerations in the sale of drugs to clients?
(b) Do commercial drug dispensers observe the phenomenon of over and under dosage?
(c) What are some of the contextual variables influencing under and over dose of drugs?
(d) How do commercial drug dispensers handle complaints of non-effectiveness of drugs from clients?
(e) Where are the drugs sold in commercial outlets obtained from?
(f) What are the requirements for operating a commercial drug dispensing outlet?
(g) How knowledgeable (educated) are commercial drug sellers about drugs and drug dispensing?

It is hoped that answers to these questions in terms of empirical data about them, will shed more light on the issues as to be useful in drug control policy and research.

METHOD

PARTICIPANTS

Eighty – five (85) drug commercial drug dispensers (defined loosely as any one engaged in the final sale of drugs to clients at a commercial outlet i.e. Patent Medicine Stores and Pharmacy/Chemist Shops) in Uyo township, Akwa Ibom State of South-Eastern Nigeria participated in this study. They included 54 (63.5%) males and 31(36.5%) females, aged between 15 and 56 years with a mean age of 30.34 years. A majority of the respondents (78 or 91.8%) were from the two main ethnic groups (Ibibio and Annang) in the state. There were no non – Nigerian participants. The respondents' length of involvement in the business ranged from 1 to 35 years, with a mean of 24 years. Among the respondents, were 42 (50.0%) owners of drug stores, 6 (7.1%) part – owners, 21 (25 %) employees, 14(16.7%) members of families of those who owned drug store and 1 (1.2%) who was just rendering assistance (Unremunerated).

THE SETTING

The study as already stated was carried out in Uyo Township in the South – South geo-political zone of the Federal Republic of Nigeria. The town is fast growing economically because of its vantage position as the seat of Akwa Ibom State government. Because of the State's position as the second largest Oil producing state in Nigeria, it is enjoying a rapid population growth. There are two government owned hospitals while the others are privately owned. The sale of drugs in the town is mostly done in Patent Medicine Stores, Chemist/Pharmacy stores found along streets and on major roads. The average distribution along street is estimated at between 4-5 Patent Medicine Stores, while the Chemist and of the Pharmacy Shops are usually

Table A1:Frequency and Percentage Distribution of Drugs Reported to be Under or Overdosed

NAME OF DRUG	Frequency of Underdosed Drugs	Percent of Underdosed Drugs	Frequency of Overdosed Drugs	Percent of Overdosed Drugs
Novalgin	2	2.44	2	3.51
Paracetamol/ Panadol	15	18.29	6	10.53
Blood/Folic Acid	4	4.85	9	15.79
Antimalarial	1	1.22	1	1.75
Ampicillin	7	8.54	1	1.75
Ampiclox	7	8.54	1	1.75
Fusil	1	1.22	0	0
Entromycin	1	1.22	0	0
Amoxycil	1	1.22	0	0
Chloraphenicol	2	2.44	0	0
Tetracycline	2	2.44	1	1.75
Septrin	5	6.10	1	1.75
Chloroquine	6	7.32	1	1.75
Flagyl/Talazole	2	2.44	0	0
Procold	1	1.22	0	0
Indomyticin	0	0	0	0
Aspirin	3	3.66	0	0
Vitamin C	3	3.66	10	17.54
760	0	0	0	0
Feldene	1	1.22	0	0
Combantrin	0	0	1	1.75
Other Worm Expellers	18	21.95	23	40.35
TOTAL	82	100	57	100

situated along major roads, it will not be unusual to find between the range of 20 – 30 of this drug sale point.

INSTRUMENT

A 40 – item questionnaire developed by the researchers was the instrument used to collect data in this research. The items covered the range of issues explored in the study: determinants of quantity of drug sold to clients, interaction between sellers and clients leading to sales, the issue of over and under dosage of drugs, type of drugs over and under dosed, illnesses related to over and under dosage, communication regarding effectiveness or non – effectiveness of drugs; response to clients complaints, communication with manufacturers, source of drugs, organizational issues/registration with regulating bodies and education or training. A separate section of the instrument dealt with demographic characteristics of the respondents – age, sex, ethic group affiliation, stake/interest in the business and their length of involvement in the business. Most of the items required open – ended response with a few requiring "Yes" or "no" response or simply providing frequency of occurrence of the variable. In developing the instrument, relevant questions were generated by the researchers in conjunction/following preliminary interview with some drug sellers. The question and items were given to two social scientists and one Pharmacist who are lecturers at the University of Uyo, Nigeria. Their judgement of suitability of the items is taken as evidence of validity of the instrument. Moreover, because the study is exploratory in nature, a strict quantitative method was not advised. Thus, the questionnaire combined the features of qualitative and quantitative method. Semi – structured, open – ended question, administered in a face – to – face fashion.

PROCEDURE

All the respondents were interviewed in their Shops by trained interviewers. In most cases, the interviewers after soliciting for the ccoperation of the respondents, and assuring them of the confidentiality of their responses read out the questions and then wrote out the responses in the space provided on the questionnaire. In some cases, respondents were allowed to read and write their responses which were scrutinized to ensure that they correctly interpreted the questions. In the course of one week, responses from 85 participants were obtained which is used for the following analysis of issues in drug dispensing behaviour in a Nigerian Urban Centre.

RESULTS

PROFESSIONAL Versus SELF – INSTIGATED PURCHASES OF DRUGS

The results presented here are specifically the outcome of analysis of responses to the question on how people arrive at what drugs to be purchased at the

drug sellers' shops? In general, people would seek help in response to illness conditions, either after consultation with a health professional or in the context of self-diagnosis and self-medication. In this study, respondents indicated that on the average 49.21 purchases are based on self prescription, while 19.94 purchases are based on doctor's /health care Professional's prescription. The frequency of self-instigated drug purchases range from 5 to 550 in a day with a mode of 20 purchases which occurred 16 times. On the other hand, the frequency of professional – instigated purchases range from 0 to 300 instances with a mode of 5 occurring 13 times. With this high frequency of self–medication. Is there any way drug sellers can find out how people arrive at such prescriptions?, In response to this, about 66 (77.6%) of the respondents stated they have ways of finding out. These ways include; by asking them (Clients) 42(63.6%), personal insinuation (23 or 34.8%). Critically, a majority of the respondents, 71(83.5%) stated it is a normal practice to try to find out how and why clients are buying any drugs.

UNDER AND OVER DOSAGE OF DRUGS

It is an issue whether people buy/use under or over dose of drugs. So, how much over or under dosage is observed by drug sellers? From the data, on the average, 30.2 cases of under dosage are seen in the town on daily basis with 20 being the mode frequently reported (which occurred 11 times) in a distribution that range from 0 – 500 cases. The data also shows that some over dosage do occur in this town. About 13.65 cases are recorded on the average everyday in this town, with the distribution ranging from 0 – 300 cases and a mode of 0 occurring 32 times. Indeed, 22 out of 30 respondents stated the quantity bought depends on individuals' request, while some of them said, it depended upon hospital prescription.

WHICH DRUGS DO PEOPLE UNDER OR OVER DOSE ?

As can be seen in table 1. Paracetamol, panadol and antibiotics are the drugs most frequently under dosed, whereas vitamin C, Paracetamol and Novalgin are the three drugs most frequently over dosed.

ILLNESSES FOR WHICH DRUGS ARE UNDER DOSED OR OVERDOSED

In table 2, the frequency of illness for which different drugs are reported to be under dosed and over

Table A2: Frequency and Percentage Distribution of Illnesses for which Drugs are under and/or Overdosed.

NAME OF ILLNESSES	Frequency of Illnesses Uderdosed	Percent of Illnesses Underdosed	Frequency of Illnesses Overdosed	Percent of Illnesses Overdosed
Stomach Ache/Pains	2	2.67	2	10
Typhoid	5	6.67	1	5
Pains	9	12	3	15
Fever	19	25.33	4	20
Dysentry	2	2.67	0	0
Cold	3	4	1	5
Headache	7	9.33	2	10
Loss of Blood	1	1.33	1	5
Hepatitis	1	1.33	0	0
Sexually Transmitted Diseases	7	9.33	1	5
Ulcer	1	1.33	1	5
Diabetes	1	1.33	1	5
Hypertension	1	1.33	1	5
Cough	4	5.33	0	0
Internal Heat	1	1.33	1	5
Pneumonia	1	1.33	0	0
Worms	1	1.33	0	0
Epilepsy	0	0	0	0
Cancer	1	1.33	0	0
Asthma	1	1.33	0	0
Chicken Pox	1	1.33	0	0
Leprosy	2	2.67	0	0
Tuberculosis	0	0	0	0
Pile	1	1.33	0	0
Abcess	0	0	0	0
Rheumatism	1	1.33	0	0
Jaundice	1	1.33	0	0
Sore Throat	0	0	0	0
Others	1	1.33	1	5
TOTAL	75	100	20	100

dosed were shown. Fever (24.1%), Pains (11.8%), Headaches (9.2%) and Typhoid (6.2%) emerged as the illnesses for which people mostly under dose themselves. Similarly, fever (22.9%) Stomach Pains (8.1%), General Pains (13.5%), and Typhoid (6.8%) are the illness people over dose themselves.

RESPONDING TO COMPLAINTS OF NON – EFFECTIVENESS OF DRUGS

The result of responses which were analyzed here considered the issue of; how drug sellers respond to complaints about the non – effectiveness of drugs? A majority (76 or 89.4%) of the respondents said there are channels through which the clients can complain if drugs are working or not working. Among these are; clients initiating the complaints; sellers asking questions; Telephone calls by clients; with only two sellers saying there is no way by which they find out such information. Whenever the sellers are confronted with complaints of non – effectiveness of drugs, they reported they would take one or more of the following actions:

(a) Prescribe a different drug (35 or 34.3%)
(b) Refer client to a hospital (25 or 24.5%)
(c) Ask Clients to go for medical test (18 or 17.6%)
(d) Do physical examination of the client (7 or 6.9%)
(e) History taking of the illness (7 or 6.9%)
(f) Ask clients if the drug was taken as prescribed (10 or 9.8%)

HOW FREQUENT ARE COMPLAINTS OF NON – EFFECTIVENESS OF DRUGS

Responses to this question was obtained for four different periods in order to assess changes/trends in the frequency of complaints in the last one month, last three month, last six months and the last one year. The mean complaints received across periods was highest for the last 6 months (15.7 complaints) and least for the last one month (6.2), whereas the two other periods recorded last 3 months (11.57) and last 1 year (11.74) mean complaints of non-effectiveness of drugs respectively.

Given the high figure of complaints being received, the respondents were further asked, how they relay the complaints to manufacturers. It was reported that in the last one month 13 of such complaints were passed on to manufacturers, 10 in the last three months, 14 in the last 6 months and 24 in the last one year.

WHERE DO SELLERS GET THE DRUGS FROM?

Five sources were mentioned in terms of where drugs were obtained by the sellers. Wholesale (37 or 44%), Agent/Distributors (25 or 29.8%) and Manufacturers (15 or 17.9%) are the main sources indicated. The other sources; Retailer (2 or 2.4%), combined sources (5 or 6.0%), were mentioned at much lesser frequency as avenues for obtaining drugs.

ORGANIZATIONAL ISSUES – REGISTRATION WITH PROFESSIONAL BODIES

As far as the issue of registration with professional bodies is concerned when the respondents were asked; If commercial drug dispensing involve formal registration; an overwhelming majority of the dispensers 78 (98.7%) said "Yes" while only 1(1.3%) stated it does not. The registering organization/body mentioned are; Association of Patent Medicine Dealers (59 or 80.8%), Ministry of Health (3 or 4.1%), Pharmacy Council of Nigeria 8(11%), with only 3 responses (4.1%) mentioning a combination of any of the above organizations. Clearly, a majority of these dispensers are not registered with professional bodies or statutory regulating bodies such as NAFDAC.

EDUCATION AND PROFESSIONAL TRAINING

How much education do drug sellers have and are they professionally trained in drug dispensing?. From the data obtained, only 1(1.9%) seller stated he/she had primary education, with a majority 39 (50%) saying they had Secondary School Certificate. 13(16.7%) had Ordinary National Diploma or National Certificate in Education, 7(9%) were trained Nurses, 7 (9%) had Bachelors Degree or Higher National Diploma, 8(10.3%) had Degree in Pharmacy, while 3(3.9%) were undergraduates.

More specifically however, 76 (93.8%) said they had training in drug dispensing, 2(2.5%) were currently undergoing such training, with only 3 (3.7) saying they had not received any such training. It is further reported that the training lasted for an average of 3 years. A significant number of the respondents 40 (80%) correctly listed titles of three courses taken during the training, 10 (20%) could not provide any list at all of the courses taken. The data also indicated that 53(76.8%) said that the training is relevant to their work in terms of providing basic treatment to people; 16(23.2%) said it helps to reduce abuse of drugs.

DISCUSSION

The findings of this study are relevant to a number of on-going practical and theoretical issues in drug use/abuse control. In the first place, the finding indicating that most drug purchases are based on client demand and not professional prescription which confirms the findings of Obiora and Awaritefe (1985) and Sogunro and Ogunremi (1980) is instructive to those in the area of policy formulation in drug sale. In a largely illiterate society, self-medication may portend more danger than any disease condition. It is likely that individuals prescribing drugs for themselves would stop drug taking as soon as the symptom lessen which could lead to resistance in the case of a viral/bacterial caused illnesses.

A second but related issue is one of under and over dosage of drugs. With this high propensity of client who rely on self-medication it is clear why over and under dosage is prevalent among drug users. As stated above, self- medication is a dangerous practice as it leads to inappropriate drug intake as well as over or under usage. All of these can lead to gradual habituation of the virus resulting in resistance. Clearly then, researchers/practitioners need to explore the drug taken behaviour history of the people in order to determine the course of their condition. Although the drugs said to be over and under used are those commonly used in the treatment of common ailment such as fever, pains, headaches and typhoid, these conditions may be symptoms of more serious problems. When these

serious conditions are suppressed with such drugs they can reappear later in more devastating forms possibly accounting for the high mortality and reduced life expectancy of Nigerians.

Thirdly, it is reported that clients often complain about non – effectiveness of drugs. Although the question did not directly address the phenomenon of fake drugs, such complaints may point to the orchestrated and much talked about problem. It is significant that some action is said to be taken in response to these complaints. However, there is a need to increase public awareness with respect to the problem of fake drugs.

The issue of source of drug supply is an important one, in that reputable manufacturers and distributors are less likely to engage in fake drugs. Although most of the respondents stated they obtain their drugs from wholesalers and/or agent/distributor, such claim may be indicative of social desirability in response. In otherwords, it is possible that many wanted to be seen in good light as people who sell good drugs. That complaints continue to be made at sale points may mean that drugs are not bought from reputable agents.

The issue of registration with professional bodies is related to behavioural control. Most professional bodies would control their members' actions in order to address social/public concerns. In the case of this study, only a few of the drug sellers are registered with the professional body – the pharmacy council of Nigeria. A majority claim to belong/registered with a National body called the Association of Patent Medicine Dealers– a union. The strong implication of this is that, in the absence of affiliation to professional bodies, ethical conduct will be difficult to enforce.

The issue of education and professional training is related to ethical conduct. That an insignificant number of the sellers are professionally trained is worrisome as it would suggest that a large number of people buy from sellers who have no knowledge of drug action. The poverty of seller's knowledge about drugs may encourage irresponsible sale of drugs without consideration for requirements of the body. Thus, people desiring over or under dosage of drugs, may have their request endorsed by the less educated sellers.

CONCLUSION

This study is only an exploratory one, but the issues raised and the findings do suggests that there is an urgent need for government agencies involved in drug abuse control to take particular note of the activities of commercial drug dispensers. As in all businesses, profit motive can be a strong determinant of behaviour. Accordingly, ethical/moral reasoning may be suppressed in furtherance of profit maximization. Clearly, the issues raised in this study require further elaboration in the form of more empirical data. In particular, wider coverage of any such study will be in order.

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