Perception and Practice of Self-Medication Among Non-Clinical Students In Niger Delta University, Bayelsa State, Nigeria

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Abstract

Background: *Self-medication is practiced worldwide and even among non-clinical students. In this cross sectional study, the researchers examined the perception and practice of self-medication among non-clinical students in Niger Delta University, Bayelsa State, Nigeria. The study involved non - clinical students of the university in the 2013/2014 academic session.*

Methods: *Simple random sampling technique by way of balloting was used to select 7 out of the 11 faculties of the university. Selection of departments from the various faculties was done based on calculation of proportions as provided by the calculated sample size of 220 obtained using Leslie Kish sample size calculation formula while the respondents were selected from each level using systematic random sampling. A semi – structured questionnaire was used for data collection after it was presented to research experts and a statistician for necessary modifications to ensure face and content validity while reliability was ensured through a pre –test on 30 respondents from Faculty of Social Sciences of Federal University of Science and Technology, Otueke Bayelsa State yielding a coefficient of 0.89. Ethical approval was sought and obtained from Ethical Review Committee of Niger Delta University. Respondents' consent was obtained and the researchers administered the questionnaire to the respondents face to face and retrieved them after been dully completed. Data obtained was presented in frequencies, percentages and charts and Chi square (X^2) was used to test the formulated hypotheses.*

Results: *Findings revealed a positive perception about self-medication and respondents were found to be highly involved in its practice. Most of the respondents believed self-medication is cheaper, saves time and is as effective as prescription medicine. The study also identified factors influencing practice of self-medication as minor illnesses, past experience, avoidance of long waiting hours in queue to see a physician and time constrain. Findings revealed a significant relationship between socio- demographic characteristics (age and sex) and the practice of self-medication as well as between perception and practice of self-medication.*

Conclusion: *Self–medication was commonly practiced among non–clinical students who justified this action for so many reasons ranging from finance, time, severity of illness and past experience.*

Keywords: *self-medication, non-clinical students, Niger Delta University, Nigeria*

Introduction

The concept of self-medication which encourages an individual to look after minor ailments with simple and effective remedies is practiced worldwide and even among non-clinical students. Globally, the incidence of self-medication is higher among students when compared to the general population.[1]

World Self-Medication Industry,[2] defines self-medication as the treatment of common health problems with drugs especially designed and labeled for use without medical supervision and approved as safe and effective for such use. Afolabi,[3] defines self-medication as the process by which the patient assumes a greater degree of responsibility for the management of a minor ailment, using a pharmaceutical product that is available without a prescription. Self-medication may include the use of herbs, the retention and re-use of prescription medicines or the direct purchase of prescription-only medicines without medical input. It involves the use of medicinal products by the consumer to treat self-recognized disorder, symptoms, recurrent disease or minor health problems.[3]

Self-medication is widely practiced in both advanced and advancing countries, relatively lower in advanced countries with an estimate of 68% when compared to 92% in advancing countries. This variation may be explained by the fact that in advanced countries, the practice of self-medication is well guided in that the masses are enlightened and have easy access to adequate information from various sources like mass media and health education through health personnel.

In advancing countries however, reverse is the case as medical services and methods of creating health awareness is poor including improper professional control of pharmaceutical products.[4] According to Rohra,[6] medicines allowed for self-medication are often called 'non-prescription" or over the counter drugs, and are available without doctor's prescription and can be obtained in pharmaceutical stores, supermarkets, chemists and other outlets.

World Health Organization,[7] maintains that self-medication has the ability to do good if individuals practiced it in a responsible manner which in turn can yield good results. Some of these benefits include quick relief of symptoms without medical consultation, cheaper alternatives for treating

common diseases as well as a reduction on the burden placed on health care services. On the other hand, irrational use of medications can lead to waste of resources, increased resistance of pathogens and can also cause serious health hazards such as adverse drug reactions and prolonged morbidity. Study shows that the prevalence of self-medication among students is very high.[5]

Sharif,[8] in assessing the perception and practice of self-medication among non-clinical students in University of Sharjah in United Arabs, reported that the knowledge and perception of non-clinical students were adequate in regards to self-medication. They were noted to be aware of the drug adverse effects, concomitant use of drugs, risk of increasing or decreasing the dose, the need to seek physician's help in case of adverse effects using medications in the presence of kidney or liver diseases and use of drugs during pregnancy. They saw self-medication as self-management of minor problems which can reduce signs and symptoms of illness and that self-medication may also be harmful if abused. Symptoms for which self-medication was practiced included headache or mild pain, eye and ear symptoms, gastric problems, cold, fever and allergy and the most common drugs used for self-medication were analgesics, antiemetics, eye drops, nasal decongestants as well as vitamins and minerals.[8]

Furthermore, a study by Hussain,[9] on self-medication among university students in different countries, noted that the prevalence of self-medication among non-clinical university students were as follows: 45% in Turkey, 88% in Croatia and 94% in Hong Kong. Another study conducted on the prevalence of self -medication with antibiotics among tertiary level students in the University of Ghana Medical School by Ogar,[10] indicated that students self-medicated using medications like amoxicillin and ampicillin, because they perceived that self-medication is less expensive compared to medical care in the hospitals which they said is often associated with delays. The researchers further discovered that the addicts lacked appropriate knowledge about the proper use of these antibiotics.

Afolabi,[11] in assessing the perception of Nigeria population regarding self-medication, reported that students self-medicate because they belief it saves money and time and reduces the burden to see a doctor. While others self-medicated because the ailments were of short duration and can be treated symptomatically with non-prescription medications and adequate hydration and do not require a visit to the physician; others self-medicated with anti-malaria medication because they had the

believe that orthodox anti malaria is better than traditional remedies because of their efficiency, popularity, availability and the fact they cost less.

Osemene,[5] in a study to determine the practice of self- medication among university students in Southwestern Nigeria, reported high rate of self-medicate among student with anti-malaria drugs and antibiotics as the common drugs being used because these drugs are readily available and cheap. The practice of self-medication was higher among the age group of 25 – 44 years but lower in the 15 - 24 and ≥ 45years age groups, respectively. Self-medication was significantly associated with age, gender and students' level in the university.[5] Sources of drugs for self-medication were patent medicines store, community pharmacies, friend relatives and left-over drugs from previous prescriptions to the rest of the city. Igbiks,[12] found a high prevalence of self-medication and inappropriate use of antibiotics among non-clinical students of a Nigerian Tertiary Institution. Metronidazole was the most common antibiotic used for self-medication which was mostly gotten from the Patent drug stores.

From the above, it is evident that self-medication is common among non-clinical students who have little or no knowledge of the mechanism of action, right dosage, side effects and adverse effects of these drugs they prescribe and administer to themselves. These drugs administered without the guidance of a competent health care provider pose a great hazard to the health of these students and may affect their studies and cause financial burden to their parents and the government as the case may be. To this end, the researchers evaluated the perception and practice of self – medication among non –clinical students of Niger Delta University, Bayelsa, Nigeria in order to enhance a better and safer approach to use of medication particularly among students.

Specific objectives this study include;

- To assess the perception of non-clinical students regarding self-medication in Niger delta university.
- To identify the drugs most commonly used without prescription or professional consultation among non-clinical students in Niger Delta University.
- To assess the practice of self-medication among non-clinical students in Niger Delta University.
- To identify the factor(s) that influences the practice of self-medication among non-clinical students in Niger Delta University.

Methods and Materials

A cross sectional research design was used to examine the perception and practice of self-medication among non-clinical students in Niger Delta University, Bayelsa State, Nigeria. The study involved non - clinical students in Niger Delta University from 100-500 level in the 2013/2014 academic session.

Simple random sampling technique by way of balloting was used to select 5 out of the 11 faculties of the university. Selection of departments from the various faculties was done based on calculation of proportions a provided by the calculated sample size while the respondents were selected from each level using systematic random sampling. Leslie Kish formula was used to calculate the sample size as seen below;

$$n = \frac{Z^2 PQ}{D^2}$$

Where n = sample size
Z = 1.76
P = prevalence from previous study (80 %)
Q = 1-P

$$N = \frac{1.76^2 \times 0.80 \times 1 - 0.80}{0.05^2}$$

$$= \frac{0.495616}{0.0025} = 198.2464$$

10% attrition rate = 0.9

$$= \frac{198.2464.}{0.9} = 220.274.$$

A semi – structured questionnaire was used for data collection. The questionnaire consisted of four sections namely: section A which sought information on demographic characteristics of the respondents, Section B on perception of self-medication, Section C on practice of self-medication and Section D on factors influencing the practice of self-medication. The instrument was presented to research experts and a statistician for necessary modifications to ensure face and content validity while reliability was ensured through a pre –test on 30 respondents from Faculty of Social Sciences of Federal University of Science and Technology, Otueke, Bayelsa State yielding a coefficient of 0 .89. Ethical approval was sought and obtained from Ethical Review Committee of Niger Delta University. Respondents' consent was obtained, confidentiality of information was ensured and participants were not coerced to participate in the study as they were free to withdraw their participation at any stage of the study if they so desire without any negative consequences. The researchers administered the questionnaire to the respondents face to face and retrieved them after been dully completed by

the respondents. Descriptive statistics in the form of frequencies, percentages and charts was use to describe the data obtained while inferential statistics in form of Chi square (X^2) was used to establish associations between the variables with level of significance set at 0.05(5%).

Results

The results of the study are as summarized in the tables and figures below;

Table 1: Demographic characteristics of respondents (N=220)

Variable		Frequency/%
Age	15 -25	190(86.4)
	26-35	29 (13.2)
	36-45	1 (0.4)
Sex	Male	127 (57.7)
	Female	93(42.3)
Religion	Christianity	199(90.5)
	Islam	17(7.7)
	Others	4(1.8)
Level of study	100L	51(23.2)
	200L	48(21.8)
	300L	80(36.4)
	400L	27(14.0)
	500L	14(6.0)

Table 1 provide information on the demographic characteristics of the respondents where majority, 190(86.4%) of the respondent were between the ages of 15-25years, a good number, 127(57.7%) of them being males, and Christians, 199(90.5%). In addition, figure 1 revealed that 54(24.5%) of the respondents were from the faculty of Engineering, 38(17.3%) Education, 37 (16.8%), while Social Science and Management Science had 36 (16.4%) and Science 19 (6.8%) respondents.

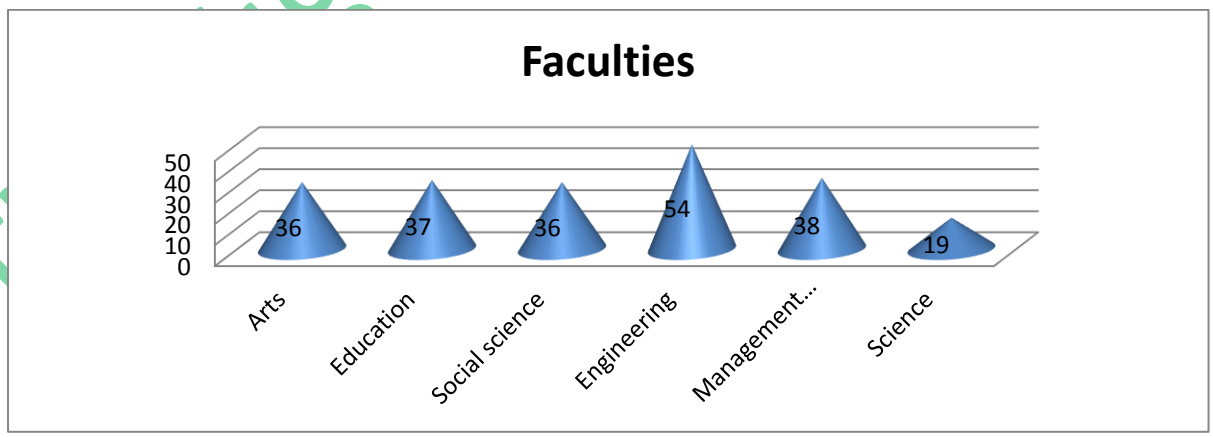

Figure 1. Showing the distribution of students according to faculty (N=220)

Figure above reveals the distribution of respondents based on faculties where 54(24.5%) where from the faculty of engineering, 38(17.3%) faculty of management, 37(16.8%) education, 36(16.4%) from arts and social science respectively and 19(8.6%) from the faculty of science.

Table 2. Perception of respondents on self – medication (N = 220)

Variable response	Frequency (%)		
	Agree	**Undecided**	**Disagree**
1. Self-medication is the use of drugs without physician's prescription or orientation of a physician	205(93.2)	4(1.8)	11(5.0)
2. Self-medication drugs are cheaper than prescription medicines	163(74.1)	16(7.3)	41(18.6)
3. I feel more comfortable going to chemist to buy medicines than consulting a doctor	117(53.2)	16(7.3)	87(39.5)
4. Self-medication is not harmful	36(16.4)	41(18.6)	143(65.0)
5. Medicines obtained from sellers without prescription are just as effective as those prescribed by a physician	130(59.1)	20(9.1)	70(31.8)
6. Self-medication provides quick relief of symptoms	110(50.0)	40(18.2)	70(31.8)
7. Consulting physician when ailment is minor is not necessary	76(34.5)	16(7.3)	128(58.2)
8. Self-medication drugs saves time	130(59.1)	13(5.9)	77(35.0)
9. Self-medication removes the stress to queue up to see a physician	129(58.6)	22(10.0)	69(31.4

Table 2 provides information on the respondents' perception of self – medication indicating that 205(93.2%) agreed self-medication is the use of drugs without physician's prescription or orientation of a physician, most, 163(74.1%) of them maintained that self-medication drugs are cheaper than prescription medicines, 117(53.2%) agreed that going to chemist to buy medicines is more comfortable than consulting a doctor, 110(50.0%) were of the view that self-medication provides quick relief of symptoms and a good number, 128(58.2%) of the respondents affirmed that consulting a physician when ailment is minor is not necessary.

Table 3. Respondent's Practice of Self Medication (N =220)

(Response)	Frequency
1. Do you have a regular health facility or medical personnel you visit?	
Yes	121(55.0)
No	99(45.0)
2. If yes, how often do you visit the health facility or physician?	
Every time I fall ill	78(35.5)
Once in a year	72(32.7)
Once in every six months	12(5.5)
Never	58(26.5)
3. Have you ever used any drug without doctor's prescription?	
Yes	219(99.1)
No	2(0.9)
4. If yes, list four (4) most commonly used drugs without doctor's prescription	
Analgesics	69(34.1)
Antipyretics	37(16.8)
Antibiotics	14(6.4)
Antimalarials	90(40.9)
Cough remedies	10(12.7)
5. How do you come to know about these drugs?	
Past experience	136(61.8)
Non-medical personnel	44(20.0)
Information on the leaflet	19(8.6)
Advertisements	16(7.3)
Others	5(2.3)
6. Where do you obtain these drugs from?	
Chemist's store	154(70.0)
Pharmacist	39(17.7)
Market	17(7.7)
Hawkers	5(2.3)
Others	5(2.3)
7. What ailment do you usually obtain drugs for?	
Malaria	104(47.3)
Typhoid	40(18.2)
Body pain	74(33.6)
Cough	2(0.9)
8. How do you request for the medication you want?	
Mentioning the name	150(68.2)
Telling symptoms	60(27.3)
Drug group	10(4.5)
9. What do you know about the drugs you take without prescription?	
Name	108(49.1)
Indication for use	57(25.9)
Dose	14(6.4)
Duration	6(2.7)
How to use it	35(15.5)
10. Do you follow the treatment regimen established by the informant?	

Yes	193(87.7)
No	27(12.3
11. Do you always use same medication when presented with same symptoms without prescription?	
Yes	166(75.5)
No	54(24.5)

Table 3 revealed participants' practice of self-medication indicating that more than half, 121(55.0%) of the them have a regular health facility or medical personnel they visit when ill, 124(56.4%) mentioned analgesics as the most common drugs they take without prescription, 136(61.8%) practiced self-medication base on past experience, 154(70.0%) of the respondents admitted they obtain these drugs from chemist stores and 104(47.3%) self-medicate when they have malaria. A good number, 150(68.2%) of the respondents said they mention the name of the drug when they want obtain them, 193(87.7%) maintained they follow the treatment regimen established by the informant and 166(75.5%) of respondents admitted that they always use same medication when presented with same symptoms without prescription.

Table 4. Factors Influencing the Practice of Self-Medication (N =220)

Variable response	**Frequency**	
	Yes	**No**
1. Previous experience	182(82.7)	38(17.3)
2. Confidence in self-knowledge about drugs	134(60.9)	86(39.1)
3. Trial and error	84(38.2)	136(61.8)
4. Urgency of the problem	149(71.0)	71(32.3)
5. Illness is minor	147(66.8)	73(33.2)
6. Distance of healthcare centers or hospitals	127(57.7)	93(42.3)
7. Avoidance of long waiting hours at clinics	121(55.0)	99(45.0)
8. Personal convenience	124(56.4)	96(43.6)

Table 4 presented the factors influencing the practice of self-medication as identified by the respondents. Majority,182(82.7%) of the respondents attributed self – medication prior experience, 134(60.4%) said they have confidence in self-knowledge about drugs, 136(61.8%) do not believe in trial and error as far as self – medication is concerned, 149(71.0%) self –medicate due to urgency of the problem, 147(66.8%) do so because they think their illness is minor, 121(55.0%) mentioned long waiting hours at the clinic a reason for self –medication and 70(31.8%) of respondents mentioned exorbitant medical bills as a reason.

Table 5. Showing statistical relationship between demographic characteristics (age and gender), perception and practice of self -medication

Variables		practice of self-medication			Pearson Chi square X^2	DF	P VALUE
		High	Low				
Age	15-25 26-35 36-45	143 14 1	47 15 0	190 29 1	7.777	2	0.020
Sex	Male Female	93 65	34 28	127 93	9.771	2	0.008
Perception	Positive Negative	156 2	0 62		7.498	1	0.000

Table 5 showed that there is a significant association between the age and sex of respondents and the practice of self-medication with $p< 0.05$. It also showed significant association between perception and practice of self-medication with $p< 0.05$. Hence, the null hypothesis rejected and the alternative (H_o) accepted

Discussion

Findings revealed a positive perception about self-medication and respondents were found to be highly involved in its practice. Most of the respondents believed self-medication is cheaper, saves time and is as effective as prescription medicine. Factors such as minor illnesses, past experience, avoidance of long waiting hours in queue to see a physician and time constrain were responsible for self –medication among the respondents. Furthermore, a significant relationship was observed between socio- demographic characteristics (age and sex) and the practice of self-medication as well as between perception and practice of self-medication.

The above findings demonstrate a positive approach to self – medication as shown by findings. This is similar to findings of a study conducted by[3] where they identified prior experience and mildness of the illness as the major reasons provided by the respondents for self-medication. World Health Organization[7] also found majority of respondents involved in self – medication, their reasons being

that self-medication saves time, removes stress of going to queue up to see a physician and that consulting physician when illness is minor is not necessary. Anti – malaria drugs, antibiotics, antibiotics, analgesics and antipyretics were the most commonly used drugs for self-medication. This may be explained by the fact that these drugs are readily available over the counter drugs and the ailments which they are used are very common. There is therefore, the temptation of going for these drugs without a doctor's prescription when an individual observes someone use such for a similar ailment. This is similar to the findings of Osemene and Lamikanra[5] who in a study in Southwestern Nigeria, found anti-malarial drugs and antibiotics as the common drugs used in self–medication.

It was further observed that most of the respondents practiced self-medication by obtaining drugs from chemist stores, pharmacy store, from the market by mentioning the name, telling the symptoms of illness, and mentioning the group which the drug belongs to. This is in contrast to findings of[3] were majority of respondents requested for the drugs by explaining the disease symptoms only while in a report by[2], request was mainly by trade name. Majority of the respondents knew the name of the drugs they used for self-medication, others knew the indication for use and how to use it. This is similar to findings of[3], where respondents knew the trade and generic names of the drugs.

The major factors identified by the respondents as influencing the practice of self-medication includes minor illness, lack time to visit physicians hence self-medicate since it saves time. Other factors include good knowledge/ experience about drugs and ailment, including urgency of the problem.

The identified factors are very significant to students for instance a student may see no reason to abandon his educational activities to see a doctor when he or she can obtain paracetamol at the chemist store. Self – medication among students can also be explained by the fact that most students are non – workers, they do not earn salary and are highly dependent on their parents and guardians, thus they tend to minimize their expenses in all aspects of their lives including their health. If a student knows that going to a hospital to pay for card, consultation, laboratory tests and drugs will cost him or her more than going to chemist to obtain an antimalarial, he or she may decide to save cost thus practicing self – medication. In addition to financial consideration, student also think self – medication saves their time and stress of going through hospital protocols to obtain treatment.

Implication of research findings

Self –medication in the first place is not the best method to treatment ailments since the prescriber has little or no knowledge of the pharmacodynamics and pharmacokinetics of the drug been administered. Thus, to discourage people from self – medication means the available health care facilities are functional enough to meet the health needs of the populace. The government therefore, must ensure easy access to health care services to all and sundry by way of improved manpower in the health sector, supply of the necessary materials and equipment needed for adequate health care services and subsidize health care services in all health care facilities. Furthermore, a policy must be put in place to check drug dispensing in Nigeria and also monitor closely the activities of drug vendors so as to minimize unsafe use of drugs by the populace.

Hospital managements must examine the various hospital protocols that delay quick access to health care services so that patients seeking health care services do not have to wait for too long before obtaining the needed health care services. Doctors and nurses must live up to their expectations in delivering quality care to patients seeking health care services so that their attitude does not push patients into self – medication. There is also the need for the general public to recognize the inherent dangers of self-medications and the need to seek medical attention at the appropriate quarters when faced with illness.

Summary and Conclusion

The study was designed to identify the perception and practice of self-medication among non-clinical students in Niger Delta University. Majority of the students were within the ages of 15-25 with a minimum age of 16years and a maximum age of 32 years with a mean of 21 years. Findings revealed a positive perception about self-medication and the respondent's level of practice for self-medication was found to be high. Most of the respondents believed self-medication is cheaper, saves time and is as effective as prescription medicine and involve in self-medication when they are ill based on past experience of illness, use of information on leaflets. Drugs were requested for by mentioning the name and commonly used drugs for self-medication were analgesics/antipyretics, anti-malaria drugs and cough medications. The study also identified factors influencing practice of self-medication among the students as minor illnesses, past experience, avoidance of long waiting hours in queue to see a physician and time constraint. Other factors include exorbitant medical bills and attitude of nurses towards patients.

The findings of this study showed that there was a significant relationship between socio-demographic characteristics (age and sex) and the practice of self-medication and also a significant relationship between perception and practice of self-medication. Self – medication was commonly practiced among non – clinical students who justified this action for so many reasons ranging from finance, time, severity of illness and past experience.

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