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Self Medication among Undergraduate Students in the Federal University of Technology, Akure, Nigeria

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Abstract

The study was undertaken to assess the attitudes of students towards self medication having the knowledge that people often use drugs that were not prescribed for them from time to time. To achieve this, the study was carried out among students of Federal University of Technology, Akure. Three schools were randomly selected from the available seven, school of post graduate studies inclusive. From each school, three departments were chosen and ten students were sampled from each department. Questionnaire was the instrument used for the data collection. The data collected were analyzed using descriptive statistics, such as tables, frequency and percentage and inferential statistics which include t-test, Analysis of Variance (ANOVA) and Regression. The results showed that a larger percentage of the respondents were Male (67%), a larger percentage also practices self medication while negative attitude towards self medication was also found. The population under study was found to be multi-ethnic and multi-religious. Further findings indicated that there was no significant difference between self medication practices and knowledge of self medication among the student. It was recommended that enlightenment campaigns using multi organs of information dissemination, while also, adequate number of staff should be made available at the Health Centre to reduce long queues during consultations and treatment.

Keywords: *Self medication, Undergraduate students*

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Background to the Study

From conception till birth, through adulthood, the care of health is of paramount importance. This is because, either as a man or a woman, one is involved in so many activities so as to make a living and is the process, the body is like a machine which wears and tears continuously and therefore requires maintenance. The process of body maintenance is tagged "health care". The healthiness of individual, therefore, is dependent on the care offered or giving to the body. Healthy people make up a healthy nation would want to take care of the health of her citizens so as to maintain a healthy people. Since only a healthy people can introduce productivity to can introduce productivity to the growth of a nation (Carrasco-Garrido et.al 2010) in terms of her economics, her education, her politics, her religion which are the essential social institutions to make a nation to forge ahead. Nigeria as a nation has, through her government administration, at every tier, developed varying strategies to take care of the health of her citizens. This is done through the building of hospitals inform of health care centres, college hospitals, general hospitals and teaching hospitals to take care of her populace from primary to tertiary levels of medical policy operations.

According to W.H.O. it has become widely accepted that self medication has an important place in the health care system. Recognition of the responsibility of individuals for their own health and awareness that professionals care for minor ailments is often unnecessary has contributed to this view. To have good health, people are becoming more responsible, getting proper information as much as possible to decide in their own care. Pharmacists and the manufacturer of non-prescription medicines share the common goals of providing high quality service to the public and encouraging the responsible use of medicine.

In Nigeria, most pharmacies sell drugs without letter of prescription from medical personnel which make drugs readily available for misuse (Ashina el al.2010). Abay and Amelol (2010), opined that, the practice of self medication will continue to endanger the lives of ignorant citizens who hold the belief that their health problems can be taken care of through drug peddles instead of visiting health centres such as hospitals.

Statement of Problem

Health care delivery, when made efficient and effective, result in a populace who is healthy and productive and ready to contribute to the maximization at nation's economy. An efficient and effective health care delivery is the one that provides for satisfactory infrastructure and qualified staff, comparable to the global best practice, it is the one where personnel-patients ratio is as found anywhere in developed countries.

The questions, however, are that, how effective is the health care delivery in Nigeria? Why do people still travel abroad for their health care? Why do people carry out self medication instead of visiting the hospitals? (Hughes et al. 2001). Nevertheless, even where efforts are made to make health care delivery relatively effective, people's behaviour sometimes, toward such efforts could prove negative. For instance, using the Federal University of Technology Akure as a case study, there is a health centre in place with relatively qualified medical personnel and well equipped pharmacy in place, but some students will get involved in self medication at the expense of their health, just as it is found in the society. It is on this premise that this study is being carried out to answer the following questions:

1. Do students of FUTA Practise self medication at all?
2. Why do students engage in self medication?
3. What is the proportion of students' population engaging in self medication?
4. What is the knowledge of self medication among FUTA students?
5. What are the types of drugs involved in self medication?

Objective of the Study

The purpose of the study are to access the level of self medication among the students of Federal University of Technology, Akure. The study aimed to ascertain the proportion of the student population engaging in self medication. The study wish to know the reasons why students engage in self medication and to determine the type of drugs for self medication.

Research Questions

1. Do students of FUTA Practise self medication at all?
2. Why do students engage in self medication?
3. What is the proportion of students' population engaging in self medication?
4. What is the knowledge of self medication among FUTA students?
5. What are the types of drugs involved in self medication?

Research Hypotheses

1. There is no significant difference in knowledge of self medication among FUTA Students.
2. There is no significant difference in the proportion of students' population engaging in self medication.
3. There is no significant difference in the reason why students engage in self medication.
4. There is no significant difference in the types of drugs involved in self medication among FUTA Students.

Significance of the Study

The findings from this study are expected to spell out why people get indulged in self medications despite its disastrous consequences. The result would therefore enable policy makers on health care delivery to have guiding principles in their tasks. The data from the study would be a veritable tool for further research and policy implementation on health care delivery in Nigeria and higher institutions of learning.

Delimitation of the Study

The study was delimitated to both male and female students of the Federal University of Technology, Akure. These also included the on-campus and off campus resident students. The study was also delimited to Self Medication among undergraduate students of FUTA.

Review of Related Literature

Self medications are defined as the use of medication, whether modern or traditional for self treatment without advice of physician (expert in medical profession) either for diagnosis, prescription or surveillance of treatment. It is a growing trend of self care which has its positive and negative aspects (Hughes et al, 2001). Self medication is a broad term not limited to drug but also includes herbal, cultural, spiritual treatment as well as alcohol and smoking use. self medications increases the chances of illicit use of

drug (Sean et al, 2015) and drug dependency and most of all masking the signs and symptoms of underlying diseases hence are complicating the problem, creating drug resistance and delaying diagnosis (Ferris et al, 2002).

On the other hand, self medications by the people, who accept responsibility and are careful, is a resource saving phenomenon to the health system. Easy availability of the drugs over the counter facilitates self medications. Self medication is a universal phenomenon and practical globally with varied frequency. Klemenc-Ketis et al. (2010) studies on self medications show that it is influenced by many factor, such as education, family, society, law, availability of drugs and exposure to advertisements, mild illness, previous experience of treating similar illness, economic considerations and a lack of availability of drugs and exposure to advertisements, mild illness, previous experience of treating similar illness, economic consideration and a lack of availability of healthcare personnel. In a developing country like India, easy availability of wide range of drug coupled with inadequate health services result in increased proportion of self medication. In several studies, it has been found that, inappropriate self medication results in wastage of resources, increases resistance of pathogens and generally entails serious health hazards such as adverse drug reaction, prolonged suffering and drug dependence. Habits of self medication among the university students reflects its prevalence in the future generation (Shankar et al., 2003)

The concept of self medication encourages an individual to look after main or ailments with simple but effective remedies, has been adopted in the world over. People hold the view that, medicines should be used in the event of any sickness or discomforts (Abraham, 2002) Ashina et al (2006) has emphasized that self medication must be correctly taught and controlled. Studies conducted in Spain showed that self medication is more prevalent among women, persons who live alone and persons who live in large cities (Carrasco - Garrido et al. 2010).

Research Methods

Research Design

The research design for the study was Descriptive Research Design of Survey type. Kothari and Gaurav (2015) ,noted that descriptive research represents an attempt to provide an accurate description or a picture of a particular situation or phenomenon at one or more points in time .Descriptive survey method has the advantage of wide scope since a great deal of information can be obtained from a large population.

Population

The population for the study consisted of all undergraduate students of FUTA from 100Level to 500Level of 2015/2016 session

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Sample 90 students were used as sample for the study.

Sampling Procedure

A multistage sampling technique was adopted. At the first, three schools were selected from the available eight by random sampling techniques. At the second stage three departments were randomly selected from each school making a total of nine (9) departments. Ten students were randomly selected from each department giving a total of 90 students to be used for the study.

Research Instrument
Questionnaire that makes up to both open and closed ended items was used for the study. The questions were on the students' socio-demographic data of the respondents, knowledge of medication and attitudinal statements which the respondents will be made to respond to

Validation of Data Instrument
The data collecting instrument was given to rural sociologists and medical personnel to assess its expected effectiveness. Suggestions from this experts were used to further improve the instrument.

Reliability of the Instruments
Test re-test method was used. The instruments were given to 20 students of Adekunle Ajasin University Akungba, Akoko twice at two weeks interval. The result of the pre-test and post test were correlated using Spearman correlation coefficient formular. The reliability of the instrument was found to be 0.79

Instrument for Data Collection
The variable for this study were divided into independent and dependent variables. Frequency count and simple percentage were used to analyse information provided under socio demographic data. The only instrument for data collection was the questionnaire. Likert scale of Always, Occasionally, Never, Strongly Agree (SA), Agree (A),Undecided (U), Disagree (D) ,Strongly Disagree (SD) “very regularly”, “regularly”, “occasionally” and “Not at all” were used at different occasion as applicable to the study. The score assigned are 4, 3 ,2 and 1 respectively to analyse items in section B of the instrument. In addition options like YES and NO were also included where appropriate for the study.

Method of Data Analysis
Data were analysed using descriptive statistics, t-test analysis of variance and regression inferential statistics.

Results and Discussions

Table 1: Demographic Distribution of Respondents

Variable	Frequency	Percentage
SEX		
Male	60	66.7
Female	30	33.3
AGE(years)		
18-25	76	84.4
26-32	13	14.4
Above 32	01	1.2
RELIGION		
Christianity	79	87.8
Islam	11	12.2
TRIBE		
Yoruba	75	83.3
Igbo	8	8.9
Others	7	7.8
MOTHERS OCCUPATION		
Civil Service	43	47.8
Organizational business	35	38.9
House wife	3	3,3
Retired	7	7.8
Others	2	2.2
FATHER'S OCCUPATION		
Civil Service	33	36.7
Organizational Business	33	36.7
Retired	17	18.9
Others	7	7.7

The study, as in Table 1, found that male constituted about 66.7 percent of the population studied while the female was about 33.3 percent. This actually agrees with the quota of admission in the Federal University of Technology, Akure where the study was carried out (FUTA Pocket Diary, 2014).

Perception of Self Medication

Table 2: Students' Perception of Self Medication

Statement	SD	D	U	A	SA	Means	Remarks
Using left over medicine at home	34	10	7	33	8	2.01	Low perception
Using of herbs	20	11	11	30	20	3.27	High Perception
Sharing medicines with relatives/friends	21	14	11	39	7	3.03	Low Perception
Acquiring medicine without prescription	35	11	8	27	11	2.11	Low Perception
Submitting Old prescription to purchase medicine	33	15	13	25	6	2.58	Low Perception
Grand Mean						2.60	Low perception

In table 2, it was found that the respondents perceived drug used and elements of self medication in different ways , for instance while the students were indifferent to acquiring medicine without prescription , sharing medicines with relations/friends, using any other

herbs or using left over medicine without medical advice they disagree that they submit old prescribed medicine for repurchase. Succinctly the students has high perception for sharing medicine with relatives or friends (3.03) and using of any other herbs (3.27). Literally, it is a common phenomenon among students to ask, why arriving from lectures, from his roommates," "Abeg" who has paracetamol, I have headache"

Regularity of Practice of Self Medication

Table 3: Regularity of practice of self Medication by Students

Statement	VR	R	O	NA	Means	Remarks
Taking of drugs without doctor's prescription	20	39	27	6	2.85	Regular
Use of old prescription to purchase medicine	42	27	20	3	3.24	Regular
Sharing drugs with relatives/friends	36	34	18	4	3.17	Regular
Receiving drugs from relatives/friends	33	46	13	-	3.28	Regular
Use of left over drugs at home	42	33	13	4	3.30	Regular
Use of herbs	25	31	19	17	2.75	Regular
Grand mean					3.09	Regular

Legend: Very regular (VR), Regular (R), Occasionally (O), Not at all (NA)
Key for interpretation: <1.5= Not at all, 1.6-2.5 = occasionally, 2.6-3.5 = Regular, 3.6- 4.5 = Very Regular.

In Table 3, result shows that while the respondents affirmed that certain drugs are regularly self medicated, occasionally self medicated some had never been used. According to the students all sampled drugs in the study were in regular use. The regular use of herbs in particular, by all and sundry these days may be attributed to the increase in campaign for native base drugs such as nutrient supplements

Table 4: Perceived Reasons why Students Practice Self Medication

Statement	Yes	No	Means	Remark
High cost of treatment in the hospital	55(61.1)	35(38.9)	1.61	Yes
Pressure of school work	62(68.9)	28(31.1)	1.68	Yes
Invitations of others or friends	27(30.0)	63(70.0)	1.32	No
Availability of drugs in patent medicine store	58(64.4)	32(35.6)	1.64	Yes
Long queues in University health centre	48(53.3)	42(46.7)	1.53	Yes
Repelling attitudes of the health worker	56(62.2)	34(37.8)	1.62	Yes
Far distance of health cen tre from hostel or lecture room	38(42.2)	52(57.8)	1.42	No
Pressure from peer group	32(35.6)	58(64.4)	1.35	No
Inadequate drug store in health centre	46(51.1)	44(48.9)	1.51	No
Grand mean			1.52	

Percentages are in parentheses ( )

Reasons Adduced for self Medication

Further results, as found in Table below indicate the various reasons adduced by the students why there were self medication .It was found that, the majority of the students responded that pressure from peer group (Mean=1.35) , far distance of the University Health Centre (Mean =1.42) and invitation from others or friends (Mean =1.32) were not the reasons why they used drugs without prescription. The reasons they gave for self medicating includes among others ;high cost of hospital treatment (mean 1.610, pressure of school work (1.68), availability of drugs at patent medicine shops (1.64) and long queues at hospitals (1.53) .Other reasons as given by the students were repelling attitude by the health workers (1.62) and inadequate drug store in health centres (1.51)

Table 5; t-test Analysis of the Significant Difference between Knowledge of self medication and its practice

Model	Unstandardized		Standardized	T	Significance
	Coefficients		Coefficients		
Constant	2.987	.401	.	7.445	.000
Pain relieving tablet	-.161	.103	.190	-1.556	.124
Antibiotics	-.155	.125	-.149	-1.232	.222
Cough mixture	-.055	.122	-.055	-.043	.966
Anti malaria	-.252	.107	-.302	-2.351	.021
Sleeping pills	-0.53	.140	-.048	-.381	.704
Anti diarrhoea drugs	-.001	.111	-.001	-.009	.993
Vitamin tablets	.122	.100	.126	1.214	.228
Contraceptive pills	-.015	.154	-.011	-.096	.924

Knowledge of Self Medication and Drug Use

The type of drugs used by the individual is determined by the knowledge the individual has about those drugs . when the t-test analysis was done (Table 5) for the various sampled used drugs by the students with knowledge of self medication , results show that only vitamin tablets have significant difference (t= 1.214) with knowledge of self medication with a significant level of 5% (0.05). Other drugs including; anti-diarrhoea, (t =-.009), pain relieve tablets (t = -1.556), antibiotics (t=-1.232), cough mixture(t = -.043), anti malaria (t = 2.351), Sleeping pills (t = -.381) and contraceptive pills (t = -.096), were not significantly different from knowledge of self medication.

Table 6 showing Results of variables (self medication practices) and knowledge of self Medication

Model	R	R Square	Adjusted R	Standard error of the Estimate
	.636	.405	.363	.25263

Level of Significance =0.05

Predictor: (Constant), use of herbs, use of old prescription to buy medicine, taking drugs without prescription, receiving drugs from relatives/ friends, use of left over medicine t home, sharing drug with relatives/ friends.

Table 6 shows the result of the regressed variables (Self medication practices) as the independent variables and knowledge of self medication as the dependent variable . the predictor in the regression model therefore, includes; use of herbs of old prescription to buy medicine , taking drugs without prescription , receiving drugs from relatives or friends, use of left over medicine at home and sharing of drugs with relatives. It was found that the independent variables were able to predict knowledge of self medication by 63 percent. Therefore, other variables, beside the self medication practices, could be responsible for 37 percent prediction of knowledge of self medication.

Table 7: Analysis of Variance of the Significant between self Medication Practices

Model	Sum of squares	Degree of freedom	Mean square	F	Significant
Regression	3.688	6	.615	9.629	.000
Residual	5.425	85	.0645		
Total	9.113	91			

Level of Significance = 0.05
Predictors: (Constant) use of herbs, use of old prescription to buy medicine, taking drugs without prescription, receiving drugs from relatives/ friends, use of left over medicine t home, sharing drug with relatives/ friends Furthermore, Analysis of variance was carried out to determine the significance difference between self medication practices and the result was as shown in Table 7.At a significance level 0.05,f-value of 9.692 and which is greater than total value of 9.113, indicates a significant difference between self medication practices.

Discussion of Results
The result of the study showed a mean age of the students to be 22years.it also shows that, while 67% of the students were male 33% were females. The male - female ratio is in tandem with the university admission quote. The students practice one religion or the other (Christianity, 90% and Islam 10%). Religious doctrines and inclinations could influence the adherents' perception of one practice or the other, in this regard, the mode of drug use. Table 1 further showed that, while the Yoruba tribe was 83 percent the Igbo tribe was 8.9 percent, other tribes made up of 7.8% of the total respondents. The predominance of the Yoruba ethnic group is understandable since the University is located within the catchment area for the South West. It was found that the respondents perceived drugs use and elements of self medication in different ways, for instance, while the students were indifferent to acquire medicine without prescription, sharing medicine with relations/friends, using any other herbs or using left over medicine without medical advice, they disagreed with whether they resubmit old prescribed medicine. There is an indication therefore that the students were much aware of the fact that Self medication is medically wrong. The result agrees with that of Afolabi et al, (2011) that 87 of the student believed self medication could be harmful and 82.5% also believed that it was necessary to consult doctors before taking a new medicine. Inspite of the level of Awareness and knowledge as possessed by students about self medication and its side effects, they still get engaged in then practice (Agbor & Azodo, 2011). The type of drugs used by the individuals is determined by the knowledge the individual has about those drugs. Then the t-test analysis was done (Table 5) for the various sampled used drugs by the students with

knowledge of self medication results showed that only vitamin tablets have significant difference (t = 1.214) with knowledge of Self medication at a significant level of 5% (0.05). Other drugs including: anti diarrhoea (t =1.232), Cough mixture (t =0.043),anti malaria(t = -2.351), sleeping pills (.381) and contraceptive pills (t =-0.096) were not significantly different from knowledge of self medication. The study has shown that the most frequently abused drugs are analgesics, antibiotics, anti malaria, vitamin tablets, anti diarrhoea drugs and contraceptives.

Furthermore, it was found that the majority of the students responded that pressure from peer group (Mean = 1.35), far distance of the University health centre (Mean = 1.42) and invitation from others or friends (Mean = 1.32) were not the reasons why they used drugs without prescription. The reasons they gave for self medication includes among others ;high cost of hospital treatment (Mean 1.61), pressure of school work (1.68), availability of drugs at patent medicine stores(1.64), and long queues at hospitals(1.53). Other reasons as given by the students were repelling attitudes by health workers (1.62) and inadequate drug store in health centres (1.51). Shankar et al, (2002) had earlier reported that high cost of doctors' consultation, easy availability of wide range of drugs coupled with adequate health services result in increased proportion of self medication.

Responses as “always”, “occasionally” or “never” were made towards how frequent the students use certain drugs. The result in Table 4 shows that contraceptives, sleeping pills and anti diarrhoea were the drugs that had never been used by a larger percentage (80.2, 62.0,50.0 respectively) of the students. These findings may imply that, since more males were sampled than the females, and since the males rarely use contraceptives, the response of “never use” for contraceptives is incontrovertible. Although studies like Bamgboye et al (2006), Carrasco- Garrido et al (2010) have found that in Mexico and in Spain respectively, females practiced more self medication than the males to the ratio of 62: 32 percent, this study has not confirmed such report. So also, the students would prefer being awake to attend to academic responsibilities rather than sleeping, hence, many shunned the use of sleeping pills. Improvement in diet and awareness of sanitation practices furthermore, might have made the students less prone to gastro- intestinal disorder; hence, they had less of diarrhoea challenges.

In addition, a larger proportion of the students were found to have practiced self medication. In table 4, 74%, 70%, 66% and 71% of the students were found to have self medication with analgesics, antibiotics, cough mixture and anti malaria drugs respectively. So also 73%, 34%, 45% and 16% have equally used vitamin tablets, sleeping pills and contraceptives without expert's prescription. These findings agreed with Omolase et al (2008), whose study in Lagos and Owo, Nigeria, reported that 95_98% in Suburban community admitted Self medication. According to the author, 79% of ophthalmic patients and 85% of patients in the general outpatients' clinic in Owo, Nigeria admitted self medication.

Conclusion

The study has found that students have the knowledge of self medication and a larger percentage of the students practice self medication. Some perceived reasons why students practice self medication include; high cost of treatment at hospitals, long queues for treatment and pressure of work among others. The students have low perception of self medications practices. Some of the self medication practices, as acknowledged by

students, were taking drugs without prescription to buy new medicine, sharing of drugs with relatives or friends and use of left over medicine at home.

Recommendations

The following recommendations are hereby made resulting from the outcome of the study

i. Campaigns, lectures, seminars, workshops should be used as instruments.
ii. In avoiding long queues during consultation and treatment, more hands for health personnel should be ensured.
iii. The pharmacy of the university must as a matter of priority of guaranteed regular supply of original medicine.

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