ORIGINAL ARTICLE

Self-Medication Practices among University Students in Northern Nigeria

Abubakar Mohammed Jibo[1], Bello Aminu Bello[2], Aisha Aliyu Abulfathi[3]

ABSTRACT

Background: The practice of self-medication is a global phenomenon. The prevalence of self-medication varies globally from 60-90%. There are many reasons for the increase in self-medication practices across the world, like poor diagnostic and management ability of health care workers that lead to low utilisation of health care services. **Objectives**: This study assessed the prevalence and practices of self-medication among university students. **Method**: The total number of respondents was 215 and were selected using a multi-stage sampling technique. A semi, structured self-administered adapted questionnaire was used to collect data for the study. Data was first entered into Excel and analysed using SPSS v.20 software. **Results**: The response rate was 96% (n=206) and the prevalence of self-medication practice was found to be 88.3% (n=182). Headache 73.8% (n=152) and Fever 57.3% (n=118) were the commonest reasons for self-medication. There was no association between self-medication and availability of professional medical service ($\chi 2$ = 0.79, P = 078), sex ($\chi 2$ = 0.26, P = 0.61), and marital status ($\chi 2$ = 0.04, P = 0.81). However, a significant association was observed between self-medication and knowledge ($\chi 2$ = 6.10, P = 0.02), smoking ($\chi 2$ = 9.71, P = 0.01) and having a medical insurance ($\chi 2$ = 7.11 and P = 0.01). The common medications used for self-medications are analgesics (98.9%), antibiotics (58.3%) and cough mixture (46.7%). **Conclusion**: The prevalence of self -medication observed among students is high. There is a need to increase awareness of the dangers associated with self-medication.

KEY WORDS: Selfmedications, prevalence, students, Nigeria.

Introduction

Self-medication involves the use of medicinal products by the consumer to treat self-diagnosed disorders or symptoms, or the intermittent or continued use of medication prescribed by a physician for chronic or recurrent diseases or symptoms.[1] While self-care is what people do for their selves to establish and maintain health, prevent and deal with illnesses.[1] The World Self Medication Industry (WSMI) defined self-medication as the treatment of health problems with medicines, uniquely designed and labelled for use without medical supervision and approved as safe and effective for such use.[2] Medicines commonly used may be obtained as non-prescription or 'over the counter' (OTC) or prescription medicines. The former is for self-medication and referred to as 'responsible self-medication and differs from the use of prescription medicines for self-medication.[3] Self-care, on the other hand, is the care taken by individuals towards their health and well being, including the care extended to their family members and others.[2] The WSMI Declaration on Self-care and Self-medication in 2006 emphasizes the importance of self-care as a building block for a sustainable healthcare system. Self-medication is a phenomenon performed almost everywhere in the world. Despite it being a common practice, comprehensive knowledge of its benefits and harmful effects are difficult to ascertain. The practice of self-medication is a global phenomenon.[4] Various reasons exist for the increase in the self-medication practices across the world, namely poor diagnostic and management ability of health care workers that results in low utilisation of health care services. Other reasons reported for the increase in self-medication elsewhere are long

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[1]Deprtment of Community Medicine, Bayero University Kano, Nigeria, [2]Department of Internal Medicine, Murtala Mohammed Specialist Hospital, Kano, Nigeria, [3]Department of Community Medicine, University of Maiduguri, Nigeria

Address for correspondence:

Abubakar Mohammed Jibo, Deprtment of Community Medicine, Bayero University Kano, Nigeria. E-mail: ajmohammed.cmed@buk.edu.ng

waiting periods in hospitals minor ailments, cost, to save money and time,poor accessibility and shortage of doctors in some instances.

The prevalence of self-medication varies worldwide and ranges from 60-90%.[5,6]In Middle East prevalence was 98% amongst university students in Palestine,[7]and 72% amongst secondary school students in Hong Kong.[8]Studies from Nigeria reported high prevalence of self medications.[9–11]This practice is common because of lack of proper health services, ignorance, time and financial constraints, as well as the availability of drugs over the counter (OTC) in drug shops.[12]

Self-medication has the advantage of making people assume responsibility for their health which saves them a lot of time and money that would have to be paid on consultation.[13] However, the dark side of self-medication could be more harmful than its benefits, even where it is responsibly done. Use of some drugs could lead to dependence and addiction, late presentation to the hospital in the event of misdiagnosis, and irrational use medications like antibiotics could lead to the development of antibiotic resistance.[12] This study, therefore, seeks to determine the knowledge, and practice of self-medication among university students in Nigeria

Methods

Bayero University Kano was established in 1975 and have three colleges, seven centres, and fifteen faculties. The number of undergraduate students that enrolled in the university at the 2015/2106 session was 32,095. The study is a cross-sectional study design. The study population comprised of all undergraduate students of the university who have spent at least one year of study. The total of 215 undergraduate students were enrolled for this study and selected using a multi-stage sampling technique.

The first stage was the selection of three faculties from the list of 15 faculties in the university by a simple random procedure. In the second stage, one department was selected in each of the selected faculty. The third stage was the selection of respondents from the list of all students in the selected department by systematic sampling methods. The list of students in the department forms our sampling frame. The sampling interval in each selected department was obtained by dividing the sampling frame with the sample size. The sampling interval of five was determined, and a random selection of starting number 0-5 to get our starting point by simple balloting (third on the list was selected). The starting respondent on the list was the third student, and every 5^{th} eligible student was enrolled (3^{rd}, 8^{th}, 13^{th} .....215^{th}) until we had a sufficient sample size.

A self-administered structured questionnaire was developed, and it has different sections on demographic variables, knowledge of self-medication, reasons for practicing self-medication, common medications used and factors that could influence the practice of self-medication. The knowledge of these respondents on what constitutes a self- medication was assessed using an adapted knowledge item assessment tool. The total Cknowledge scores obtainable on the item was 10. The scores were graded, a score of 0-5 on this scale was considered a poor knowledge and score of 6-10 as a good knowledge score.

Two Research Assistants were trained for two days to participate in the data collection. The research assistants are health science students trained on the technique of data collection. Data collected were entered into Microsoft Excel 2007 and the entries were checked for consistencies and analysed using SPSS statistics software version 20. Frequency tables and percentages were used to present categorical data. Tests of associations to determine relationships between categorical variable and results are considered significant where the P values are less than 0.05. Permission to conduct the study was obtained from the ethical committee of Aminu Kano Teaching Hospital/Bayero University Kano, and informed consent from the respondents was obtained before being allowed to participate.

Results

The total number of questionnaires administered was 215, and 206 were filled and returned, giving a response rate of 96%. Respondents' age ranges from 18 to 40 years, with a mean age of 25.5 $\pm$ 4.1years. Half of the respondents are within the age range of 24-35 years, and males constitute close to two-third (63.1%) of the respondents. More than three- quarter (77.1%) of the students are not married (Table 1). The knowledge of the respondents was assessed using various items shown on (Table 2). The proportion of those that have ever used self-medication was 88.3% (n=182). The respondents have offered various reasons for the use of self-Medications. The sources of drugs used for self-

medication (see Figure 1) were patent medicine vendors (62.6%), primary health centres (23.6%) and street drug hawkers (11.5%). The most common drugs used by the respondents were analgesics (98.9%), antibiotics (58.3%), cough suppressants (46.7%) and antimalarial (35.7%) as shown on Figure 2. Headache (73.8%) and fever (57.3%) were the conditions most treated by self-medication. Other conditions mentioned were common cold (39.8%), diarrheal diseases (35.4%), abdominal discomfort (17.9%), body pains (8.3%) and to improve wellness with vitamins (21.4%)

Table 1: Sociodemographic characteristics of the respondents

Sociodemographic features	Freq (n=206)	Percentage (%)
Age		
18-24	93	45.2
25-34	103	50.0
35-44	10	4.8
Sex		
Male	130	63.1
Female	76	36.9
Tribe		
Hausa	130	63.1
Fulani	45	21.8
Yoruba	14	6.8
Igbo	8	3.9
Others	9	4.4
Religion		
Islam	192	93.2
Christianity	14	6.8
Marital Status		
Single	160	77.7
Married	42	20.4
Divorced	4	1.9

Respondents mentioned health problems that makes them to self-medicate. Table 2 shows the common health problems among the students that enables them to get drugs over the counter and treat self. Headache was the common health problem in almost three-quarter of the respondents.

Of the 206 respondents that had their knowledge assessed, 154 (74.8%) had a good knowledge score (6-10 points), and 52 (25.2%) had poor knowledge score (1-5 points) on this scale. There is good understanding among the respondents on what

Table 2: Common conditionsthat leads to Self medications

Health condition	Self-Medication	
	Yes F (%)	No F (%)
Headache	152 (73.8%)	54 (26.2%)
Fever	118 (57.3%)	88 (42.7%)
Common cold	82 (39.8%)	124 (60.2%)
Diarrheal diseases	73 (35.4%)	133 (64.6%)
Abdominal Discomfort	36 (17.9%)	170 (82.5%)
Body pains	17 (8.3%)	189 (91.7%)
Improve Health	44 (21.4%)	162 (78.6%)

Table 3: Items used to assess the knowledge of self - medication

Knowledge Assessment (n=206)	Correct knowle-dge (n=206) %	Incorrect knowle-dge (n=206) %
Unwise purchase drugs from roadside petty traders or drug hawkers	197 (95.6)	9 (4.4)
Drug pack leaflet is always containing a guide to use	193 (93.7)	13 (6.3)
Drugs are better purchased from a health facility or pharmacy	182 (88.4)	24 (11.6)
Use of drugs not prescribed by authorised personnel	175 (85.0)	31 (15.1)
Use of drugs prescribed by a doctor at home or outside the health facility	172 (83.5)	34 (16.5)
Taking drugs after consulting a doctor	165 (80.1)	41 (19.9)
Use of drugs purchased over-the-counter following doctor's prescription	153 (74.7)	53 (25.3)
The reading of leaflet in the drug pack should be once in a while	151 (73.3)	55 (26.7)
Use of medicines prescribed by authorised personnel to treat self-diagnosed conditions	149 (72.3)	57 (27.7)
Use of home-made drugs and herbs to treat ailments	119 (57.8)	87 (42.2)

constitute self-medication.

Table 4: Reasons for Self-medications

Reasons for Self Médications(n=206)	Yes F %	No F %
Drugs readily available	154 (74.8)	52 (25.2)
It was a minor ailment	143 (69.4)	63 (30.6)
Have treated similar ailment in the past	138 (66.9)	68 (33.1)
Saves time	135 (65.5)	71 (34.5)
No doctor available	58 (28.2)	148 (72.8)
Ailment required emergency care	42 (20.4)	164 (79.6)
For prevention	38 (18.4)	168 (81.6)
Drugs affordable	34 (16.5)	172 (83.5)
Drugs were always effective	25 (12.1)	181 (87.9)
Safer to use	21 (10.2)	185 (89.8)
Ailment did not require western medication	21 (10.2)	185 (89.8)

Various reasons have been offered by the respondents for self-medication. Table 4 shows the common reasons why it is easy to self-medicate in Nigeria.

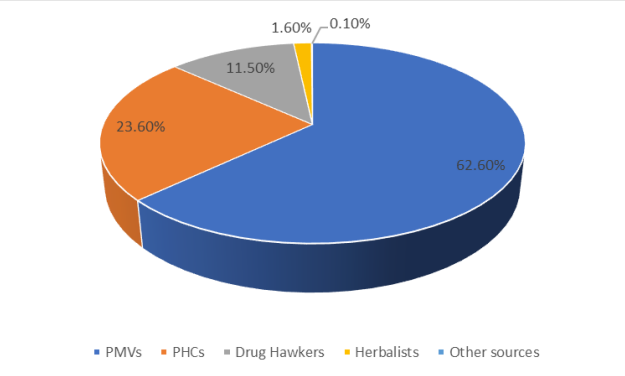

Figure 1: Sources and drugs used for Self-Medication.

Discussion

The study assessed the prevalence of self-medication among university students in Nigeria (88.3%). This is similar to the prevalence of self-medication reported from Hong Kong,[7] Karachi in Pakistan,[14] Cameroon,[15] and Nepal.[16] This high prevalence of self-medication may have signify an evolution of the healthcare system through the adoption of self-care as seen across the globe or could be reported elsewhere.[5,10,11] Our study reported older respondents are likely to engage in self-medication in comprison to younger age group. The result

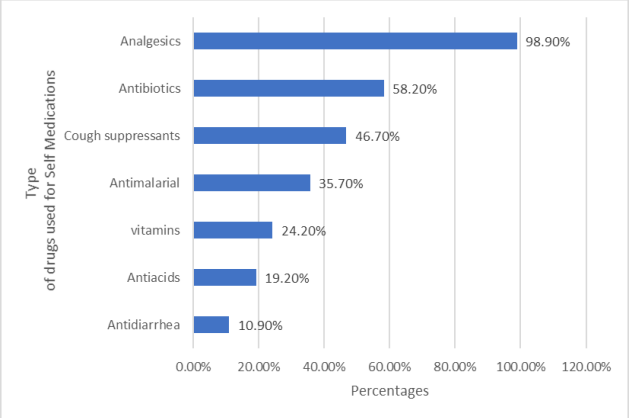

Figure 2: Drugs commonly used for Self-Medication

differs from studies in Europe[17] and Vietnam[18] but similar to studies from China[19] and USA[20] that showed a direct proportionality between older age and self-medication. In the USA[20] Neafsey and Shellman reported self-medication to be more common among the elderly. Studies[21,22] have shown that self-medication is more common amongst females than males because women suffer from complaints; they deem worthy of treatment more often than men. Thus they are more likely to use over-the-counter medicines when they are unwell. It contrasts findings (Table 5) where males 56.3% are more likely to engage in self-medication than females (32.0%) counterparts.

Almost two-thirds of our respondents (62.6 %) obtain these drugs from patent medicine vendors (see figure I), primary health centres and private pharmacy shops. The findings are similar to sources of drugs reported by Ayalew in Ethiopia[23] where conventional sources of drugs include pharmacy professionals, friends/relatives, and clinicians. Different studies also mentioned drug sellers as a source of advice, or information for the drugs use in self-médication.[24–26] More than two-thirds of the respondents engage in self-medication because they consider their health problem as a ”minor illness”, or they had previous experience of treating a similar illness in the past. Others respondents mentioned ”it saves their time” by treating oneself. These findings are consistent with reports by Omolase[10] and Shankar,[14] who showed that the significant reason for self-medication was ’simplicity of the health condition’. The common drugs used by the respondents were analgesics, antibiotics and cough suppressants. Other studies[25,27–29] reported similar results where antimicrobial use in self-medication

Table 5: Bivariate Analysis of Self-Medication Respondents data

Variable (n=206)	Self Médications		Test Statistic	P-Value
	Yes F %	NoF %		
Age				
Less than 24	78 (37.9)	15 (7.3)	$\chi 2=3.30$	0.07**
More than 24	104 (50.5)	9 (4.4)		
Sex				
Male	116 (56.3)	14 (6.8)	$\chi 2=0.26$	0.61**
Female	66 (32.0)	10 (4.9)		
Marital Status				
Single	141 (68.4)	19 (9.2)	$\chi 2=0.04$	0.81**
Ever married	41 (19.9)	5 (2.4)		
Knowledge of Self Medication				
Poor	41 (19.9)	11 (5.3)	$\chi 2=6.10$	0.02*
Good	141 (68.4)	13 (6.3)		
Smoke				
Yes	19 (9.2)	8 (3.9)	$\chi 2=9.76$	0.01*
No	163 (79.1)	16 (7.8)		
Easy access to drugs				
Yes	123 (59.7)	15 (7.3)	$\chi 2=0.25$	0.62**
No	59 (28.6)	9 (4.4)		
Have Health Insurance				
Yes	33 (16.0)	10 (4.9)	$\chi 2=7.11$	0.01*
No	149 (72.3)	14 (6.8)		
Access to Health Services				
Yes	116 (56.3)	16 (7.8)	$\chi 2=0.079$	0.78**
No	66 (32.0)	8 (3.9)		

** Not Significant P>0.05, *Significant P<0.05

was happening every day in low- and middle-income countries. Despite efforts in restriction and promotion of rational use of antibiotics, many countries allow easy access to antibiotics over the counter.[25] Similar to our results, it happens in some developed, and almost all developing countries were pain relievers (analgesics), and antibiotics are common drugs used in self-medication(see Figure 2).

Headache and fever were the conditions commonly treated by self-medication. The result is similar to that reported from Asia and Africa, where the most frequent indications discovered from the majority of the studies were fever and headaches, accounting for 60% of the illness requiring self-medication. These studies also showed fever associated with diarrhoea or body aches in some instances with gastrointestinal disease, cough, cold, allergy and stress being the other common conditions favouring self-medication. There was no association observed between self-medication and availability of healthcare services service (P=0.78) and easy accessibility to drugs (P= 0.62) which contrasts reports by Yuefeng et al.[24] where an association between self-medication and non-availability of professional medical services exist. There was an association between self-medication and not having medical insurance (P = 0.00) which is similar to reports by Yuefeng et al., 2012.[24]It implies that not having medical insurance may make an individual self-medicate and vice versa.Medical insurance provides access to professional medical care. Medical insurance, on the other hand, also decreases the cost of professional medical services; which is probably the reason for this association observed. People who do not have medical insurance are likely to self-medicate, because self-medication is cheaper than professional medical services. We got a statistically significant association between self-medication and smoking (P= 0.01) which is a similar finding to studies

reported by Ferriera de Moraes.[25]

Our study was limited by the fact that it was an institutional based therefore does not represent the Community. However this has provided an avenue for further research and exploration that is community based and more reliable in determining prevalence

Conclusion

The study reports a high prevalence of self-medication among university students in Nigeria. Knowledge of what constitutes self-medication, smoking, and having health insurance have an association with this practice. The common medications used are analgesics, antibiotics and cough mixtures. There is a need to have an improved restriction of access to over the counter drugs to curtail possibilities of misuse of drugs

Conflict of Interest: None declared

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