



Knowledge, Attitude and Practice of Self Medication amongst Medical Students in Chukwuemeka Odumegwu Ojukwu University Teaching Hospital, Awka

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Abstract

Background: Self-medication is an integral and vital component of self-care which can be defined as the selection and use of medicine or medical products by individuals to treat self-recognizable illness and symptoms or intermittent or continuous use of medication prescribed by a physician for chronic and reoccurring disease or symptoms. The purpose of this study was to determine the knowledge, attitude, and practice of self-medication amongst medical students at Chukwuemeka Odumegwu Ojukwu University Awka.

Method: A descriptive cross-sectional study involving 160 medical of COOUTH, Amaku in Awka Campus. The respondents were selected using a simple random sampling technique. Data were collected using a self-administered questionnaire. Analysis was done with IBM SPSS version 26 computer software programme.

Result: The knowledge of self-medication among clinical students in Chukwuemeka Odumegwu Ojukwu University Awka was optimal among the study participants. Respondents had a positive attitude towards self-medication which was as high as 90% in this study. The practice of self-medication was high among the study participants as over 70% of the participants practice self-medication. The major reason for self-medication is due to convenience 39.4%.

Conclusion: These findings suggest a need for the provision of a health insurance scheme for medical students and health education and talk on the hazards of self-medication, especially in relation to drug dependence and drug resistance.

Keywords Self-Medication; Medical Students; COOU; Awka

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Introduction

Self-medication is an integral and vital component of self-care, it is thus defined as the selection and use of medicine or medical products by individuals to treat self-recognizable illness and symptoms or intermittent or continuous use of a medication prescribed by a physician for chronic and reoccurring disease or symptoms.¹ It is a public health concern because of drug misuse and its medical, social and psychological problems. It is also a human behaviour in which an individual uses a substance or any exogenous influence to self-administer treatment for physical or psychological ailments¹. The most widely self-medicated substances are over-the-counter drugs and dietary supplements, which are used to treat common health issues at home¹.

Self-medication is also defined as using medicinal products to self-medicate disorders or their symptoms². It is often seen as gaining personal independence from established medicine.² Overusing the medications prescribed by a physician for oneself or other family members (especially when it comes to children or the elderly) also falls into the definition of self-medication¹. The prescription of medicines for oneself without having specialists' advice can cause many side effects including drug resistance and complications, as well as prolonged disease course².

Responsible self-medication has been advocated by the World Health Organization (WHO) for the treatment and prevention of condition/symptoms that do not require medical consultation example of such includes using over-the-counter (OTC) and relatively low-risk drugs to treat self-diagnosed disorders or symptoms, which can prevent mild illnesses and thereby reduce health care financial costs³. To safely and effectively use a prescription drug, the consumer must accurately identify symptoms, ascertain therapeutic goals, and use appropriate drugs, dosage, and therapy durations³. Furthermore, medical history, contraindications, concomitant co-morbidities, potential adverse effects, and finally response to treatment should be precisely monitored³. Self-medication is practised worldwide both for serious and non-serious illnesses³. It varies among different populations and is influenced by various features such as age, gender, income and expenditure, self-care orientation educational level, and medical knowledge but mostly higher in developing countries like Nigeria³. This is a result of some socioeconomic factors which include educational status, access to health facilities and awareness of health care services³. Self-medication has both benefits and risks. Responsible self-medication can save scarce medical resources from being wasted on minor conditions, reduce the burden on healthcare facilities, and decrease the cost and time people spend visiting healthcare facilities for minor symptoms⁴. However, inappropriate self-medication can have a number of potential risks for example delay in seeking appropriate medical advice; failure to recognize or self-diagnose contraindications, interactions with prescribed medicinal products; failure to report current self-medications to the prescribing physician (risk of double medication and/or harmful interaction); inappropriate duration of use of medicine; risk of dependence and abuse etc⁵.

Thus, WHO recommended responsible self-medication for the treatment and prevention of conditions that do not require medical consultation⁶. Self-medication is affected by various factors some of them being socioeconomic (e.g. educational level, socioeconomic status, access to medical information, awareness about health etc.), accessibility to medicine and health care facilities, and health sector reforms among others⁶. Improvement in peoples' general knowledge, level of education, socioeconomic status, and development of new technologies (e.g. internet and related communication) is a way of promoting self-medication worldwide⁶. Herbs and herbal medicines are also commonly used for self-medication because of their easy availability and accessibility; people have some knowledge about herbal remedies and hold the perception that herbal products are safe and devoid of side effects⁶. Self-medication is unavoidable in certain circumstances so the public should be motivated to practice responsible self-medication. Some of the repercussions for one's health stemming from this practice include increased resistance to certain types of medication, decreased efficacy of treatments due to inappropriate use, delay of the proper diagnosis, severe medication side effects, toxicity, dangerous drug interactions, drug dependency, hypersensitivity to certain drugs, resistance withdrawal symptoms, and countless other health problems, such as drug overdose or extreme dependence⁹. Nonetheless, the world health organization has, however, indicated that responsible self-medication does present the advantage of preventing and treating those diseases which do not require prior medical consultation and has the potential to provide a cheaper alternative for treating common disease⁹.

Self-medication can lead to wasteful expenditure, an increase in morbidities due to adverse events and resistance to antibiotics⁸. Inadequate knowledge of medication use may directly lead to misuse by community and/or patients, noncompliance with a drug regimen and results in serious outcomes like adverse drug reactions and reduction of the quality of treatment⁸. Previous studies conducted in different areas suggested that people had poor knowledge about the pros and cons of self-medication, as a result, their outlook toward self-medication practice was majorly favourable for any perceived illness⁸. Studies show that the main reasons for the practice of self-medication are the following: suffering from a mild illness, having previous experience in treating similar illnesses, economic conditions, unavailability of health care professionals and generalized excessive accessibility and availability of over-the-counter medications⁸.

Self-medication is common amongst the youth and the major reason for this habit has been attributed to the economic and social factors, which include the aspect of economic globalization with the consequent greater availability and variety of products¹⁰. Furthermore, globalization facilitates access to many kinds of drugs and their misuse¹⁰.

Medical students play a significant role in health care decision making and they represent a major part of the community however, during their undergraduate years of study are not legally eligible to prescribe medicines despite their increasing knowledge about the pathophysiology of diseases and therapeutics⁷. Self-medication among medical students may be more because they are empowered with a good educational level, greater access to medicine and information, and knowledge of diseases⁷. Medical students should have good knowledge about self-medication so that they can practice responsible self-medication. Medical students, future doctors and medical educators, with good knowledge about self-medication, could advocate, motivate, and impart essential knowledge to their patients and the general public for responsible self-medication. Furthermore, doctors should be knowledgeable about the self-medication practice in the community so that they could enquire about self-medication by their patients before prescribing medicines. This could help them optimize therapy and avoid drug-drug interactions⁷. Compared to the general public, many factors influence the practice of self-medication among medical students like easy availability of drugs, advertising of drug manufacturers, previous experiences with symptoms or disease, self-confidence about accurate drug knowledge, home-kept prescription drugs and easy access to information⁷.

Problem Statement

One of the major trends emerging recently in the area of health is the practice of self-medication. This practice has gained notoriety as a result of the huge gap between people's health needs and the availability and accessibility of several drugs¹¹. Also, the media has played a pivotal role in the mass advertisement of diverse kinds of drugs and medications resulting in their use without a doctor's consult. The Internet as a tool for accessing information has also contributed to the practice of self-medication. Thus, the abundance of information with the touch of a button has almost removed the need for people to consult health care professionals for the treatment of their ailments. For instance, a person would prefer to access sites such as Wikipedia on their symptoms than spend close to 3 hours in line waiting to be seen by a healthcare professional¹¹.

In recent years, there has been an upswing in self-medication among medical students¹². The prevalence of self-medication among medical students is increasing, this may be due to social fragmented health care, waiting time, lack of awareness and even lack of health insurance for these students¹². There are potential risks of self-medication and those risks are dependent on the type of drug used to self-medicate. This study will aid in determining the factors responsible for self-medication among medical students¹².

Significance of the Study

Self-medication is an important issue as far as the health of an individual is concerned and can lead to health hazards such as drug reaction, and drug dependence. This study is significant because self-medication is on the rise as seen in a study conducted in Mangalore, India¹³ where 21.4% had poor knowledge of self-medication. This is not just among medical students but among individuals but medical students who are future health professional needs to be educated on the knowledge and practice of self-medication thus minimizing potential health hazards to themselves and the public as a whole.

Justification of Study

Though there are laws and policies with some backed-up actions for self-medication in societies developed by government agencies, non-governmental organizations and international bodies yet the problem persists. This study is significant because the practice of self-medication is on the rise and very limited research was done exclusively on self-medication amongst Nigerian medical students. Also, there is a paucity of literature on the prevalence of self-medication among medical students and their attitude towards the same.

Research Questions

1. What is the knowledge of self-medication among medical student training at Chukwuemeka Odumegwu Ojuwku University, Awka?
2. What is the attitude towards self-medication among medical students training at Chukwuemeka Odumegwu Ojuwku University Awka?
3. What is the practice of self-medication among medical students training at Chukwuemeka Odumegwu Ojuwku University Teaching Awka?
4. What are the factors that influence self-medication among medical students training at Chukwuemeka Odumegwu Ojuwku University, Awka?

Objectives of Study

General Objectives:

To determine the knowledge, attitude and practices of self-medication among medical students training at Chukwuemeka Odumegwu Ojuwku University, Awka.

Specific objective:

1. To assess the knowledge of self-medication among medical student training in Chukwuemeka Odumegwu Ojuwku University.
2. To assess the attitude towards self-medication among medical students training at Chukwuemeka Odumegwu Ojuwku University.
3. To assess the practice of self-medication among medical students training at Chukwuemeka Odumegwu Ojuwku University.
4. To determine the factors influencing self-medication among medical students training in Chukwuemeka Odumegwu Ojuwku University.

Methodology

Study Area

The study was carried out on Chukwuemeka Odumegwu Ojukwu University Amaku Awka campus. Chukwuemeka Odumegwu Ojukwu University Awka campus is a tertiary healthcare institution located in Anambra state- the densely populated Igbo heartland in the South-Eastern part of Nigeria, West Africa. Awka is an urban area, the third largest city in Anambra state with an estimated population of 301,657 and a land mass of 120Km² according to the 2006 Nigeria census. Awka is one of the oldest settlements at the centre of Nri colonization which produced the earliest documented bronze works in Sub-Saharan Africa around 800AD and was the cradle of the Igbo colonization. Awka lies between latitude 6^o, 12 North and longitude 7^o, 6 East. The temperature in Awka is generally between 23^oc-27^oc. The major language of the people is Igbo and the occupation of the people includes trading, public service, blacksmithing, technicians, drivers other privately established individuals and professionals, some of whom are health workers, politicians and bankers. The major population lives in the metropolis, while the remainders are rural dwellers.

Study Design

The study was a descriptive cross-sectional survey conducted using pretested questionnaires on the knowledge, attitude and practice of self-medication among medical students at Chukwuemeka Odumegwu Ojukwu University, Awka campus.

Study Population

Medical students in the clinical classes training at Chukwuemeka Odumegwu Ojukwu University, Awka campus.

Sample Size Determination

The sample size will be determined using Cochran's formula. This formula is used for the estimated population size of less than 10,000.

$$\frac{Z^2 P(1 - P)}{d^2}$$

N = minimum sample size

Z = Standard normal deviate, 1.96 at 95% confidence limit

P = prevalence= proportion of respondents in Nepal who have the knowledge of self-medication 52% =0.52³⁰

d = Degree of precision, (margin of error tolerated) taken as 5% = 0.05

Therefore, sample size was

$$N = \frac{1.96^2 \times 0.52 (1-0.52)}{0.05^2}$$

$$= \frac{3.84 \times 0.52 \times 0.48}{0.0025}$$

$$= \frac{0.9584}{0.0025}$$

$$N = 383$$

Since the sample size is <10,000, the final sample will be

$$n_f = \frac{n}{1 + (n/N)}$$

Where

n_f = the derived sample size when population is <10,000

n = the derived sample size when population is > 10,000

N = Estimate of the population of fourth, fifth and sixth-year medical students studying in Chukwuemeka Odumegwu Ojukwu University, which is 230 students.

$$n_f = \frac{383}{1 + (383/230)}$$

$$1 + (383/230)$$

$$n_f = \frac{383}{2.66}$$

$$n_f = 143$$

The minimum sample size was 143.

Adding 10% of the minimum sample size for the expected non-response rate,

$$= 10\% \text{ of } 143$$

$$= \frac{10}{100} \times 143$$

$$= 14$$

The total sample size:

$$14 + 143 = 157 \text{ approximately } 160$$

The minimum sample size = 160

Selection Criteria

Inclusion Criteria

- a. Medical Students currently in their fourth, fifth and sixth year of study in Chukwuemeka Odumegwu Ojukwu, Awka.
- b. Medical students who gave their consent.

Exclusion Criteria

- a. Medical students in their fourth, fifth and sixth year of study who do not give their consent.

Sampling Procedure

Stratified random sampling will be used to conduct this study, using random sample selection at each stratum (class). There are about two hundred and thirty medical students at Chukwuemeka Oduemgwu Ojukwu University Awka Campus. Questionnaires will be distributed to these students. The class list will be used as the sampling frame in each stratum. All odd registration numbers will be selected in ascending order until the desired sample size is achieved. 26%, 30% and 38% will be chosen from the fourth, fifth and sixth year respectively.

Research Instrument

The questionnaire component: Semi-structured, self-administered questionnaire, consisting of four sections viz;

Section A:

Socio-demographic characteristics, will focus on age, sex, level, religion and marital status.

Section B:

Knowledge of self-medication which will consist of close-ended questions focusing on the respondent's awareness of self-medication.

Section C:

The attitude of medical students to self-medication consists of both open and close-ended questions which will highlight the attitude of respondents toward self-medication.

Section D:

The practice of self-medication, using close-ended questions to assess the type of drugs used to self-medicate. Open-ended questions will be used to assess the habit and frequency of self-medication.

Data Collection

The semi-structured questionnaire will be distributed to the respondents within a period of three weeks at Chukwuemeka Odumegwu Ojukwu University, Awka campus on Mondays, Wednesdays and Fridays. This will be done strictly after seeking individual consent.

Data Analysis

Questionnaires will be checked for data errors and omissions at the end of each day and quantitative data will be analyzed using SPSS (Statistical Package of Social Science) version 21. Data analysis will include the use of appropriate tables, frequencies, bar charts, pie charts, percentages, proportions, mean and diagrams of the relevant variables. Appropriate statistical tests will be used to test for association between variables at 5% level of significance.

Ethical Clearance

Approval and Ethical clearance were obtained from the COOUTH Ethical Committee to carry out this study before the study commences properly. Verbal consent will be obtained from research respondents before administering the questionnaires. The respondents will be informed about the research and its objectives and participation will be made voluntary. They will be assured that confidentiality will be maintained during and after the study and information given would be used only for research purposes.

Anticipated Limitations

Respondents may be reluctant to participate but they will be assured of confidentiality and encouraged to participate.

Results

Socio-Demographic Characteristics

Table 1: Showing the Socio-Demographic Characteristics of the respondents

VARIABLE	FREQUENCY (N=160)	PERCENTAGE %
AGE		
16-21	50	31.3
22-27	79	49.4
28-33	21	13.1
More > 33	10	6.3
MEAN AGE +/- SD	24.5 years +/- 0.83	
SEX		
Male	90	56.3
Female	70	43.8
RELIGION		
Roman catholic	72	45
Anglican	61	38.1
Pentecostal	27	16.9
MARITAL STATUS		
Single	146	91.3
Married	14	8.8
TRIBE		
Igbo	160	100
YEAR OF STUDY		
400	60	37.5
500	50	31.3
600	50	31.3
PLACE OF RESIDENCE OF PARENTS		
URBAN	140	87.5
RURAL	20	12.5
HIGHEST EDUCATIONAL OF FATHER		
No formal education	2	1.3
Primary education completed	12	7.5
Secondary education completed	11	6.8
Tertiary education completed	90	56.2
Post graduate Degree	45	28.1
HIGHEST EDUCATIONAL OF MOTHER		
No formal education	7	4.4
Primary education completed	10	6.3
Secondary education completed	9	5.6
Tertiary education completed	108	67.5
Post graduate Degree	26	16.3

<i>OCCUPATION OF FATHER</i>		
<i>Trader</i>	6	3.8
<i>Teacher</i>	17	10.6
<i>Doctor</i>	20	12.5
<i>Engineer</i>	88	55.0
<i>Artisan</i>	29	18.1
<i>OCCUPATION OF MOTHER</i>		
<i>Trader</i>	28	17.5
<i>Teacher</i>	43	26.9
<i>Doctor</i>	34	21.3
<i>Engineer</i>	34	21.3
<i>Housewife</i>	21	13.1

Out of the total of 160 respondents who were approached for the study, 160 people responded to the questionnaire giving a response of 100%.

From the table above (table 1), it could be deduced that there were more males 90 (56.3%) while 70 (43.8) were females. It also showed that most of the medical students are between 22-27 years 79(49.4%). All are Christians with most from the Roman Catholic denomination 72 (45%). Most parents reside at the urban level 140 (87.5%). Most fathers and mothers attained tertiary level of education 90 (87.5%), and 108 (67.5%) respectively. Most fathers are Engineers by profession 88 (55%) while most mothers are Teachers by profession 43 (26.9%).

Knowledge of Self-Medication

Do You Know What Self-Medication Is?

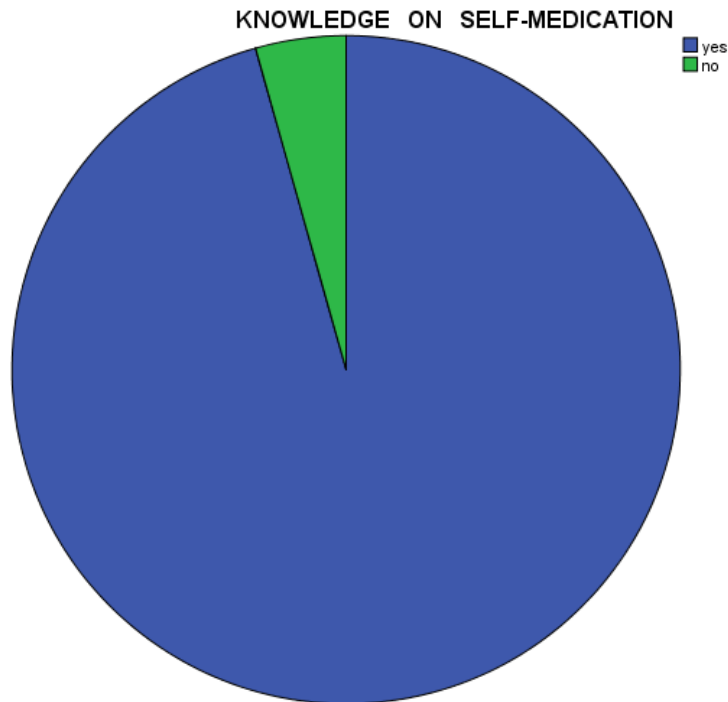


Figure 1: Knowledge on Self Medication

One hundred and fifty-three respondents (95.6%) were aware of self-medication while seven (4.4%) respondents were not aware of self-medication.

Table 2: Do you understand what self-medication is?

VARIABLE	FREQUENCY (160)	PERCENTAGE
<i>Prescribing and administering drugs to oneself</i>	77	48.1
<i>Taking drugs without a proper prescription from a health care worker</i>	54	33.8
<i>Administration of drugs without a doctor's prescription</i>	29	18.1

Seventy-seven (48.1%) respondents defined self-medication as prescribing and administering drugs to oneself, 54 (33.8%) defined it as taking drugs without a proper prescription from a health care worker while 29 (18.1%) defined self-medication as administration of drugs without doctor's prescription.

Table 3: Potential Consequences of Self-Medication

VARIABLE	FREQUENCY (N=160)	PERCENTAGE
<i>Incorrect self-diagnosis</i>	13	8.1
<i>Delay in seeking medical advice</i>	22	13.8
<i>Adverse reactions</i>	26	16.3
<i>Drug interactions</i>	11	6.9
<i>The correct choice of therapy</i>	12	7.5
<i>Drug abuse</i>	29	18.1
<i>Drug dependence</i>	18	11.3
<i>Unmasking of severe diseases</i>	14	8.8
<i>Incorrect dosage of drugs</i>	15	9.4

Twenty-nine (18.1%) of the respondents chose drug abuse as a potential consequence of self-medication, twenty-six (16.3%) chose adverse reactions, twenty-two (13.8%) chose delay in seeking medical advice while fifteen (9.4%) chose incorrect dosage of drugs

Table 4: Attitude Towards Self-Medication

QUESTION	STRONGLY AGREE	AGREE	UNSURE	DISAGREE	STRONGLY DISAGREE	TOTAL
<i>Self-medication is acceptable for medical students</i>	17 (5.3%)	22 (6.9)	20 (12.5)	26(16.3)	58 (36)	160 (100)
<i>Medical students have the ability to diagnose and treat symptoms</i>	99 (61.9)	16 (10)	10 (6.3)	24 (15%)	11 (6.9)	160 (100)
<i>Self-medication is harmful if undertaken without proper knowledge of drugs and diseases</i>	96 (60)	43 (26.9)	8 (5)	6 (3.8)	7 (4.4)	160 (100)
<i>Medical license is needed for better administration of drugs</i>	96 (60)	48 (30)	4 (2.5)	7 (4.4)	5 (3.1)	160 (100)
<i>The course of medication</i>	70 (43.8)	50 (31.3)	24 (15)	9 (5.6)	7 (4.4)	160 (100)

<i>should be completed even though the symptoms subside</i>						
<i>Most medical students do not bother their doctors with minor health problems always</i>	90 (56.3)	34 (21.3)	11 (6.9)	11 (6.9)	14 (8.8)	160 (100)
<i>Need for carefulness with non-prescribed over-the-counter medicines</i>	104 (65)	49 (30.6)	7 (4.4)			
<i>Importance of reading accompanying medication leaflet</i>	89 (55.6)	49 (30.6)	11 (6.9)	11 (6.9)		160 (100)
<i>Need for recommendation of self-medication to other people</i>	5 (3.1)	4 (2.5)	19 (11.9)	40 (25)	92 (57.5)	160 (100)

When asked if self-medication is acceptable for medical students, seventeen (5.3%) strongly agreed, twenty-two (6.9%) agreed, twenty (12.5%) were unsure, twenty-six (16.3%) strongly disagreed while fifty-eight (36%) disagreed.

When asked if self-medication is harmful, ninety-six (60%) respondents strongly agreed, forty-three (26.9%) agreed, eight (5%) were unsure, six (3.8%) strongly agreed and seven (4.4%) disagreed.

When asked if the course of medication should be completed even though the symptoms subside, seventy (43.8%) strongly agreed, fifty (31.3%) agreed, twenty-four (15%) were unsure, nine (5.6%) strongly disagreed and seven (4.4%) disagreed.

When asked if there is a need of reading the accompanying medication leaflet, eighty-nine (55.6%) respondents strongly agreed, forty-nine (30.6%) agreed, eleven (6.9%) were unsure while eleven (6.9%) disagreed.

Practice of Self-Medication



Figure 2: Practice of Self-medication

Fifty (31.3%) respondents self-medicate when ill, forty (25%) wait till symptoms subside, thirty-one (9.7%) check the internet while twenty-three (7.2%) consult a fellow medical student.

Have you Self-Medicated in the Past 6 Months

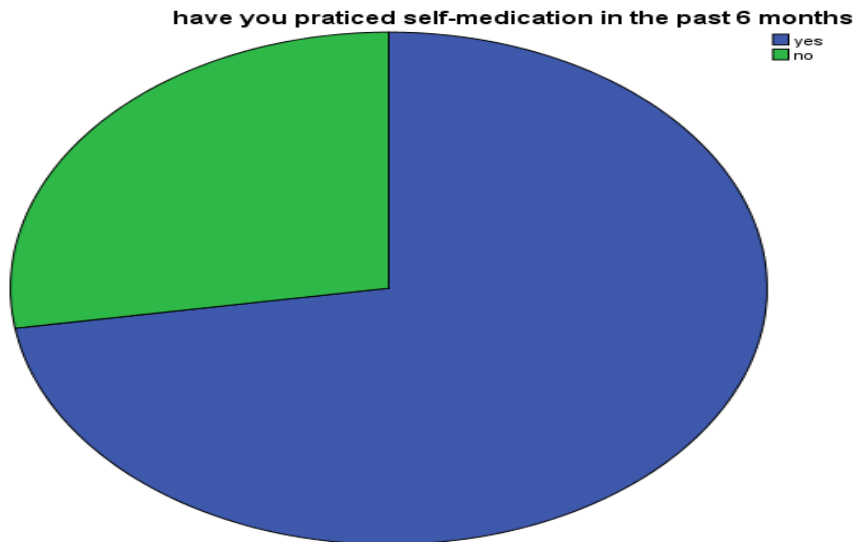


Figure 3: Self-medication for the Past 6 Months

Hundred and sixteen (72.5%) respondents had self-medicated within the past 6 months while forty-four (27.5%) has not self-medicated within the past six months.

Diseases that Required Self-Medication in the Past Six Months

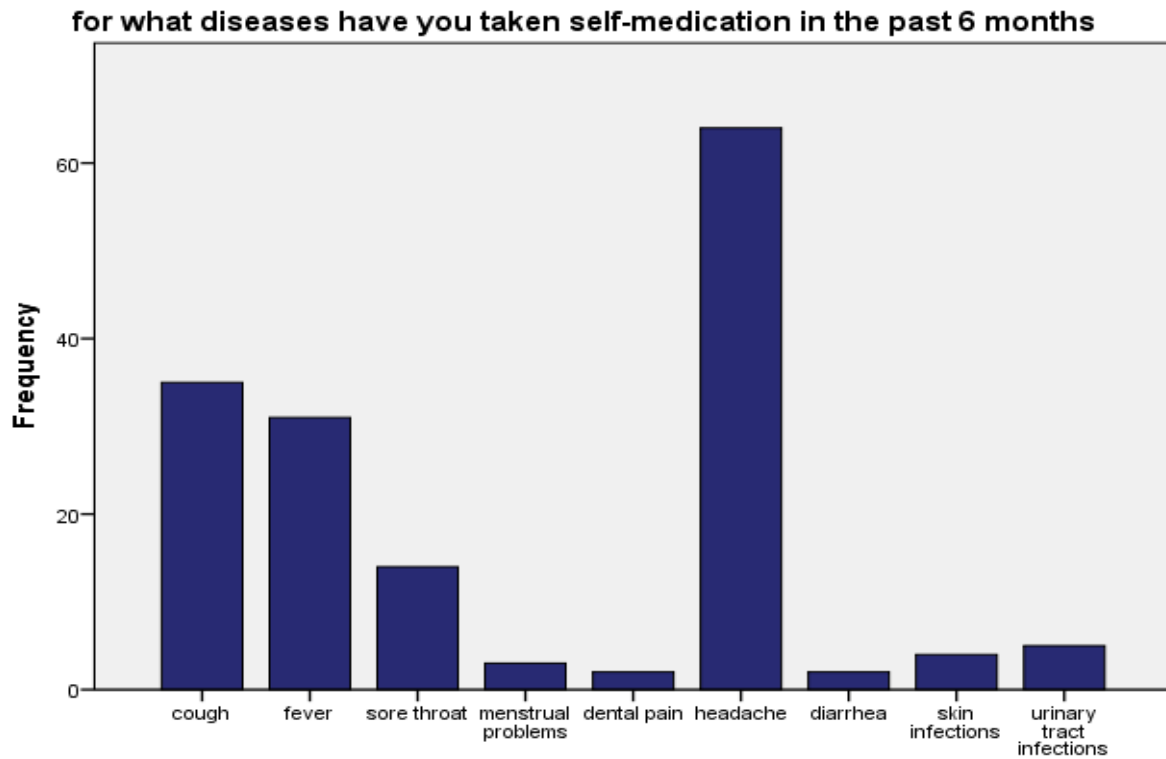


Figure 4: Diseases that Required Self-Medication in the Past Six Months
 Sixty-four (40%) respondents self-medicated because of headache, thirty-five (21.9) self-medicated due to cough, thirty-one (9.7) due to fever while fourteen (8.8%) self-medicated because of sore throat in the past 6 months.

Categories of Medication Commonly used for Self-Medication

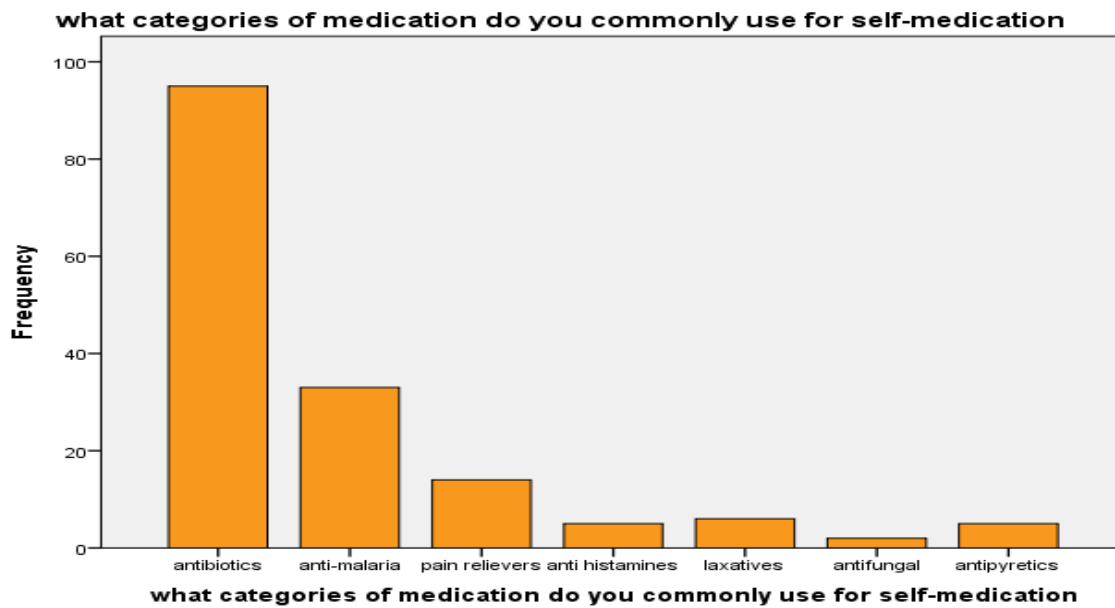


Figure 5: Categories of Medication Commonly used for Self-Medication

Ninety-five (59.4%) respondents commonly use antibiotics when self-medicating, thirty-three (20.6%) for anti-malaria while fourteen (4.4%) use pain relievers

Table 5: Do you read the accompanying medication leaflet?

<i>VARIABLE</i>	<i>FREQUENCY (N=160)</i>	<i>PERCENTAGE</i>
<i>Always</i>	50	31.3
<i>Sometimes</i>	61	38.1
<i>Never</i>	49	30.6

Sixty-one (38.1%) sometimes read medication leaflets, fifty (31.3%) always while forty-nine (30.6%) never read accompanying medication leaflets.

When you Self-Medicating, do you understand the Instructions?

if you read the accompanying medication leaflet, how much do you understand the instructions

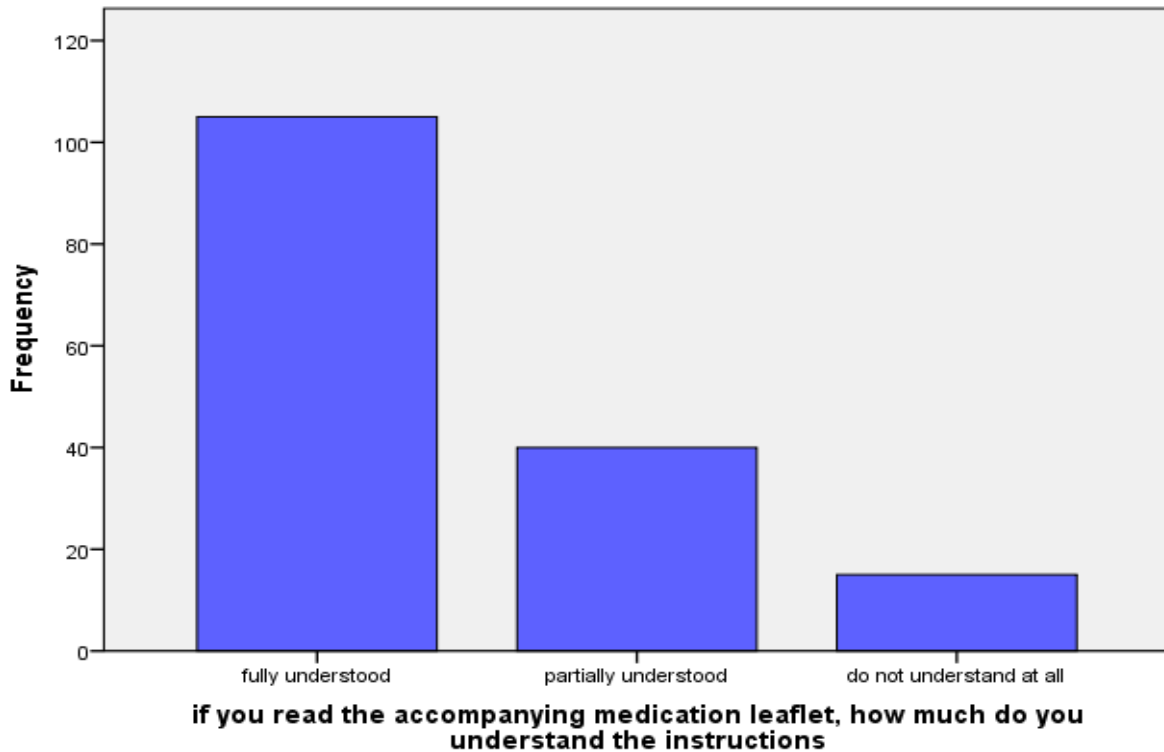


Figure 6: When you Self-Medicating, Do you understand the Instructions?

Hundred and five (65.6%) fully understand the instructions, forty (25%) partially understand and fifteen (9.4%) don't understand at all.

Have you Experienced Adverse Effect

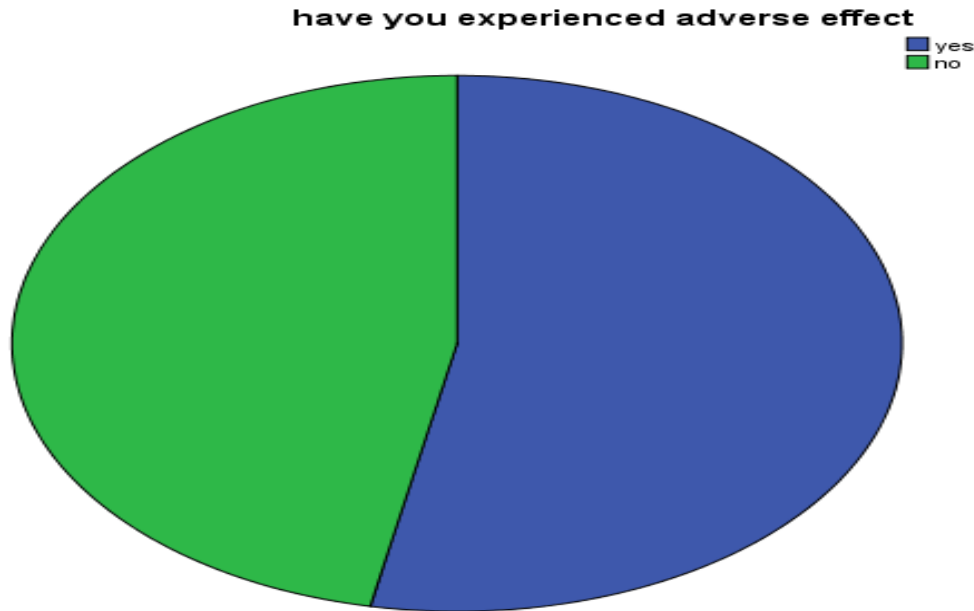


Figure 7: Have you Experienced Adverse Effect

Eighty-five (53.1%) respondents experienced adverse effects while seventy-five (46.9%) did not experience adverse effects.

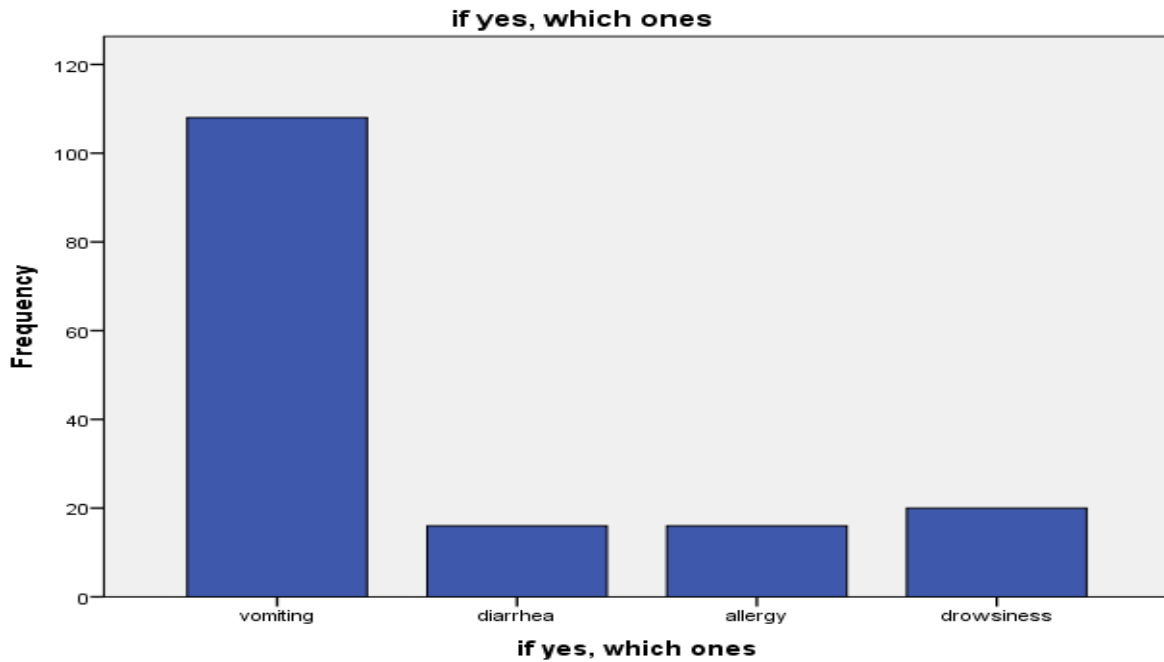


Figure 8: Adverse Effect Experienced

Hundred and eight (67.5%) experienced vomiting, sixteen (10%) experienced diarrhoea and sixteen (10%) had an allergy.

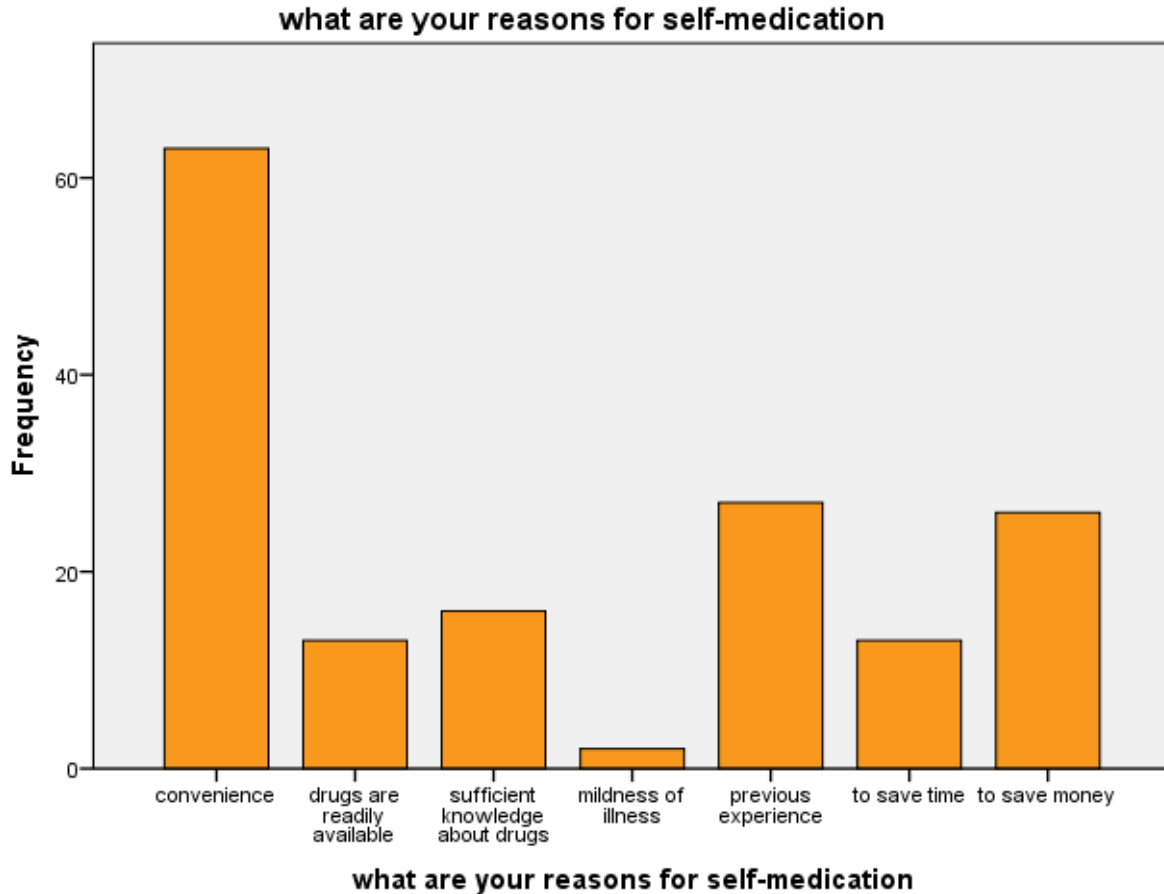


Figure 9: Reasons for Self-medication

Sixty-three (39.4%) respondents self-medicate due to convenience, twenty-six (16.3%) to save money, twenty-seven (16.9%) due to previous experience and sixteen (10%) due to sufficient knowledge about drugs.

Comparison between the Sex of Respondents and Knowledge of Self-Medication

Table 6: Knowledge Of Self Medication

SEX	YES	NO	χ^2	P
MALE	87 (54%)	3 (1.8%)	0.465*	0.534
FEMALE	66 (41%)	4 (2.5%)		
TOTAL	153	7		

Not significant * is greater than 0.05

There is a relationship between sex and the knowledge of self-medication amongst the respondents.

Comparison between the Class of Respondents and Self-Medication

Table 7: Have you Ever Self-Medicating

LEVEL	YES	NO	χ^2	P
400L	45	15	0.460*	1.555
500L	38	12		
600L	33	17		
TOTAL	116	44		

Not significant * is greater than 0.05

There is a relation between the level of the current study and self-medication.

Discussion

This research assessed the knowledge, attitude and practice of self-medication among medical students at Chukwuemeka Odumegwu Ojukwu University, Awka. The population of the students included medical students in their 4th, 5th and 6th year of study. The survey attempted clearly to answer the research questions. The collected data was analyzed using descriptive statistics and represented in tables. Pie charts, bar charts.

From the survey, it was discovered that the mean age of medical students trained at Chukwuemeka Odumegwu Ojukwu University, Awka is 24.5 years. It was also observed that males dominated this field (56.3%).

From this survey, it was discovered that not all medical students have adequate knowledge about self-medication (4.4%). This is similar to a study carried out among first-year medical students in Nepal¹⁵ where 2.7% had no adequate knowledge of self-medication. Amongst those who self-medicate (95.6%), the commonest drugs used were antibiotics (59.4%) and anti-malaria drugs (20.6). This could be a result of malaria being endemic in Nigeria and also due to the belief that there is synergy between antibiotics and anti-malaria in the treatment of Typhoid fever and malaria.

From this survey, it was discovered that 16.3% of respondents knew adverse drug reaction is a potential consequence of self-medication., it was also discovered that 53.1% of respondents experienced adverse effects when self-medicating with vomiting 67.5% the most experienced adverse effect. This is similar to a survey done in Nepal¹⁵ where 37.3% experienced and had knowledge of drug adverse reactions associated with self-medication¹⁵. This could be averted with proper education on self-medicating and the dangers of adverse drug reactions while self-medicating.

In this study, 36% disagreed and 6.7% strongly disagreed that self-medication is acceptable to medical students. This is similar to a study carried out in Nepal¹⁵ where 30.7% disagreed and 6.7% strongly disagree. This could be a result of proper and adequate self-medication and potential consequences of self-medication.

In a study carried out in Nepal¹⁵, 18.7% disagreed while 8% strongly disagreed that medical students can diagnose and treat symptoms, this is almost similar to findings in my study where 11% disagreed and 15% strongly disagreed. This could be a result of fear of worsening already present symptoms that could lead to potential consequences and pose risk to health¹⁵.

In this study, it was discovered that 5.6% strongly disagreed and 4.4% disagreed that a course of medication should be completed even though the symptoms subside. This is not similar to a study done in Nepal¹⁵ where 58.7% strongly disagreed and 29.3% disagreed. This could be a result of poor and negative attitudes toward self-medication¹⁵.

From this study, it was discovered that 31.3% of respondents self-medicate first when they fall ill, and 25% wait for symptoms to subside. This is similar to a study done in Bangedesh¹⁴ where 29% of respondents self-medicate while 12% wait till symptoms subside. This could be a result of knowledge of drugs as medical students and from previous experiences with similar illness¹⁴.

In this study, it was discovered that 67.5% of respondents experienced vomiting as the most adverse effect. This is similar to a study in Bangedesh¹⁴ where vomiting 30.2% was reported as an adverse effect¹⁴.

In a study carried out in Bangladesh¹⁴, 61% of respondents self-medicated due to previous experience. This is not similar to my findings in my study where 16.9% self-medicated due to previous experience. However, most are self-medicated because it was convenient and money-saving¹⁴.

In this study, when asked the reasons for self-medication, 39.4% of the respondents self-medicated due to its convenience – that is, avoiding waiting for so long in queues at clinics and hospitals. This is similar to a study carried out in Nigeria⁶ where 59% of the respondents self-medicated due to long waiting at the clinical and hospital⁶.

Conclusion

The finding of this survey shows that majority of the respondents had adequate knowledge of self-medication (95.6%). There was an optimal attitude towards self-medication (90%) but the practice of self-medication is sub-optimal whereby most of the respondents self-medicate when ill (31.3%) with the major reason being that self-medicating is convenient - that is not having to go to the hospital and waiting in long queues to see a doctor in the hospital coupled with outrageous bills.

In conclusion, from the survey, there is a need for the provision of a health insurance scheme for students especially medical students to limit self-medication as most medical students detest visiting hospitals because of the outrageous bills.

Recommendation

1. Health talks and seminars on the risk of self-medication should be delivered to both the medical and the general public at large.
2. More studies should be done on the effectiveness of tertiary institution student health insurance (**THSHIP**) in Nigeria.
3. Provision of health insurance scheme for students.

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