

# Perception and Consequences Associated with Self- Medication Practice Among Nnamdi Azikiwe University Undergraduates.

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## ABSTRACT

Self-medication implies the use of any medicine for the treatment of ailments without a physician's prescription. This study investigated perception and consequences associated with self medication practice among Unizik undergraduates. The study was designed as a survey. The study population comprised all undergraduate students of Nnamdi Azikiwe University Awka Anambra State. (30,917). A sample of 390 respondents was selected from this population. Questionnaires were personally administered to 390 undergraduate students of Unizik. Major findings indicate that a large number of the respondents perceive that self- medicated drugs are as effective as the one prescribed by physicians. That the respondents' major ailment is Malaria. And that the respondents mostly treat malaria using Lokamal Antimalarial drug. On the consequences associated with self medication, the study discovered that majority of the students are aware of the consequences and have experienced dizziness as a major consequences of self- medication. The study concluded that the respondents are aware and has also to a large extent experienced dizziness as a major consequence of self- medicating. It however suggests that health education on self-medication should be introduced into the undergraduate curriculum so as to enlighten the students on the consequences associated with unregulated self-medication practice.

**Keywords:** Perception, Consequences, Self- Medication, Practice.

## INTRODUCTION

Self-medication implies the use of any medicine for the treatment of ailments without a physician's prescription (Adum, Ekwugha, Orjiakor & Ebeze, 2016, p.41). Such ailments may be fever, body pains, indigestion, diarrhea etc. In any case, several people, friends, relatives and even patent medicine sellers (PMS) may advise the sick person on the type of medicine to take as a cure. This medicine which may come inform of herbs or conventional drugs may be bought over the counter. The practice of self- medication in a developing economy like Nigeria poses a great health challenge. However, Self-medication in Nigeria has reached a crisis situation such that Nigerians, especially, youths, take anything; even potentially toxic substances, as remedies for ailments. As (Ketis, Hladnik, & Kersnik, 2010, as cited in Esan, Fasoro, Odesanya, Esan, Ojo, & Faeji 2018, p.1) explained, 'Self- medication is now a common phenomenon in both developed and developing countries but higher in developing countries, due to wider increase of drug availability without prescription.

Previous experience of ailment and incessant advertising, on the other hand, has increased the prevalence of self-medication among undergraduates. This is because these undergraduates who perceives some ailments as minor tends to buy self-medicated drugs not minding the risk associated with taking such drugs. And this according to (Erhun & Erhun, 2000, as cited in Osemene & Lamikanra, 2012, p. 2) accounts for about 2.9 – 3.7 % causes of death in hospitals as a result of drug-drug interactions. Incessant advertising has also contributed to the growth of this ugly trend as manufacturers always conclude their adverts with "if symptoms persist after two days consult your doctor" This has indirectly encouraged the growth in self-medication practices as people would always want to try their luck with these drugs before actually going to

see their doctors when the situation finally gets out of hand. Virtually any adult, according to Adum et al. (2016) could walk into the many dappling Pharmacies or Patent Medicine Stores (PMS) – popularly called “chemist” by locals – and purchase any available drug in any quantity required without any recourse to a doctor’s prescription. This behaviour as opined by these authors is not exclusive to any category of Nigerians, but cuts across virtually all categories – lower class, middle class and the upper class. Against this backdrop, this study thus, aim at investigating how Unizik undergraduate students perceive self medication practice, the prevalent ailments and the types of drugs used for the treatment of such ailments, how the drugs are used, and the consequences associated with the use of these drugs with a view to recommending means of controlling self- medication practice in Nnamdi Azikiwe University Awka.

### **Statement of Research Problem**

The rise in the rate of self-medication is a serious issue not only to health decision-makers but to policy-makers also. This increase however, according to Stosic, Dunagan, Palmer, Fowler, & Adams, (2020) could be as a result of higher costs of consulting a doctor, greater availability of drugs and easier access to medications, lack of access to health care facilities and services, and patients’ experiences of previous treatments.

Generally, self- medication is regularly used for minor ailments such as headache, fever, sore throat, gastrointestinal tract problems, respiratory problems, skin disorders, ear symptoms among others (Gelayee, 2017). WHO on one hand, recognizes regulated self medication as a viable tool for achieving universal health coverage, while adherents on the other hand, observes that it gives them quick access to treatment, self-independence in alleviating symptoms, reduction in the cost of accessing healthcare and frequency of visits to health centers. In spite of its various advantages as perceived by its adherents, self-medication, particularly if unguided as opined by Bennadi (2014) could results into possible risks at the individual level such as incorrect diagnosis, serious adverse effects, increased antimicrobial resistance, dangerous food and drug interactions, as well as drug misuse and abuse.

However, Chouhan & Prasad (2016) pointed out that the negative consequences of Self- medication can be largely felt in many developing countries with limited resources, low literacy level and healthcare amenities, as well as the huge populace who neither have access to information nor satisfactory knowledge regarding therapy, dosage and duration of use or side effect. At the moment, a deep source of worry is, since the adherents of self-medication perceive it in good light, do they actually know the adverse consequences associated with these medications? It is on this premise that this paper sought to determine perception and consequences associated with self-medication practice among Unizik undergraduates.

### **Objectives**

1. To find out how the Unizik undergraduates perceive self medication practices
2. To find out the ailments and self medicated drugs used by the Unizik undergraduates.
3. To ascertain the proportion of Unizik undergraduates who are aware of the consequences associated with self medication.

### **Research Questions**

1. What is the Unizik students’ perception of self medication practice?
2. What are these ailments and the self medicated drugs used by Unizik undergraduate?
3. What proportion of the Unizik undergraduates are aware of the consequences associated with self medications?

## LITERATURE REVIEW AND THEORETICAL FRAMEWORK

Self-medication is an umbrella term, which includes a variety of behaviours, ranging from self-care to disease prevention and disease management. As such, self-medication is not limited to drug intake, but includes also interventions aimed at modifying lifestyle. Subashini and Udayanga (2020, p.1) therefore defines self-medication as the use of medication (modern and/or traditional) for self-treatment without consulting a physician either for diagnosis, prescription, or surveillance of treatment. It however involves obtaining medication without prescription and taking medicines on advice of and from friends and relatives. Self-medication is common in both developed and developing countries but higher in developing countries, due to wider increase of drug availability without prescription. It can also on the other hand mean acquiring medication without a prescription, resubmitting an old prescription to procure medication, sharing medications with others, or utilizing a medication that is already available in the residence.

### Self- medication and adherents' perception

Studies have revealed that young adults are more vulnerable to the practice of self-medication as a result of their low perception of risk associated with the use of drugs. (Muzio, Vito, Tartaglini, & Villari, 2017, p. 129). Their knowledge of drugs, are as a result of their easy access to the Internet, and the media on related health issues. These youths perceive the sale of both over the counter (OTC) and prescription drugs by petty traders and roadside hawkers as the best option because to them, it helps them manage their health situations promptly.

Esan et al. (2018) argued that in Nigeria, there are many unregistered patent medicine stores/pharmacies from which people purchase drugs from. Stating specifically that Self-medication with both over the counter drugs and prescription drugs are very common in Nigeria

basically because of weak enforcement of drug regulations. The unregulated sales of these products may constantly increase self-medication practice among the general populace. However, a responsibly guided self-medication may still be envisaged, whereby the patient treat his illness or symptom with medicine which are approved and available without prescription, but which are safe and effective when used as directed (WHO Drug Information, 2020).

Quite a lot of benefits have been linked to appropriate self-medication; among them are increased access to medication and relief for the patient, the active role of the patient in his or her own health care, quick, effective and financially acceptable removal of unpleasant symptoms of minor illness and prevention of development of serious disease, within a short period of time. In spite of these numerated perceptions, self-medication is far from being a completely safe practice, especially in the case of non-responsible self-medication. Adeluyi (2020)

### Self-medication information sources

The major sources of self- medication information as assert by Shah, Halder & Shabbir (2021) is patent medicine stores and community pharmacies. Other identified sources of drugs used by the young adult youth for self-medication, are friends and relatives and left-over's from previous prescriptions (Rasheed, Naqvi & Ahmad, 2017). Furthermore, one of the most under-considered sources of self-medication information as stated by Santamaría, Moreno, Acosta, Alfonso, Ospina and Soler, (2021, p.7) is the sharing of medicines between family and friends. Sharing of medications according to Santamaría et al. (2021) can be defined as borrowing or lending medication in which the receiver of the medicines is not the individual for whom the medicine was initially prescribed. Studies have shown that lending pain prescription medication was more common than lending non prescription medications, and most participants admitted

lending analgesics to family, friends, neighbors, and sometimes with work colleagues, because of distrust in physicians, inconvenience of contacting a physician, no access to a health-care professional, or an emergency situation such as severe pain among many others.

Similarly, Ashitha, Sheba, Sreekutty, Moosa, and Musharraf (2022) point out that the 'advent of the media have caused massive changes in the society as a whole, thereby causing a big hike on the rate at which people subscribe to self-medication presently. The internet according to Shah, Halder, and Shabbir (2021) is widely used in healthcare, and it has significantly impacted on research, training and patient care. In spite of its positive contributions to healthcare, it has also led to countless misfortunes through its services as Self-medicating source.

The social media platforms according to Zaprutko T, Kopciuch D, Paczkowska A, Sprawka J, Cynar J, Pogodzińska M, et al. (2022) facilitate the sharing of information and knowledge as part of the relations among people. For many people, the Internet, including social media, became a primary and trustworthy source of health information on self-medications (Coloma, Becker, Sturkenboom, Mulligen, & Kors, 2015, p. 921-930). Nevertheless, such trust might be dangerous. This is because a large number of these online sources of information are not supported by professional information. Wiśniewski, Religioni, and Merks (2020) states that Pharmacists, as patient's advisors guarantee drug safety and public awareness resulting, from pharmaceutical care, pharmacists' responsibilities, and conditions aimed at suitable drug storage and delivery. Other sources, apart from licensed pharmacies, could also pose serious risks to the consumer's health.

### Medical conditions and self-medicated drugs used

The most common medical conditions that leads students to self medicate are cough, headache, cold, menstrual pains and fever. Other medical conditions are sore throat, running nose, eye problems, diarrhea, malaria, gastrointestinal disorders, infection, skin problems, and dysmenorrhea. (Araia, Gebregziabher, & Mesfun, 2019). Antibiotics, analgesics, antipyretics, antacids, vitamins, cough remedies, eye drops, antihistamines, antimicrobials, and anti-inflammatory drugs according to (Ramadan, Eltaweel & Nakhal, 2018) are commonly used drugs in self-medication. However, the commonly used self-medicated drugs among undergraduate students in Unizik are:

- Coflin, Benyline with codeine cough syrups, Actifed, pro cold, Mixer grip, Cofmix, Ibucap (for cough and cold)
- Paracetamol, Panadol Extra, Ibuprofen, Diclofenac, Saridon P, Boska, Brustan Aspirin etc ( for pains)
- Lokamal, Amatem soft gel, Lonart, Chroloquine, Artesunate, (Anti malaria drugs)
- Oral drip, Zinc tablet, Imodium, Metronidazole (for Diarrhea)
- Glusil tablet, Mist Mag, gestid etc (gastrointestinal disorder).
- Dolo-Meta B etc (for menstrual pains)

### Some of the Self-Medicated Drugs used by Unizik undergraduates.





Adum, et al., (2016) gave the following, as reasons for self- medication among Nigerians:

- The state of health care facilities in the country which are on the average somewhat inadequate, in the sense of qualified medical personnel, availability of equipment and drug supply.
- Medical attentions in major hospitals, with the exception of some private hospitals where medical charges can be prohibitive, are inadequate. This can be highly inconveniencing to people seeking medical attention. There are cases where patients have died in some hospitals while waiting for medical attention by the few available doctors in government hospitals

- The availability of alternative medicines like herbals which efficacy most times have not been scientifically verified.
- The presence of “chemists”- local dispensary stores- and pharmacies, where drugs of all kinds could literally be bought off the counter.
- Lack of clear-cut enforceable guidelines and regulations as to who can purchase which drug and for which ailment.

### **Consequences of self-medication**

Potential risks of self-medication practices are, incorrect self-diagnosis, delays in seeking medical advice when needed, infrequent but severe adverse reactions, dangerous drug interactions, incorrect manner of administration, incorrect dosage, incorrect choice of therapy, masking of a severe disease and risk of dependence and abuse. In many cases the self-medication leads a person toward lifelong health problems Such as Antibiotics resistance, insomnia, depression, abdominal discomfort, immune system weakness, kidney failure, and liver cirrhosis etc (Alamgir, Salahuddin, Syed & Manzoor, 2018).

(Hussain, 2015, as cited in Alamgir et al., 2018) pointed out that self-medications might cause headache, fever flu, allergy, cough, body ache, acidity and minor infections. He further stated that the use of routine or general medicine like sleeping pills and toothache medications may cause variety of health problems for its user. Potential risks associated with of self-medicated drugs include incorrect self-diagnosis, delays in seeking medical advice when needed, infrequent but severe adverse reactions, dangerous drug interactions, incorrect manner of administration, incorrect dosage, incorrect choice of therapy, masking of a severe disease and risk of dependence and abuse.

### **Empirical Review.**

Some related studies were highlighted to bring to the fore what the body of research on healthcare holds about the subject matter of self-medication; especially among Unizik undergraduate youths who are prone to self-medicate.

Ashitha, Sheba, Sreekutty, Moosa, and Musharraf (2022) suggest that the Media through its information dissemination function, promotes Self-Medication Use. The study however revealed that, among the 300 respondents, 56.8% of people attest they obtained information on self-medication from media while 20% said their source of information is advice from friends and family, 13% said it's from the pharmacy while 10% is from left over medicines.

Findings from Zewdie, Andargie & Kassahun (2020), show that among 341 study participants, 167 (64.98%) had practiced self-medication. 20 (11.97%) said familiarity with medicine and ailments were the main reasons for self-medication practices. The findings show that 94 (56.28%) of the students used analgesics for self-medication while 60 (35.9%) used antibiotics for self- medication. The sources of drugs for self-medication were pharmacies 98 (58.68%), Left-over medications 42 (25.14%), suggestions from family/friends 18 (10.77%), previous prescriptions for similar diseases 7 (4.19%), and “others” 5 (2.99%).

A survey by Umebese (2014) shows that among a sample of 200 undergraduate students in Edo State, Nigeria, 85.5% had self-medicated in the past. About 60.2% reported not visiting the hospital during their last episode of illness. The commonest self-reported illness was malaria (26.5%) and the commonest medications used for self-medication were anti-malaria's (47.7%) and antibiotics (22%). More than half of the respondents (53.4%) reported that a pharmacist had not required a drug prescription before selling a medicine and 70.6% cited long waiting hours at the hospital as the most important reason for self-medicating. About 85.9% reported that their perceived knowledge of the medicine they needed to treat the illness was the reason for choosing a particular medicine for self-medication while 57% perceived self-

medication to have been effective in addressing their last reported illness.

Tadele, Araya, Alemayehu, Solomon & Ali (2014), conducted a cross-sectional study among regular undergraduate students of Adi-haqi Campus of Mekelle University, Ethiopia. Results show that among 407 study participants, 44.5% had self-medicated with antibiotics in their lifetime while 27.5% had practiced within the last three months. These students most cited reasons for self-medication with antibiotics are previous experience with similar illness and antibiotics being less expensive, assumed knowledge of antibiotics, and emergency use.

### **The Health Belief Model (HBM)**

The Health Belief Model (HBM) was propounded in the 1950s to explain the reason for people's behaviour towards the detection and prevention of diseases or health complications (Hochbaum, 1958; Rosenstock, 1960). Entrenched in the HBM are many factors that establish why people will put in measures to control, screen and prevent ill conditions (Justin & Anthony, 2022, p.3) The HBM is based on the understanding that a person will take a health-related action, if that person feels that a negative health condition can be avoided, have a positive expectation that by taking a recommended action, he/she will avoid a negative health condition and believes that he/she can successfully take a recommended health action with confidence. The HBM was spelled out in terms of four constructs representing the perceived threat and net benefits: perceived susceptibility, perceived severity, perceived benefits, and perceived barriers. These concepts were proposed as accounting for people's "readiness to act."

Perceived susceptibility, one of the dimensions of the theory, is concerned with the belief about the possibility of contracting a disease (Conner, 2010). For instance, if an individual believes he can contract an illness, that individual will be interested in engaging in health behaviour like, self-medicate or go to the hospital than an individual with lower perceived susceptibility. Perceived seriousness explains the severity or consequences of not treating a health condition (Janz & Becker, 1984). The other dimensions of the theory include perceived benefits which lead to increased performance or motivation for undertaking the desirable health behaviour which in this case is self-medication (Glanz et al., 2008; Rosenstock, 1974); and perceived barriers that can prevent an individual from engaging in that health behaviour despite the demand (Janz & Becker, 1984). These barriers include cost, perceived inconvenience and fear of side effects from a medical procedure (Rosenstock, 1974). Cues to action, another dimension of the theory centers on the individual's preparedness to take action (Rosenstock, 1974). The HBM was modified to include self-efficacy (Rosenstock et al., 1988), which implies an individual's mindset to successfully perform the behaviour. Originally, the model was created to explain one-time health-related behaviour but has been modified to a more substantial, long-term behaviour change (Rosenstock et al., 1988). Since this theory captured a range of factors that influence the decision of individuals to undertake or perform a health activity or behaviour, the theory is considered appropriate in examining the factors that contribute to self-medication among various segments of Unizik undergraduates. The applicability of HBM in this study was also dependent on its aptness in determining factors influencing health behaviour among certain clusters of the population under study.

### **Theory of Planned Behaviour (TPB)**

The Theory of Planned Behaviour (TPB) was propounded by sociologist Icek Ajzen in 1985 through his article "From intentions to action: A theory of planned behaviour." This theory has been used extensively to understand and appreciate the healthy behaviour of people (Conner, 2010; Conner, Norman, & Bell, 2002). It is consequently one of the highly utilized health behaviour theories (HBT). According to the TPB, three factors influence intent: (i) the person's attitude toward the behaviour, (2) A person's evaluation of how important and significant others such as partner or co-worker consider the behaviour to be. And lastly (3) the degree of perceived behavioural control or the perceived ease/difficulty associated with the behavioural

change. This theory therefore explains the linkages between behaviour, beliefs and intentions (Conner, 2010). The intentions to engage or exhibit certain behaviour and the total perceived control over the behaviour are considered as the determinants of behaviour. The TPB as pointed out by Justin & Anthony (2022) considers intentions as motivations to undertake an activity while perceived behaviour control relates to the belief that one has control over the intended action. So, by employing the TPB in this study, it is assumed that the probability of an individual with an underlying or a predisposing health condition to practice self-medication on the perceived outcome of improvement in health status determines self-medication practices. Though, the TPB has limited consideration for the perceived barriers to healthcare accessibility. However, using the TPB along with the HBM provides a level playing ground for the two theories to complement their strengths and weaknesses.

## METHODOLOGY

The research design adopted for this study was survey. The undergraduate students of Nnamdi Azikiwe University Awka were purposively selected for the population of this study. The student population of the school is about 30,917. (Source: Academic Planning Unit 2019/2020). A sample of 390 was drawn from the study population of 30,917 using Yamane's formula for calculating sample size:  $n = \frac{N}{1+N(e)^2}$ . The multistage sampling procedure was used to select study units across the faculties, departments and academic levels. The first stage involved the selection of faculties from Nnamdi Azikiwe University. The Faculty of Arts and Humanities, Social Sciences, Faculty of Education and Management Sciences were randomly selected. The third stage saw the selection of departments. The department of Modern European Languages and the department of Religion and Human Relations were randomly selected from the Faculty of Arts and Humanities. For the Faculty of Social Sciences, the Department of Economics and Mass Communication were randomly selected. The Department of Education Management and Policy and the Department of Technology and Vocational Education were randomly selected from the Faculty of Education. Also, for the Faculty of management, the department of Business Administration and Marketing were randomly selected. The fourth stage saw the selection of levels of study which was randomly done. For the department of Modern European Languages, levels 300 and 200 were randomly selected. For the department of Religion and Human Relation, levels 400 and 100 were randomly selected. For the department of Economics, levels 300 and 400 were randomly selected. For the department of Mass Communication, levels 300 and 200 were randomly selected. For the department of Education Management and Policy, levels 100 and 300 were randomly selected. For the department of Technology and Vocational Education, levels 400 and 100 were randomly selected. For the Department of Business Administration, levels 100 and 200 were randomly selected. For the Department of Marketing, levels 200 and 300 were randomly selected. The questionnaire was the research instrument used for the collection of the data. The questionnaire consisted of questions which were constructed in a way that the first stage sought the demography (personal data) of the respondents while the others are related to the subject matter of study. Both open and closed ended questions were used. Data for this study was collected within two months. The questionnaire was personally distributed and copies collected from the respondents; as a result, the return rate was 99%.

## DATA ANALYSIS

Demographic data show that among our respondents, males were 125 (32%) while the females 265 (68%). As regards the age range of respondents, 289 (74.1%) were of the age range of 17-22, 90 (23%) of respondents were of the age range 23-27 years, while 11 (2.8%) were 28 and above.

**Research question 1:** what is the Unizik students' perception of self-medication practices?



Table 1: Respondents perception of self-medication practice.

	Is self-medication cheaper than prescription medicine ?	Is self-medication on harmful ?	Are self-medicated drugs effective as those prescribed by a physician?	Does self-medication provide quick relief of symptoms?	Consulting a physician when ailment is minor Is not necessary ?	Does self-medication remove the stress of queuing up to see physician?	Does self-medication save time?
Yes	59% N=230	35.9% N=140	82% N= 320	98.7% N=385	72% N=280	76% N=298	68% N=265
No	41% N=160	64.1% N=250	18% N=70	1.3% N=5	28% N=110	24% N=92	32% N=125
Total	100% N =390	100% N = 390	100% N = 390	100% N = 390	100% N = 390	100% N = 390	100% N = 390

Table 1 showed that 59% (N=230) of the respondents perceives self-medicated drugs as cheaper than drugs prescribed by physicians while 41% said it is not; 64.1% (N=250) think self-medication is not harmful while 35.9% said it is; 82% (N=320) feels self-medicated drugs are as effective as the one prescribed by physicians while 18% said it is not; 98.7% (N=385) are of the opinion that self-medication provides quick relief of symptoms, 1.3% affirmed negatively to that. Similarly, 72% (N=280) feels that it is not necessary consulting a physician when the ailment is minor; 76% (N=298) think that self-medication removes stress of queuing up to see a physician; while 68% (N=298) believes self-medication saves time. These data indicate that the respondents perceive self-medication as a life-saving practice. This of course is obviously seen on the data displayed above. They invariably feel that it is cheaper, not harmful, as effective as drugs prescribed by physicians, provide quick relief of symptoms, reduce the stress of queuing to see a doctor, save time then finally, consulting a physician when ailment is minor as opined by them is not necessary.

**Research question 2:** What type of ailments and self-medicated drugs do Unizik undergraduate use?

Table 2: Types of ailments

Variables	Response	Frequency	Percentage
Have you ever used any drug without the doctor's prescription?	Yes	312	80%
	No	78	20%
<b>Total</b>		<b>390</b>	<b>100%</b>

What ailment do you always obtain drugs for?	Malaria	100	26%
	Typhoid	9	2.3%
	Body pains	65	16.6%
	Cough	97	24.8%
	Menstrual pains	15	3.8%
	Headache	60	15.3%
	Diarrhea	5	1.28%
	Sore throats	5	1.28%
	Fever	34	8.6%
<b>Total</b>		<b>390</b>	<b>100%</b>
Why do you self- medicate?	Distrust in physicians	14	3.6%
	Inconveniences of contacting a physician	100	25.6%
	No access to health care professional	50	13%
	Presence of 'chemists stores	226	57.8%
<b>Total</b>		<b>390</b>	<b>100%</b>
Do you follow the treatment regimen by the prescriber?	Yes	107	27.4%
	No	213	54.6%
	Sometimes	70	18%
<b>Total</b>		<b>390</b>	<b>100%</b>
Do you always use same medication when same symptoms reoccur?	Yes	209	53.5%
	No	80	20.5%
	Sometimes	101	26%
<b>Total</b>		<b>390</b>	<b>100%</b>

Data in Table 2 indicate that 80% of the respondents have used drugs without prescription from physicians. While 20% of the respondent attested that they have not; 58% of the respondents, affirmed that they self medicate because of the availability of chemists stores; 25.6% because of the inconveniences of contacting a physician; 12.8% say no access to health care professionals; finally 3.6% of the respondents affirm that they self medicate because of their distrust in physicians. This data however shows that majority of the

respondents are actually practicing self medication as a result of reasons mentioned above with availability of chemists stores having the greater percentage. This however tallies with the assertion by Adum et al. (2016) that people could walk into the many dappling Pharmacies or Patent Medicine Stores (PMS) – popularly called “chemist” by locals – and purchase any available drug in any quantity required without any recourse to a doctor’s prescription.

On the ailment the respondents obtain drugs for, majority of the respondents 26% says they obtain drugs for malaria; 24.8% primarily for cough; 16.6% for body pains; 15.3% for headache; 8.6% for fever; 3.8% for menstrual pains; 2.3% for typhoid; 1.28% for diarrhea however, 1.28 for sore throats. Thus, Malaria featured most as the respondents’ major ailment of obtaining self medicated drugs.

27.4% of the respondents attest they follow the treatment regimen by the prescriber; 54.5% says they don’t. While 18% of the respondents’ sometimes follow the regimen. As can be seen in table 2, 53.5% affirm that they use same medication if same symptom reoccurs; 20.5% of the respondents say they don’t while 26% attest to using it sometimes. This suggests that a large number of the respondents in spite of the fact that they self medicate, don’t even follow the regimen. This could be a pointer to why a large number of the respondents use same medication when same symptoms reoccurs because they don’t complete the right dosage for the treatment which in the long run tends to come back.

Table 3: Self-Medicated drugs used by Unizik Undergraduates

variable	Response	Frequency	Percentage
Which of these are commonly used drugs prescriptions?	Analgesic	61	15.6%
	Antipyretics	100	25.7%
	Antibiotics	70	17.9%
	Antimalarial	130	33.3%
	Cough medicines	29	7.4%
<b>Total</b>		<b>390</b>	<b>100%</b>
From which sources did you get to know about these drugs?	Past experience.	94	24.1%
	Friends and relatives.	100	25.5%
	Advertisements.	10	2.6%
	Social media.	11	2.8%
	Left over from previous prescriptions	88	22.5%
	Patent Medicine stores.	70	18%
	Pharmacies	17	4.5%
<b>Total</b>		<b>390</b>	<b>100%</b>

Where do you obtain these drugs from?	Chemist's stores	218	55.8%
	Pharmacy	125	32.0%
	Roadside drug hawkers	47	12.5%
<b>Total</b>		<b>390</b>	<b>100%</b>
How do you request for the medication you want?	Mentioning the drug name.	128	32.8%
	Describing symptoms	217	55.6%
	Drug group	47	12.0%
<b>Total</b>		<b>390</b>	<b>100%</b>
Which among these drugs do you usually buy?	Benylin 4 flu	10	2.6%
	Tetracycline	49	12.6%
	Boska	30	7.6%
	Lokamal Antimalarial	115	29.5%
	Mist Mag	20	5.1%
	Paracetamol	90	23.0%
	Asprin	15	3.8%
	Amatem softgel	7	1.7%
	Actifed	16	4.1%
Panadol extra	38	10%	
<b>Total</b>		<b>390</b>	<b>100%</b>

On self medicated drugs commonly used by Unizik undergraduates, Majority of the respondents 33.3% affirmed they self medicate more with Antimalarial; 25.7% attests to using Antipyretics (fever drugs); 17.9% of the respondents use Antibiotics; 15.6% use Analgesics; while 7.4% use cough medicines. The above data however showed that Antimalarial drug is the commonly used drug prescriptions by the Unizik undergraduates'.

Furthermore, 25.5% of the respondents, pointed out that they got to know about these drugs from friends and well wishers; 24.1% said past experience; 22.5% said their source is left over from previous prescription; 18% affirmed patent medicine stores as their source of drug usage; 4.5% pharmacies , 2.6% said advertisement while 2.8% said it is through social media. The analyzed data showed that majority of the respondents got to know about the drugs from friends and well wishers.

Data on where the respondents obtain drugs from showed that the chemists store has a higher number of 55.8% respondents that patronizes them; pharmacy 32.0% while roadside drug hawkers had 12.5%. Meaning, a greater proportion of the respondents obtain self-medicated drugs from the chemists' stores.

Consequently, the data above also indicates that 55.6% of the respondents request for self medications by describing the symptoms they are experiencing, 32.8% request for drugs by mentioning drug names, while 12.0% simply request for drugs through telling the prescriber the drug groups.

Similarly, a greater percentage, 29.5% of the respondents attest to buying Lokamal Antimalarial drugs; 23.0% of the respondents affirm they buy Paracetamol; 12.6% however buy Tetracycline; 10% buy Panadol extra; 7.6% of the respondents buy Boska; 5.1% buy Mist Mag; 4.1% buy Actifed; 3.8% buy Aspirin; 2.6% 'Benylin 4 Flu'; while 1.7% of the respondents buy Amatem Softgel malarial drugs. The data on this section indicates that a greater number of the respondents usually buy Lokamal Antimalarial drugs.

**Research question 3:** What proportion of the Unizik undergraduates are aware of the consequences associated with self-medications?

Table 4:

Variables	Response	Frequency	Percentage
Do you know uncontrolled self- medication is dangerous to your health?	Yes	215	55.1%
	No	175	44.9%
Total		390	100%
	Antibiotics resistance	15	3.4%
	Insomnia	5	1.2%
	Abdominal discomfort.	38	10.5%
Which of the following have you experienced?	Vomiting	75	19.2%
	Dizziness	197	50.5%
	Immune system sickness	28	7%
	None	32	8.2%
Total		30	100%
What potential risk do you think self-medication practice has?	Incorrect self Diagnosis	99	25.4%
	Severe adverse reactions	9	2.4%
	Dangerous drug interactions	80	20.5%
	Risk of dependence and abuse	102	26.1%
	Death	100	25.6%
<b>Total</b>		<b>390</b>	<b>100%</b>

Table 4 indicated that 55.1% of the respondents representing a greater number of the population knew the danger associated with unregulated self-medication. While 44.9% said they don't. Similarly, 50.5% of the respondents affirmed to have experienced dizziness as a result of self-medication; 19.2% experienced vomiting; 10.5% abdominal discomfort; 8.2% said they have not experienced any consequences since they started self-medication; 7% immune system sickness; 1.2% insomnia, while 3.4% attested to have experienced antibiotic resistance.

However, a greater number of the respondents 26.1% also said over dependence and abuse is the greatest potential risk self-medication has; 25.6% said death; 25.4% of the respondents said it is incorrect self-medication; 20.5% said dangerous drug interaction; while 2.4% is of the opinion that adverse drug reactions is also one of the potential risk of self-medication. The findings however implied that the respondents think that over dependence and abuse is one of the greatest risks of self-medication.

### Analysis of Research Questions

The first research question sought to find out the Nnamdi Azikiwe University students' perception of self-medication practices. To answer the research question, reference was made to Table 1. This table shows that almost all the respondents (82%) feels self-medicated drugs are as effective as the one prescribed by physicians. Therefore the data in table 1 however indicates that the respondents perceives Self-medication as cheaper, not harmful, effective as drugs prescribed by physicians, provides quick relief of symptoms, reduces the stress of queuing to see a doctor, saves time and finally, the respondents feel that consulting a physician when ailment is minor is not necessary. The above data is a pointer to how the Unizik students perceive self-medication practice.

The second research question sought to discover the types of ailments and self-medicated drugs Unizik undergraduates use. Here, reference was made to Tables 2 and 3. Table 2 shows that 26% of the respondents' major ailment of obtaining self-medicated drugs is Malaria. Similarly, a greater percentage, 29.5% of the respondents attest to always buying Lokamal Antimalarial drugs. Based on the foregoing, we can infer that the Unizik undergraduates treat Malaria often and that the commonly used drug prescription is Lokamal Antimalarial drug.

The third research question sought to determine the proportion of Unizik undergraduates that are aware of the consequences associated with self-medication. Data in Table 4 indicate that a good number of the respondents 51.5% are aware of the consequences associated with self-medication. Particularly in terms of the experienced consequences, 50.5% of the respondents affirmed to have experienced dizziness as a result of self-medication. However, a greater number of the respondents 26.1% also said over dependence and abuse are the greatest potential risk of self-medication practice. Consequently, our study suggests that Unizik undergraduates generally are aware of the consequences of self-medication and has also affirmed over dependency and abuse as the greatest potential risk associated with self-medication practice.

### CONCLUSION

This study concluded that majority of the Unizik undergraduates practiced self-medication majorly because of their perception that self medicated drugs are as effective as the one prescribed by physicians. Commonly used drugs were Lokamal Antimalarial, Paracetamol, Panadol extra and tetracycline. Similarly, the study also concludes that respondents are aware of the consequences associated with self-medication and majority of them has also experienced dizziness as one of the major consequences of self-medication practice. This study however recommends that health education on self-medication should be introduced into the undergraduate curriculum so as to enlighten the students on the consequences associated with unregulated self-medication practice.

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