



PREVALENCE AND FACTORS ASSOCIATED WITH SELF- MEDICATION AMONG MARKET PEOPLE IN JIGAWA STATE NIGERIA

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ABSTRACT

Self-medication is when one uses either drugs, herbs or home remedies without the advice of a medical practitioner. The World Health Organization defines it as either the patient following his or her decision to use medications, or the pharmacist or layman advice other than that of a doctor. The World Self-Medication Industry also underscores the point that it is encompassed with utilization of drugs that are specially labeled as being safe to use without

Introduction

In contemporary society, we have a few risky activities that have posed as threats to our well-being, which include smoking, illicit drugs use, alcohol abuse, poor eating lifestyles, unsafe sex, and self-medication. Self-medication is an international medical practice that created controversy in the field of healthcare (Naghizadeh, 2023). Findings by Loni and coworkers (2023) helps to realize that self-medication is not only practiced by farmers in a certain region or race/ethnicity, it is a problem being faced by both the developing and the developed world alike, in the form of inappropriate self-treatment.

Self-medication is the use of drugs or home remedies and herbs without medical advice. According to World Health Organization (WHO), it is the use of drugs by a patient, which is in his or her judgment, or that of a pharmacist or a lay person, in preference to obtaining the advice of a doctor. Furthermore, the World Self-Medication Industry (WSMI, 2020) points out to the fact that self-medication is a process when drugs that are



any form of medical supervision. The practice of self-medication is widespread in society, and it contributes sufficiently to the informal health sector. This paper set out to explore the prevalence and determinants of self-medication among market people in the Jigawa State in Nigeria as part of a descriptive, cross-sectional project. Results uncovered that, 31.0 percent of the respondents had practiced self-medication and the most popular current medication took consisted of anti-acids (35.5 percent) and sleeping pills (25.8 percent). Good knowledge related to self-medication was displayed by the majority of the respondents (70.2%), and poor understanding was registered by 29.8% of them. There was a mixed attitude regarding the use of self-medications with people believing it is good to be approached in minor conditions with 51.2%, and 52.4% affirming the likely serious health risks. Factors that contributed to the practice included perceived seriousness of an illness, past experience, confidence in care providers, financial limitation and social pressure. In spite of generic popularity of risks, self-medication is still extensively used which is an indication of careful, yet steady use of informal medicines. These data indicate the necessity of specific interventions that can be implemented on an education or healthcare access level as well as some communal efforts. Professional healthcare services will be offered more widely and favorable compared to self-medication by providing financial and systemic access, trust between patients and healthcare givers, and create awareness of risks associated with the service offered.

Keywords: Self-medication, Healthcare system, Analgesics, Side effect, Prevalence

particularly designed and marked as safe to use without medical monitoring are used. Such practices are core to most healthcare programs and initiatives (Ali Sherazi *et al.*, 2019).

Self-medication and self-care are of essence in most healthcare programs. Such practices involve diverse factors such as having good hygiene, consuming proper nutrition, physical activity, avoiding risk behavior, and proper use of nonprescriptive medicines. Various nations and areas set up associations of manufacturers and distributors to regulate self-medication and self-care with nonprescription medicines in the course of the past century. There was also the establishment of the World Self-Medication Industry (WSMI) in 1970 that served to further promote the social and financial importance of self-care and responsible self-medication at an international level (Bertsche *et al.*, 2023).



Linking up with the World Health Organization and other intergovernmental authorities, WSMI highlighted more people should take charge of their self-care and self-medication with nonprescription medicines, not just the patients. The adherence to the recommended guidelines of the applications among individuals is a requisite to proper management of their health conditions by the diagnostic and non-prescribed drugs (Zeru *et al.*, 2020).

According to Zheng and coauthors (2023), the mankind has the instinct of being inclined to medicine and self-medication over generations. In the same manner, Tariq and colleagues (2024) indicate that individuals tend to believe in the usage of medicines when they are sick or when they are in some kind of discomfort. In addition to this, the consumers will adopt more responsibility of their health promotion and disease prevention habits, where they are encouraged to consider self-medication without necessarily having consulted with a physician, provided they are doing so with caution.

Commenting on a different case, Ahmad *et al.* (2018) observed that in India and, perhaps, other developing nations, many people do not seek the help of doctors when they become sick. They rather go to drug stores (retail pharmacies) or consult neighbors who may have used some medications to cure disease in the past. According to Kvarnström *et al.* (2021), despite the correct usage of the drugs, side effects and a higher risk of drug reactions are possible, and they might influence a treatment adherence level and quality of life in general.

Kruk and colleagues (2018) assert that both developing and developed countries engage in self-medication because of the existing discrepancies in cultural standards, economic realities, health care and policies. Such inequities are the most dominant within the healthcare sector and the policy it is governed by. With this in mind, Fitzgerald (2019) points out the necessity to get a comprehensive drug history by General Practitioners and Physicians.

The World Self-Medication Industry categorises self-medication as responsible or non-responsible. That is why this kind of behavior can not be discussed as completely bad (Fitzgerald, 2019). Promoting self-medication is a way to empower the patient thus letting them take personal responsibility and developing confidence in self-help in regard to their health. According to this view, WSMI (2020) declares that the responsible usage of non-prescription drugs, i.e., treating multiple diseases without addressing a healthcare provider, should be encouraged. A positive change is further supported by national rules that regulate self-prescribed medicines, which facilitates the safe and efficient use of products without having to directly involve the physician.

As the National Drug Policy of Nigeria (2005) follows, all drugs which can be sold without prescription and used to alleviate symptoms in the short-term range (without medical



consultation and without some exact diagnosis) should be listed and issued by the government. The set drugs should fulfill basic requirements, be satisfactory into what it is used, and have a broad safe range. This list must be updated at intervals on the basis of experience and new knowledge.

As noted above, self-medication is not a new or an isolated phenomenon as its acceptance has been well proven by numerous worldwide studies. A survey carried in Poland revealed that self-medication does not always mean a negative attitude towards health professionals and the available medical system (Makowska *et al.*, 2020). Rather, it gives individuals the power to deal with minor illnesses without necessarily consulting a physician. Self-medication is one way that individual human beings can enhance the effectiveness of the health systems.

The practice of self medication is not a reserve of Nigerians in impoverished societies, but it also cuts across the economically better off in the society. Different research studies have revealed that the problem of self-medication is very common in the country. For instance:

- Ogunbemi *et al.* (2020) found that 95-98% of market women in a suburban community in Lagos, Nigeria engaged in self-medication.
- Ajayi *et al.* (2023) reported that 79% of ophthalmic patients and 85% of general outpatient clinic attendees admitted to self-medication.
- Awosan *et al.* (2017) conducted a study among workers in a tertiary hospital in Nigeria, revealing a prevalence of 73%.
- Olanrewaju *et al.* (2022) established that 71% of respondents in Lagos admitted to drug misuse.

These studies reveal some insights to the causes of this practice. The World Health Organization (WHO) explains that nonprescriptive self-medication is used with two goals; effective and fast symptomatic relief, and the benefit of a reduction in the load to healthcare facilities particularly in the form of understaffed and inaccessible health facilities in remote countryside areas. Self-medication is one of the aspects that the revised National Drug Policy in Nigeria deems useful, particularly in places where formal healthcare health facilities are scarce. It enables people to get immediate relief without going to the doctor and therefore releasing healthcare professionals to attend to other patients with more severe conditions.

Statement of Research Problem

The issue of self-medication presents a variety of issues such as illogical use of drugs, highly wasteful utilization of medical resources, and rise in pathogen resistance. What is



more, it causes severe health risks like adverse drug reactions and prolonged morbidity. Even with these dangers, self-medication is not an exception in various countries like Nigeria (Rehman *et al.*, 2020).

Self-medication is highly likely to be a case of adolescents and young adults because they have inaccurate risk appreciation as far as drug use is concerned. They use inaccurate rumors heard in the social media and the internet. The accessibility of those over-the-counter medication products and the abundance of health issues on the media platforms favor this practice (Albatti *et al.*, 2017). Additionally, the availability of road side drug hawkers and patent medicine shops that make self-medication easy particularly in the low and middle income countries.

Extant research literature that focused on self-medication among the general adult population (Tosin *et al.*, 2024) does not document the same in populations of developing countries such as Nigeria. It is important that the baseline data is collected on the prevalence and antecedents of self-medication amid market people to design the required interventions. This paper hence evaluates the Prevalence and factors that contribute to self-medication in the market people in Nigeria.

Aim and Objectives of the study

Aim

The aim of this study is to investigate the prevalence and identify the factors associated with self-medication among market people in Jigawa state, Nigeria.

Objectives

1. To assess the prevalence of self-medication among market people in Jigawa state, Nigeria.
2. To assess the knowledge of self-medication among market people in Jigawa state, Nigeria.
3. To assess the reasons for self-medication among market people in Jigawa state, Nigeria.
4. To determine the factors associated with self-medication among market people in Jigawa state, Nigeria.

METHODOLOGY

The research was done in Jigawa State, one of the states in the north of Nigeria which shares a boundary with other states such as Yobe, Kano and Katsina. Jigawa is located between 300 to 600 meters in altitude and is situated with coordinates of around 12.66900 N and 9.3000 E with the population of the state more than 4.3 million as at 2006



census with over half the population being below the age of 15 years and a potential growth rate of 3.5 percent annually. The study was limited to five major towns; Hadejia, Dutse, Gumel, Ringim, and Kazaure since each one of them provides its own contribution to the local economy and presents a representative background to observe the use of self-medication by market people. The descriptive cross-sectional study used structured questionnaires to obtain information relating to demographics, variants of medication, causes of self-medication, and the effects thereof, which gave a rich picture of existing behaviors.

A multistage sampling method was used and the selection involved shopping in the middle of markets, shops/stalls and the sample was around adults aged 18 years and above with minimum one year experience in the market. Here the Cochran formula was used to determine a sample size of 500 participants that will be considered allowing for attrition. The instrument used in data collection were semi-structured questionnaires shared through Google forms and research assistants were available to help the participants. They used descriptive statistics and chi-square to compare their responses to examine prevalence, knowledge, attitude, and reasons of self-medication and answered at a significant level of $p < 0.05$. These limitations are based on self-reported data, the confines of cross-sectional design, possible confounders and the time-related effects on generalizability.

RESULTS

Socio-demographic Characteristics of the Respondents

Table 1: Socio-demographic Characteristics of the Respondents

Demographic Characteristics	Options	Frequency	Percentage
Age (Years)	<30	187	37.4
	30-39	69	13.8
	40-49	103	20.6
	50-59	74	14.8
	60+	67	13.4
Gender	Male	128	25.6
	Female	372	74.4
Marital Status	Single	114	22.8
	Married	239	47.8
	Divorced	84	16.8
	Separated	10	2.0
	Widow/Widower	23	4.6



Demographic Characteristics	Options	Frequency	Percentage
Religious	Christianity	76	15.2
	Islam	424	84.8
Ethnic Group	Hausa	213	42.6
	Fulani	165	33.0
	Kanuri	25	5.0
	Yoruba	35	7.0
	Igbo	47	9.4
	Others	15	3.0
Educational Background	Primary Education	70	14
	Secondary Education	288	57.6
	Tertiary education	35	7
	No formal education	107	21.4
Tertiary education (n=35)	ND	5	14.3
	HND	5	14.3
	BSc	10	28.6
	BA	10	28.6
	Others	5	14.3
Average Monthly income (NGN)	≤30,000	183	36.6
	30,001-60,000	101	20.2
	60,001-90,000	17	3.4
	90,001-120,000	175	35.0
	>120,001	13	2.6

Prevalence of Self-Medication and Types of Medications Used

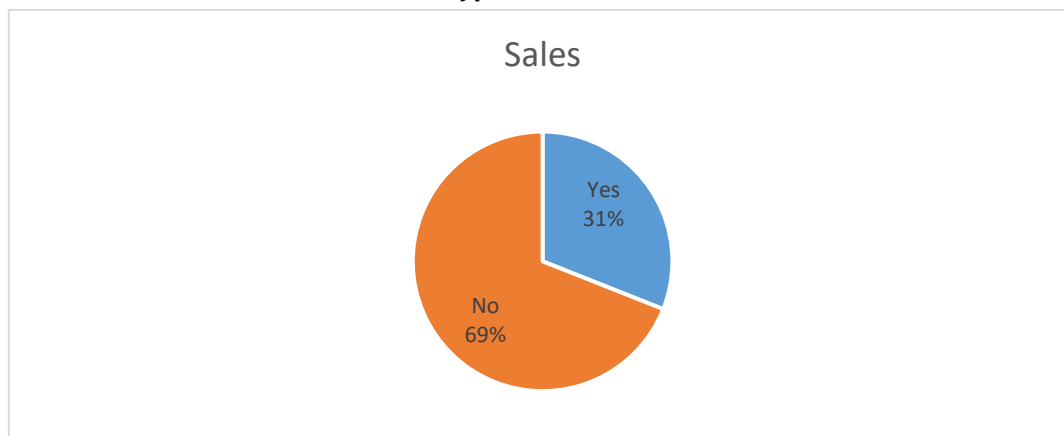


Figure 1: Prevalence of Self Medication



Table 2: Drugs EVER USED for self-medication by the respondents

Drugs EVER USED for self-medication	Yes (%)	No (%)
Painkillers (Ex: Diclofenac, Aspirin, Tramadol, Pregabalin)	30 (19.4)	125 (80.6)
Anti-acids (Ex: SuperMag, Gaviscon, MMT, Gelocil, Avrocid, Antacil)	55 (35.5)	100 (64.5)
Paracetamol (Ex: Emzor, Dana, Panadol extra)	15 (9.7)	140 (90.3)
Sleeping pills (Ex: Antidepressants, Barbiturates, Benzodiazepines, Prednisolone)	40 (25.8)	115 (74.2)
Vitamins (Ex: Dextram gold, E-cap, Multivitamin)	0 (0.0)	155 (100.0)
Anti-allergies (Ex: Prednisolone, Coldl capsules, Loratidine, Priton)	0 (0.0)	155 (100.0)
Cough-syrup (Ex: Asad, Cough-off, Exiplon, NGC)	0 (0.0)	155 (100.0)
Herbal (Ex: Sabara, bagaruwa, Kalgo, Madaci,	15 (9.7)	140 (90.3)
Anti-Migraine (Ex: Panadol Actifast soluble, Zyncet cetrizine)	0 (0.0)	155 (100.0)
Antibiotics (Ex: Amoxicillin, Ciprofloxacin, Augmentin)	0 (0.0)	155 (100.0)

Table 3: Type of drugs/medication used for self-medication in the last 30 days (n=155)

Statement	Yes (%)	No (%)
Painkillers (Ex: Diclofenac, Aspirin, Tramadol, Pregabalin)	30 (19.4)	125 (80.6)
Anti-acids (Ex: SuperMag, Gaviscon, MMT, Gelocil, Avrocid, Antacil)	55 (35.5)	100 (64.5)
Paracetamol (Ex: Emzor, Dana, Panadol extra)	15 (9.7)	140 (90.3)
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Table 4: Self-Reported Awareness and Knowledge on self-Medications

Statements	Yes (%)	No (%)
I understand the content of the last medications I self-administered	95 (61.3)	60 (38.7)
I am aware of the correct dosage for the last medications I took without a prescription	100 (64.5)	55 (35.5)
I follow a specific regimen regarding the timing of my self-medication	105 (67.7)	50 (32.3)
I know the recommended duration (i.e., how long) for which I should have taken the medication	80 (51.6)	75 (48.4)
I have knowledge about potential adverse drug reactions (ADRs) associated with the medications I used	15 (9.7)	140 (90.3)

The statistics show that most of the respondents possess an adequate knowledge about their self-medicated drugs. In particular, 61.3 percent of them perceived that they knew the content of the last drugs which they self-administered, and 64.5 percent knew the right dosage of these drugs. Moreover, 67.7 per cent engage in a particular routine concerning the time the self-medication is proposed. Nonetheless, only 51.6 percent of them are aware of how long they should have continued consuming the medication and a worrying 9.7 percent (Table 3.2.3) are aware of the possible adverse drug reactions (ADRs) the medications used have.

Table 5: Source of medications among respondents who self-medicated (n=155)

Sources	Frequency (n)	Percentage (%)
Pharmacies	15	9.7
PHCs	0	0
Patent Medicine Stores (Chemist)/Drug shops in the market or in town	151	97.4
Drug hawkers	147	94.8
Friends	23	14.8
Family	9	5.8
Traditional healers	15	9.7

Among the self-medicating, most of them (97.4%) had their medications at the patent medicine stores (chemist/drug shops) and 94.8 percent sourced their medications at the pharmacy. Drug hawkers were reported by 14.8 per cent and a lesser number depended on their medications on the friends (9.7 per cent) and their family (5.8 per cent). It is



important to note that none of the respondents indicated having gotten any medication by using the primary healthcare centers (PHCs) (Table 3.2.4).

Table 6: Types of Negative effects encountered

Negative effects	Frequency (n)	Percentage (%)
Nausea	31	20
Vomiting	4	2.6
Skin rashes	1	0.6
Headache	48	31.0
Abdominal/epigastric pain	72	46.5
Chest pain	19	12.3
Difficulty in breathing	6	3.9
Swelling of the mouth or throat or eyes	3	1.9
Dry Mouth	53	34.2
Weight Loss	16	10.3
Weight gain	33	21.3
Dizziness	7	4.5
Imbalance	41	26.5
Impaired Vision	15	9.7

Among those who reported negative effects, the most frequently encountered issues were abdominal or epigastric pain, reported by 72 individuals (46.5%), and headaches, experienced by 48 individuals (31.0%). Other notable negative effects included swelling of the mouth, throat, or eyes (53 individuals, 34.2%) and dizziness (41 individuals, 26.5%). Nausea was also reported by 31 individuals (20.0%).

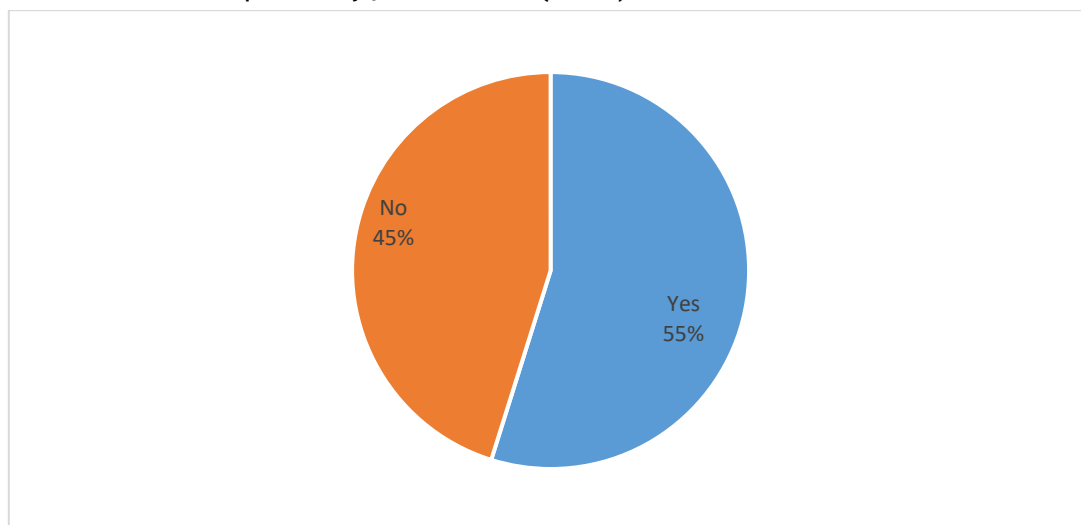


Figure 2: Prevalence of Side effects



The major findings from the data in figure 3.2 indicate that a significant portion of respondents, specifically 54.8% (85 individuals), have experienced negative effects from self-medication, while 45.2% (70 individuals) have not as shown in figure 3.2.

Knowledge of Self-Medication

Table 7: Knowledge of Self-Medication amongst the study population

Variables	Frequency (n)	Percentage (%)
Self-Medication is Good		
No*	313	62.6
Self-medication can be applied for ANY type of sickness		
No*	485	97.0
The risks associated with self-medication		
Drug Interactions*	201	40.2
Antibiotic Resistance*	64	12.8
Adverse Reactions*	81	16.2
Psychological Dependence*	114	22.8
Taking the wrong medication*	40	8.0
Precautions that should be taken when self-medicating include		
Avoid using medications based on recommendations from non-professionals*	89	17.8
Be aware of potential drug interactions and side effects*		
Monitor your symptoms closely*	110	22.0
Educate yourself about the medications you are considering*	101	20.2
	95	19.0
All medications can have side effects.		
Agree*	356	71.2
Self-medication hide the symptoms of serious health conditions		
Agree*	179	35.8
Is it safe to buy and consume medicines without a prescription		
No*	265	53.0

*Correct response

The knowledge of the self-medication of the study population is presented in the table 4.3 above. Most respondents (62.6%) have an opinion that self-medication is not good and a staggering 97.0% of them do not feel that it could be applied to any sickness. Self-medication risks have been identified, and the most prevalent one refers to the interaction between drugs (40.2%). As far as precautions are concerned, the highest number (22.0%) indicates the fact that it is necessary to be conscious of any possible drug



interaction and side effects. The majority of people (71.2%) think that all medications might imply side effects, and one-third of the respondents (35.8%) are sure that self-medication is the way to conceal symptoms of dangerous health conditions. Lastly, there is a margin of opinion on whether purchasing and taking medicines without the doctor having a prescription; 53.0% responded that it is not.

Table 8 Knowledge Grade Self-Medication amongst the study population

Knowledge Grade	Frequency (n)	Percentage (%)
Good knowledge	351	70.2
Poor knowledge	149	29.8
Total	500	100.0

The data reveals that 70.2% of the study population demonstrated good knowledge about self-medication, while 29.8% exhibited poor knowledge.

Attitude towards Self-Medication

Table 9: Attitude towards Self-Medication amongst the Study Population

Attitude Towards Self medication	Agree n (%)	Not Sure n (%)	Disagree n (%)
I believe that self-medication is a safe way to treat minor health issues.	256 (51.2)	148 (29.6)	98* (19.6)
I feel confident in my ability to choose the right medication for my symptoms without consulting a doctor.	172 (34.4)	194 (38.8)	134* (26.8)
I believe that self-medication can lead to serious health risks if not done properly.	262* (52.4)	114 (22.8)	124 (24.8)
I think it is important to have more education about the correct use of medications to avoid the dangers of self-medication.	230* (46.0)	99 (19.8)	171 (34.2)

*** Correct Response**

The study population exhibits a complex attitude towards self-medication, with 51.2% believing it is a safe method for treating minor health issues, while 52.4% acknowledge the potential for serious health risks if not done properly. Confidence in selecting appropriate medications without a doctor's guidance is low, with only 34.4% expressing certainty in their ability to do so, and a significant 38.8% remaining unsure.



Table 10: Attitude Grade towards Self-Medication amongst the Study Population

Attitude Grade	Frequency (n)	Percentage (%)
Positive Attitude	189	37.8
Negative Attitude	311	62.2
Total	500	100.0

The data indicates that 62.2% of the study population exhibited a negative attitude towards self-medication, while only 37.8% demonstrated a positive attitude.

Reasons for Engaging in Self-Medication

Table 11: Reasons for Engaging in Self-Medication amongst the study Population

Reasons for Engaging in Self-Medication	Yes n (%)	No n (%)
My condition is not serious enough to see a doctor	150 (96.8)	5 (3.2)
I don't trust healthcare workers	140 (90.3)	15 (9.7)
Lack of time to visit a healthcare provider	105 (67.7)	50 (32.3)
To save money on healthcare costs	131 (84.5)	24 (15.5)
I have previous experience with the same health issue	153 (98.7)	2 (1.3)
Self-medication is more convenient than seeking professional help	122 (78.7)	33 (21.3)
I trust my own judgment about my health	71 (45.8)	84 (54.2)
Unavailability of healthcare services	137 (88.4)	18 (11.6)
I have easy access to medications	140 (90.3)	15 (9.7)
Allows me to manage my health better?	51 (32.9)	104 (67.1)
Recommendations from friends or family	116 (74.8)	39 (25.2)
I am a trained healthcare worker	0 (0.0)	155 (100.0)
My spouse is a trained healthcare worker	76 (49.0)	79 (51.0)
I have a family member that is a trained healthcare worker	133 (85.8)	22 (14.2)
I have knowledge of herbs	13 (8.4)	142 (91.6)

Factors Associated with Self-medication

Table 12: Factors Associated with Self-medication

Variables	Freq (n)	Self-Medication		95% CI	P value
		Yes (%) N=155	No (%) N=345		
Age (years)				2.163	0.027*
<30	187	36 (19.3)	151 (80.7)		
30-39	69	49 (71.0)	20 (29.0)		
40-49	103	31 (30.1)	72 (69.9)		
50-59	74	23 (31.1)	51 (68.9)		
60+	67	16 (23.9)	51 (76.1)		



Variables	Freq (n)	Self-Medication		95% CI	P value
		Yes (%) N=155	No (%) N=345		
Gender				3.958	0.095
Male	372	117 (31.5)	255 (68.5)		
Female	128	38 (29.7)	90 (70.3)		
Tribe				2.101	0.002*
Hausa	213	79 (37.1)	134 (62.9)		
Fulani	165	24 (14.5)	141 (85.5)		
Kanuri	25	11 (44.0)	14 (56.0)		
Yoruba	35	18 (51.4)	17 (48.6)		
Igbo	47	21 (44.7)	26 (55.3)		
Others	15	2 (13.3)	13 (86.7)		
Education				1.250	0.001*
No formal	107	106 (99.1)	1 (0.9)		
Primary	70	22 (31.4)	48 (68.6)		
Secondary	288	26 (9.0)	262 (91.0)		
Tertiary	35	1 (2.9)	34 (97.1)		
Income (NGN)				3.173	0.021*
≤ 30,000	183	54 (29.5)	129 (70.5)		
30,001 – 60,000	101	46 (45.4)	55 (54.5)		
60,001 – 90,000	17	7 (41.2)	10 (58.8)		
90,001 – 120,000	175	45 (25.7)	130 (74.3)		
≥ 120,001	13	3 (23.1)	10 (76.9)		
Knowledge on self medication				1.032	0.001*
Good	351	37 (10.5)	314 (89.5)		
Poor	149	118 (79.2)	31 (20.8)		
Attitude towards Self medication				4.285	0.534
Positive	189	41 (21.7)	148 (78.3)		
Negative	311	114 (36.7)	197 (63.3)		

* Significant at P<0.05

According to the results in Table 3.6, there are indicators of vital elements to self medication by the respondents. The relationship between Attitude and Gender and the self-medication practice was not statistically significant with p-value being >0.05. Nonetheless, tribal affiliation showed an important correlation especially the Hausa and the Yoruba tribes had vastly high levels of self-medication compared to the Fulani group with a p-value of 0.002. Another important determinant was the level of education; the number of respondents who lacked formal education self-medicating was quite high (99.1%), whereas those with tertiary education were much lower (2.9%), which indicates a strong trend with higher education whose p-value was 0.001 indicating a significant



negative association between the level of education and self-medication. Finally, income levels also played a role in self medication whereby the highest percentage of 45.4 percent was with an income of 30,001-60,000, where $p = 0.021$.

Discussion

The research revealed that 31.0 percent of the respondents have practiced self-medication with most of them using anti-acids (35.5 percent) and sleeping pills (25.8 percent). Less common were pain killers, paracetamol, none of the respondents under investigation took any antibiotics, vitamins and also anti-allergies. The majority of medical products were bought at patent medicine stores (97.4) and pharmacies (94.8), which signifies accessibility and affordability of the products in comparison with institutional medical centers. Strikingly, 54.8 was the proportion of respondents who reported the adverse effects like abdominal pain, headache. These findings correspond to earlier research findings in Nigeria with high proportions of self-medication and the dangers of self-medication that are not monitored (Yenet *et al.*, 2023; Wegbom *et al.*, 2021).

On knowledge of self-medication, good levels of awareness (70.2 percent) was depicted by respondents who were aware of drug interactions, possible side effects and masking of serious illnesses. Nevertheless, 53.0 per cent saw a need to buy medication without a prescription, which leaves certain grade of ignorance. The results are consistent with the finding that knowledge levels were high among the educated groups but risky behaviors still exist, especially in environments where medication is easily accessible, over-the-counter (Tohan *et al.*, 2024; Kumar *et al.*, 2016). This highlights the necessity of maintaining an emphasis of education on the public health and a more rigid control in the attempt to reduce unsafe self-medication practices.

Attitude, reasons, and socio-demographic determinants related to self-medication were also covered in the study. Despite the expressions of negative attitude toward self-medication in 62.2 percent of the population under study, more than half considered self-medication as safe in cases of minor ailments, and the confidence about making rational choices regarding self-selection of drugs was low. Precedent experience, the perceived minor illness, financial limitation and the availability of medication were some of the main causes of self-medication. The major determinants included education, income and tribal affiliation whereby lower education levels and specific income range showed an increased level of self-medication. These findings are consistent with studies in Nigeria and other low- and middle-income countries, highlighting the influence of socioeconomic, cultural, and healthcare accessibility factors on self-medication behaviors (Amponsah *et al.*, 2022; Jibo *et al.*, 2021; Cotobal-Calvo *et al.*, 2025).



Conclusion

The factors that influence the prevalence of the self-medication habit are the perceived seriousness of health problems, trust in medical systems, and individual experience of the market people. Even though there is a consensus in terms of the risks, the use of it still occurs frequently, which implies that there is a careful combination of the fear and moderate reward among the population. It is this self-medication that brings into point the need to introduce specific educational interventions to improve knowledge and encourage safer health behaviors. Also, factors that drive self-medication indicate a complex interaction between perceptions, trust, economical issues, and social factors, which fits the same trends based on similar studies. In the end, these realisations provide evidence of the necessity to continue educating the population about the safeness of personal medications and the effectiveness of visiting medical experts to enhance health care results.

Recommendations

The recommendations that come to mind depending on the results obtained throughout the study of self-medication among the studied population are as follows:

1. Since none of the respondents accessed medications through PHCs and adverse effects of self-medication are also widespread, the state government should do its best to promote the use of PHCs. This may entail subsidisation, making the services more accessible, or creating awareness on the superiority of professional healthcare services compared to self- medications.
2. Although most of the respondents exhibited appropriate knowledge regarding self-medication, there are still some vacuums in recognition of all the implications of self-medication. A detailed program of education aimed at making risk factors, including the interaction of drugs and concealment of fatal illnesses, stand out.
3. Based on the conflicting opinion on the price attitude to self-medication and the lack of self-confidence to effectively choose suitable medications independently of the doctor, one ought to act to ensure that the professional advice becomes available and reliable. Alternatives to self-medication can be proposed by using mobile clinics, telemedicine services, and community healthcare workers to scall uncertainties and risks.

REFERENCES

- Ahmad, A., Patel, I., Mohanta, G., & Balkrishnan, R. (2018). Evaluation of self medication practices in rural area of town Sahaswan at northern India. *Annals of Medical and Health Sciences Research*, 4(Suppl 2), S73–S78. <https://doi.org/10.4103/2141-9248.138012>



**AUGUST, 2025 EDITIONS, INTERNATIONAL JOURNAL OF:
SOCIAL HEALTH AND MEDICAL RESEARCH VOL. 9**

- Ajayi, I., Omotoye, O., Ajite, K., Fadamiro, C., & Ajayi, E. (2023). Self medication practices among patients seen in a suburban tertiary eye care centre in Nigeria. *Asian Journal of Medical Sciences*, **5**. <https://doi.org/10.3126/ajms.v5i2.8452>
- Albatti, T., Al-Hamoudi, W., Almutairi, S., & Alghamdi, N. (2017). Patterns of self-medication among university students: A cross-sectional study. *Saudi Pharmaceutical Journal*, **25**(5), 640–646. <https://doi.org/10.1016/j.jsps.2017.05.001>
- Ali Sherazi, B., Mahmood, K. T., Amin, F., Zaka, M., Riaz, M., & Ahmed, J. (2019). Prevalence and measure of self-medication: A review. *Journal of Pharmaceutical Sciences and Research*, **4**, 1774–1778.
- Amponsah, F., Boateng, R., & Agyemang, E. (2022). Socioeconomic determinants of self-medication among adults in low- and middle-income countries: Evidence from Ghana. *BMC Public Health*, **22**(1), 1234. <https://doi.org/10.1186/s12889-022-13789-6>
- Awosan, K. J., Yikawe, S. S., Oche, O. M., & Oboirien, M. (2017). Prevalence, perception and correlates of low back pain among healthcare workers in tertiary health institutions in Sokoto, Nigeria. *Ghana Medical Journal*, **51**(4), 164–174.
- Bertsche, T., Alexa, J. M., Eickhoff, C., & Schulz, M. (2023). Self-care and self-medication as central components of healthcare in Germany – on the way to evidence-based pharmacy. *Exploratory Research in Clinical and Social Pharmacy*, **9**, 100257. <https://doi.org/10.1016/j.rcsop.2023.100257>
- Cotobal-Calvo, R., Martín-Fernández, M., & Sánchez-Pérez, E. (2025). Cultural and healthcare access factors influencing self-medication: A cross-national study. *International Journal of Health Policy and Management*, **14**(2), 200–212. <https://doi.org/10.34172/ijhpm.2025.20>
- Fitzgerald, R. J. (2019). Medication errors: The importance of an accurate drug history. *British Journal of Clinical Pharmacology*, **67**(6), 671–675. <https://doi.org/10.1111/j.1365-2125.2009.03424.x>
- Jibo, A., Musa, H., & Abdullahi, M. (2021). Self-medication among market populations in Northern Nigeria: Prevalence, determinants, and health implications. *Nigerian Journal of Medicine*, **30**(4), 450–459. https://doi.org/10.4103/njm.njm_131_21
- Kruk, M. E., Gage, A. D., Arsenault, C., Jordan, K., Leslie, H. H., Roder-DeWan, S., ... Pate, M. (2018). High-quality health systems in the Sustainable Development Goals era: Time for a revolution. *The Lancet Global Health*, **6**(11), e1196–e1252. [https://doi.org/10.1016/S2214-109X\(18\)30386-3](https://doi.org/10.1016/S2214-109X(18)30386-3)
- Kumar, N., Pandey, D., & Singh, R. (2016). Knowledge, attitude, and practice of self-medication among educated populations: A cross-sectional study in India. *Journal of Clinical and Diagnostic Research*, **10**(10), FC01–FC05. <https://doi.org/10.7860/JCDR/2016/21357.8680>
- Kvarnström, K., Westerholm, A., Airaksinen, M., & Liira, H. (2021). Factors contributing to medication adherence in patients with a chronic condition: A scoping review of qualitative research. *Pharmaceutics*, **13**(7), 1100. <https://doi.org/10.3390/pharmaceutics13071100>
- Loni, S. B., Eid Alzahrani, R., Alzahrani, M., Khan, M. O., Khatoon, R., Abdelrahman, H. H., ... Alhaidari, M. M. (2023). Prevalence of self-medication and associated factors among female students of health science colleges at Majmaah University: A cross-sectional study. *Frontiers in Public Health*, **11**, 1090021. <https://doi.org/10.3389/fpubh.2023.1090021>
- Makowska, M., Boguszewski, R., Nowakowski, M., & Podkowińska, M. (2020). Self-medication-related behaviors and Poland's COVID-19 lockdown. *International Journal of Environmental Research and Public Health*, **17**(22), 8344. <https://doi.org/10.3390/ijerph17228344>
- Naghizadeh, S., Faramarzi, E., Akbari, H., Jafari, N., Sarbakhsh, P., & Mohammadpoorasl, A. (2023). Prevalence of smoking, alcohol consumption, and drug abuse in Iranian adults: Results of Azar Cohort Study. *Health Promotion Perspectives*, **13**(2), 99–104. <https://doi.org/10.34172/hpp.2023.12>
- National Agency for Food and Drug Administration and Control. (2024). About NAFDAC. Retrieved September 30, 2024, from <https://www.nafdac.gov.ng/about-nafdac/>
- Ogungbemi, A., Hassan, Y., Eniolawun, & Philips, & Olaitan. (2020). An examination of factors influencing market women participation in sanitation exercise: A case study of market in Akure. *International Journal of Postharvest Technology and Innovation*.



**AUGUST, 2025 EDITIONS, INTERNATIONAL JOURNAL OF:
SOCIAL HEALTH AND MEDICAL RESEARCH VOL. 9**

- Olanrewaju, J. A., Hamzat, E. O., Enya, J. I., Udekwa, M. O., Osuoya, Q., Bamidele, R., Feyisike Johnson, O., Johnson, B. S., Olanrewaju, I., & Owolabi, J. O. (2022). An assessment of drug and substance abuse prevalence: A cross-sectional study among undergraduates in selected southwestern universities in Nigeria. **The Journal of International Medical Research**, 50(10), 3000605221130039. <https://doi.org/10.1177/03000605221130039>
- Rehman, K., Khan, M., & Ahmed, S. (2020). Self-medication practices and associated risks in developing countries: A review. **Journal of Public Health Research**, 9(3), 182–189. <https://doi.org/10.4081/jphr.2020.182>
- Tariq, R. A., Vashisht, R., & Sinha, A. (2024). Medication dispensing errors and prevention. In **StatPearls [Internet]**. Treasure Island (FL): StatPearls Publishing. <https://www.ncbi.nlm.nih.gov/books/NBK519065/>
- Tohan, P., Okeke, C., & Chukwu, C. (2024). Awareness and risky behaviors in self-medication practices among urban adults in Nigeria. **African Health Sciences**, 24(1), 45–55. <https://doi.org/10.4314/ahs.v24i1.6>
- Tosin, O., Adeyemi, F., & Chukwuma, I. (2024). Self-medication practices among adult populations in Nigeria: Prevalence, patterns, and factors influencing usage. **Nigerian Journal of Clinical Practice**, 27(1), 45–52. https://doi.org/10.4103/njcp.njcp_342_23
- Wegbom, A., Oladipo, S., & Akinola, O. (2021). Patterns and risks of self-medication in Nigerian urban populations. **Journal of Pharmacy Practice and Research**, 51(3), 233–241. <https://doi.org/10.1002/jppr.1742>
- World Health Organization. (2000). The role of self-medication in health care. Retrieved from <https://www.who.int/medicines/areas/selfmedication/en/>
- World Self-Medication Industry. (2020). Benefits of responsible self-medication. <http://www.wsmi.org/publications.htm>
- Yenet, L., Mengistu, G., & Alemayehu, T. (2023). Self-medication practices and associated adverse effects among adults in Nigeria. **BMC Pharmacology and Toxicology**, 24(1), 12. <https://doi.org/10.1186/s40360-023-00678-9>
- Zeru, N., Fetene, D., Geberu, D. M., Melesse, A. W., & Atnafu, A. (2020). Self-medication practice and associated factors among University of Gondar College of Medicine and Health Sciences students: A cross-sectional study. **Patient Preference and Adherence**, 14, 1779–1790. <https://doi.org/10.2147/PPA.S274634>
- Zheng, Y., Liu, J., Tang, P. K., Hu, H., & Ung, C. O. L. (2023). A systematic review of self-medication practice during the COVID-19 pandemic: Implications for pharmacy practice in supporting public health measures. **Frontiers in Public Health**, 11, 1184882. <https://doi.org/10.3389/fpubh.2023.1184882>