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ABSUMSAJ

PREVALENCE, PATTERNS AND DETERMINANTS OF SELF-MEDICATION AMONG STUDENTS OF ABIA STATE POLYTECHNIC, ABA, ABIA STATE

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ABSTRACT

BACKGROUND: Self-medication is the act of treating one's self without prescription or appropriate medical supervision. It is a common practice globally and the prevalence is continuously on the increase especially in developing countries like Nigeria, where it has become a common practice among the student's community, mainly due to absolute or relative lack of access to healthcare, easy availability and poor drug regulatory practices.

AIM: This study was aimed at assessing the Prevalence, Patterns and Determinants of Self-medication among students of Abia State Polytechnic, Aba, Abia state.

METHODOLOGY: This was a descriptive cross-sectional study among 240 students of Abia State Polytechnic, Aba, using pre-tested self- administered questionnaires. Data was collected and analyzed using SPSS version 20. The study took place between June and July 2019.

RESULTS: The mean age of respondents was 23±2.4 years. Nearly 60% of the study participants had good knowledge out of which 76.3% (183) practiced it mostly whenever they felt sick (40.4%). The commonest illness prompting this practice were Headache/body pain (56.8%) and fever (36.1%), hence analgesics (60.1%) were the commonest self-prescribed medication. The commonest sources of these medications were community/local pharmacies (37.2%) and patent medicine stores (31.7%). The major reasons for self-medication among respondents were that it was time saving (24%) and family influence (19.6%). Age was a significant factor influencing the practice of self-medication, p=0.022.

CONCLUSION: The knowledge and practice of Self-medication is relatively high among the students. This could present a great challenge to the health sector in terms of increased rates of drug resistance, treatment failure and deleterious effects leading to increased morbidity and mortality. These can be forestalled with regular sensitization campaigns to the students and community at large on the benefits and dangers of self-medication.

KEYWORDS: Prevalence, Patterns, Determinants, Self-medication, Abia Poly.

INTRODUCTION

It is common for people to feel unwell and use medications for treating themselves. A medication is a drug used to diagnose, cure, treat or prevent diseases. Everyday people throughout the world act on their own for their health by practicing self-medication.

Self-medication is simply the act of treating one's self without prescription. It is the act of choosing and administering exogenous substance(s) to alleviate symptoms or treat a disease condition without medical supervision. It can be defined as obtaining and consuming one (or more) drug(s) without the advice of a physician, either for diagnosis, prescription or surveillance of treatment.[1] It can also be said to be the treatment of "common" health problems with medicines that are taken on patient's own initiative or an advice of a pharmacist, without professional directive/supervision.[2] This is now becoming a common practice among the student's community mainly due to lack of access to health care, easy availability and poor drug regulatory practice.

World Health Organization (WHO) considers self-medication as obtaining and consuming medication without professional supervision which comprises of acquiring medicines without a prescription, purchasing drugs by resubmitting/reutilizing an old prescription, taking medicine on advice of others or relatives or consuming left over medicine already available at home.[3] Therefore, the concept of self-medication portrays the selection and use of drugs by individuals to treat self-diagnosed conditions or symptoms. Self-medication could be with over-the-counter drugs and also with prescription drugs. Generally, commonly used medications are analgesics, antibiotics, cough remedies etc.

Self-medication practice is high in developing countries and this could be due to sales of drugs without prescription by most pharmacies, availability of medicines from informal sectors such as open market, supermarket, inadequate health care facilities, motor parks, road side store, sales by the roadside hawkers. Self-medication can be described as a double edged sword for its users, because it has both beneficial and harmful effects.[2]Several benefits have been linked to appropriate self-medication and these cannot be overlooked. Self-medication is one of the essential components of self-care.[4] Given limited access to healthcare system and scarcity of health care

providers in resource-constrained settings, self-medication has been well recognized as an alternative option to relieve symptoms associated with minor illnesses.[4]Inappropriate self-medication practice could be hazardous, leading to adverse side effects which are said to be the unintended consequences of any action in addition to the intended consequence of that action. Some of these effects include allergy, euphoria, weakness, vomiting, nausea, dependence etc. Risks of self-medications include drug abuse, drug misuse, drug resistance, drug over dose, use of expired drugs, worsening of ailments, prolonged duration of a drug and other toxicological and pharmacological risks. In view of the increase of practice of self-medication, WHO advised that self-medication be correctly taught and controlled.[3]This is true because if self-medication practice is not taught and controlled, it may metamorphose to drug abuse and misuse.[3]

The practices of self-medication have posed a serious threat to the society and side effects of such practices cannot be over emphasized.

Over the years, it has been found that inappropriate self-medication has been observed worldwide with varying prevalence and varying side effects which results in wastage of resources, increased resistance to pathogens, and generally entails serious health hazards such as adverse drug reactions, prolonged suffering, drug dependence, disability and premature death.[5]Self-medication is not a new problem but deserves a concise attention as it has become a serious and fast growing public health problem worldwide.

The times India has reported that resistance to antibiotics has been declared as a "major global threat" to public health by WHO in a first ever global surveillance report that collated data from 114 countries.[5] In a previous study conducted in India, it was discovered that the prevalence of self-medication was as high as 87% and 80.82% learnt self-medication during a prior illness.[3]From a study conducted in Jordan, it was discovered that the prevalence of self-medication among public school students was 87% and nearly 75% of self-medication was used for pain relief.[6] Therefore, it was noted that the prevalence of self-medication among school students is very high and increases with age.[6]From a cross-sectional study conducted among 892 adults(≥18years) in post conflict Northern Uganda, it was seen that 75.7% of the respondents practiced antimicrobial self-medication.[7] Drug use among respondents was mainly initiated by self-prescription (46.5%) and drug shop attendants (57.6%).[7]

Nigeria stands out among the countries of the world where drugs are freely displayed for sale in unauthorized places and by individuals not duly licensed. A study conducted among adults who are rural residents in Lagos, Nigeria, showed that 93.5% of the respondents, equivalent to 315 persons, had good knowledge about self-medication, 92.3% practiced it and the practice was significantly higher among respondents with the highest level of education.[8] The perception of illness and incessant advertising among others have increased the prevalence of irresponsible self-medication, which accounts for about 2.9–37% causes of death in hospitals in Nigeria, as a result of drug-drug interactions.[8] Some individuals may engage in the practice due to ignorance, poverty, and non-availability of health facilities.

Having stated the problems associated with self-medication, this study was carefully selected as it would go a long way in proffering solution to this practice. It is hoped that this research would generate knowledge of approach to minimizing the practice of self-medication especially among young people, reducing the problems associated with this wrong practice. It could help the government and health sector develop and implement rules and regulations which would guide the dispensation of drugs in pharmacies. It will also help reduce dangers and severe adverse effects associated with this practice, hence increasing overall life expectancy. This study will add to the existing body of knowledge on the subject matter and help in planning of health awareness campaigns geared towards modification of lifestyle and practices among young people. Finally, if the aforementioned are all achieved, there would be massive improvement in the standard of health in developing countries such as ours.

METHODOLOGY

This study is a descriptive cross sectional study using pre-tested self-administered questionnaire to obtain information from consenting respondents.

The population of this study comprises of male and female students of Abia State Polytechnic, Aba. Out of the 17 Local Government Areas in Abia State, Aba North was selected by a simple random sampling method of balloting. Abia State polytechnic was selected as it was the only tertiary institution in the Local Government. Simple random sampling technique was also used to

select the departments of study that would make up the study population. Students who met the inclusion criteria were then recruited from the chosen departments.

The sample size was determined using the Cochran formula for descriptive studies: $n = Z^2pq/d^2$ at 95% confidence, 5% error margin giving us 223.84 ≈ 224. Therefore, the minimum sample size will be 224. However, to compensate for non-response and invalid data forms, the calculated sample size was increased by 10%, to get the final sample size of 246.

RESULTS

This study comprises of 240 participants.

TABLE 1: SOCIO-DEMOGRAPHIC DATA OF RESPONDENTS

VARIABLE	FREQUENCY (N=240)	PERCENTAGE (%)
Age group (in years)		
15-20	65	27.1
21-25	137	57.1
26 – 30	30	12.5
>30	8	3.3
Sex		
Male	176	73.3
Female	64	26.7
Marital status		
Single	234	97.5
Married	5	2.1
Divorced/Separated	1	0.4
Tribe		
Igbo	188	78.3
Hausa	1	0.4
Yoruba	5	2.1

Others	46	19.2
Religion		
Christianity	237	98.8
Islam	1	0.4
African traditional/Others	2	0.8
Level		
ND1	84	35.0
ND2	58	24.2
HND1	34	14.2
HND2	64	26.7
Father's Education Level		
No formal Education	10	4.2
Primary Education	55	22.9
Secondary Education	77	32.1
Tertiary Education	98	40.8
Father's Occupation		
Civil Servant	99	41.3
Self Employed	117	48.8
Unemployed	8	3.3
Other	16	6.7
Mother's Education Level		
No formal Education	7	2.9
Primary Education	47	19.6
Secondary Education	78	32.5
Tertiary Education	108	45.0
Mother's Occupation		

Civil Servant	58	24.2
Self Employed	155	64.6
Unemployed	8	3.3
Other	19	7.9

MEAN AGE = 23 ± 2.4 Years

Table 1 shows the socio-demographic characteristics of the respondents. The mean age of the respondents was 23 ± 2.4 years, with those between 21 and 25 having the greater proportion (57.1%). Majority were males (73.3%) while females were 26.7%. Nearly all were from Igbo ethic group (78.3%), single (97.5%). Majority of the respondents were in their first level of study ND1 (35.0%). For most of the respondent, their fathers (40.8%) and their mother (45%) had tertiary education. For most of the respondents, their fathers (48.8%) and mothers (64.6%) were self-employed.

TABLE 2: KNOWLEDGE OF SELF- MEDICATION

VARIABLES	**FREQUENCY (N=240)**	**PERCENTAGE (%)**
Have you ever heard of Self Medication?		
No	44	18.3
Yes	196	81.7
If yes, how did you hear about it?	**(n = 196)**	
Family	50	25.5
Friends	33	16.8
Organizations	32	16.3
Mass Media	38	19.4

Social Media	29	14.8
Other	14	7.1
What is Self-Medication?		
The act of swallowing medications.	16	6.7
The act of taking medications given to you by a physician.	49	20.4
The act of taking any form of medication not prescribed to you by a physician	142	59.2
I don't know	33	13.7
Do you know the common ailments people self-medicate for?		
Yes	154	73.3
No	80	26.7
If yes, what are the common ailments people self-medicate for?	**(n = 154)**	
Fevers	75	48.7
Headache/ body pains	60	38.9
Gastrointestinal Infections	5	3.3
Constipation	1	0.7
STI's	6	3.9
UTI's	1	0.6
RTI's	2	1.3
Allergies	1	0.7
Others	3	1.9
Do you know the drugs commonly used for self-medication?		
Yes	166	69.2
No	74	30.8

If yes, what are the drugs commonly used for self-medication?	**(n = 166)**	
Analgesics	101	60.8
Blood tonics/capsules	14	8.4
Multivitamins	12	7.2
Anti-helminthic	4	2.4
Cough syrup	4	2.4
Anti-allergic	8	4.8
Anti-malarial	14	8.4
Antibiotics	8	4.8
Drugs for stomach upset	1	0.6
Do you know the sources of these drugs people self-medicate on?		
Yes	170	70.8
No	70	29.2
If yes, where do they get these drugs?	**(n = 170)**	
Community/local pharmacies	63	37.1
Markets	9	5.3
Hospitals	34	20.0
Medicine stores	58	34.1
Homes	4	2.3
Friends	1	0.6
Roadside Hawkers	1	0.6

Table 2 shows the self-medication knowledge of the respondents. A high proportion of the students has ever heard about self-medication (81.7%). The family (25.5%0 was the most chosen source of information on balanced diet. Majority knew that self-medication is the act of taking any form of medication not prescribed to you by a physician (59.2%). 73.3% knew about the common ailments people self-medication for, of which the most frequent was fever (48.7%). 69.2% know the drugs commonly used for self-medication, of which the commonest was analgesics (60.8%). 70.8% of the respondents knew the sources of these drugs people self-medicate on and they pointed out that community/local pharmacies (37.1%) were the most common sources of these drugs.

TABLE 3: PRACTICE OF SELF MEDICATION

VARIABLE	**FREQUENCY (N=240)**	**PERCENTAGE (%)**
Have you ever Practiced Self Medication?		
Yes	183	76.3
No	57	23.7
If yes, how often do you practice it?	**(n = 183)**	
Everyday	9	4.9
Once a week	16	8.7
Once a month	35	19.2
Once a year	18	9.8
Whenever you feel sick	74	40.4
When you cannot afford hospital bills	27	14.8
Others	4	2.2
I have never tried Self- Medication but would do if need be.	**(n = 57)**	
Yes	27	47.4
No	13	22.8
Don't know	17	29.8
What illness did you self-medicate for?	**(n = 183)**	

Fevers	66	36.1
Headache/ body pains	104	56.8
Gastrointestinal Infections	3	1.6
STI's	2	1.1
RTI's	3	1.6
Allergies	1	0.5
Others	4	2.2
What drugs did you self-medicate on?	**(n = 183)**	
Analgesics	110	60.1
Blood tonics/capsules	6	3.3
Multivitamins	9	4.9
Anti-helminthic	8	4.4
Cough syrup	6	3.1
Anti-allergic	8	4.4
Anti-malarial	27	14.8
Antibiotics	5	2.8
Drugs for stomach upset	3	1.6
Others	1	0.6
Where did you obtain these drugs you self-medicated on?	**(n = 183)**	
Community / local pharmacies	68	37.2
Markets	5	2.6
Roadside hawkers	10	5.5
Hospitals	36	19.7
Medicine Stores	58	31.7
Homes	4	2.2
Others	2	1.1

Table 3 is on practice of self-medication. Most of the respondents (76.3%) have ever practised self-medication and a high proportion of these students do so whenever they feel sick. (40.4%).

Headache/ body pains (56.8%) was the illness for which most practiced it while analgesics (60.1%) was the mostly used medication. Most of these respondents (37.2%) procured their medication from community/local pharmacies. Among the 23.7% that have never practiced self-medication, a high proportion (47.4%) would self-medicate if need be.

TABLE 4: RECENT PRACTICE OF SELF MEDICATION.

VARIABLE	**FREQUENCY (N=183)**	**PERCENTAGE (%)**
Which of these drugs have you used in the last one month without the doctor's prescription?		
Analgesics	92	50.3
Blood tonics/capsules	17	9.3
Multivitamins	16	8.7
Anti-helminthic	13	7.1
Cough syrup	6	3.3
Anti-allergic	7	3.8
Anti-malarial	21	11.5
Antibiotics	4	2.2
Drugs for stomach upset	5	2.7
Others	2	1.1
For which of these conditions have you used the drugs without a doctor's prescription in the last one month?		
Headache/ body pains	116	63.4
Fever	29	15.8
Allergies/skin rash	4	2.2

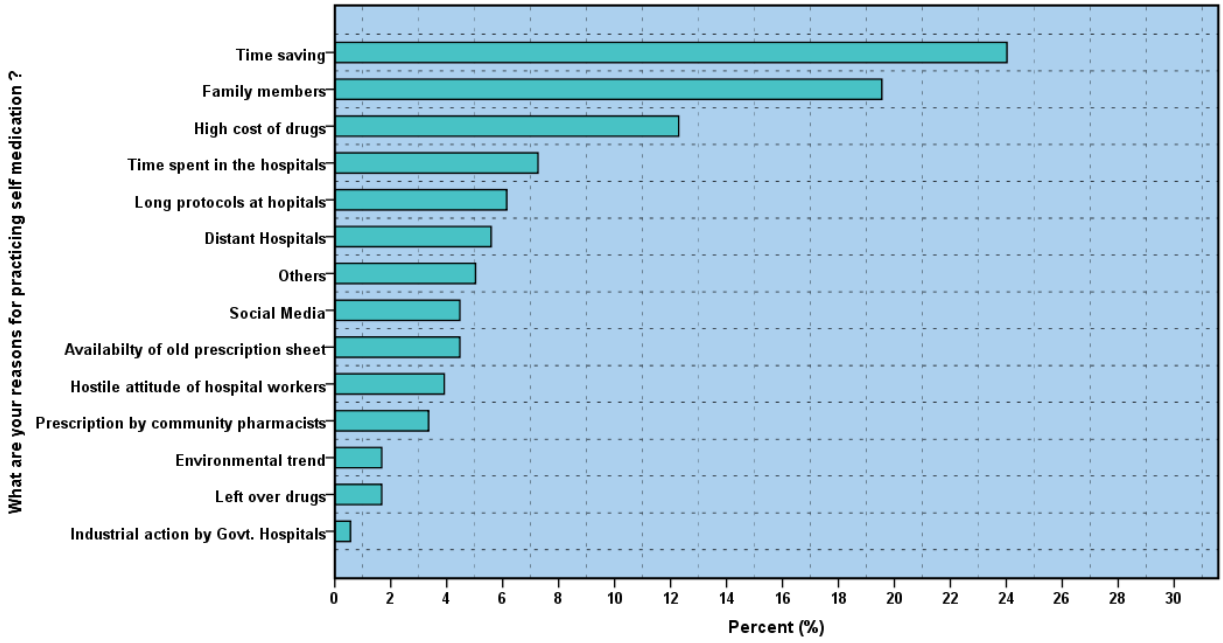
Sore throat/Cough	8	4.4
Cold/Catarrh	14	7.7
Nausea/Vomiting	2	1.1
STI's	1	0.6
Others	9	4.8

Table 4 above is on the recent practice of self-medication. In the past one month, most of the respondents (50.3%) of the respondents have used analgesics without the doctor's prescription (n=183); the condition for which most used a drug without doctor's prescription is headache/body pains (63.4%).

TABLE 5: FACTORS INFLUENCING SELF-MEDICATION

VARIABLE	**FREQUENCY (N=183)**	**PERCENTAGE (%)**
What are your reasons for practicing self-medication?		
Family members	36	19.6
High cost of drugs	22	12.3
Social Media	8	4.5
It is Time saving	44	24.0
Environmental trend	3	1.7
Distant Hospitals	10	5.6
Hostile attitude of hospital workers	7	3.9
Time spent in the hospitals	13	7.3
Long protocols at hospitals	11	6.1
Prescription by community pharmacists	6	3.4
Availability of old prescription sheet	8	4.5

Left over drugs	4	1.7
Industrial action by Govt. Hospitals	2	0.6
Others	9	5.0



The figure above shows the reasons for practicing self-medication. Time saving (24.0%) and influence of family members (19.6%), high cost of drugs (12.5%) and time spent in hospitals (7.3%) were the major reasons why the students practiced self-medication.

TABLE 6: SIDE EFFECTS OF SELF-MEDICATION

VARIABLE	FREQUENCY (N=183)	PERCENTAGE (%)
Have you ever experienced any side effect after self-medication?		

Yes	50	27.3
No	133	72.7
If yes, what side effects did you experience?	**(n = 50)**	
Body Pains	2	4.0
Dizziness	8	16.0
Headache	4	8.0
Waist pain	4	8.0
Stomach upset	2	4.0
Stomach pain	2	4.0
Stomach Ulcer	1	2.0
Woozy Eyes	1	2.0
Weakness/Tiredness	2	4.0
Vomiting	2	4.0
Did not work correctly	1	2.0
Drug reaction	1	2.0
Eyes	1	2.0
Gastro-intestinal disturbance	1	2.0
Heart burn	1	2.0
Skin Irritation	1	2.0
Others/Not mentioned	16	32.0

Table 6 shows the various self-medication associated side effects experienced by respondents. Among the respondents (n=183) that here ever practiced self-medication, 27.3% have experienced a side effect after self-medication. Dizziness (16%), headache (8%), waist pain (8%) and others/ not mentioned (32%) were the most common side effects that these respondents experienced. Others also experienced stomach pain (4%), stomach upset (4% weakness /tiredness (4%) and vomiting (4%).

Table 7: SOCIO-DEMOGRAPHIC FACTORS AFFECTING KNOWLEDGE OF SELF-MEDICATION

VARIABLES	Poor Knowledge N=98 (%)	Good Knowledge N=142 (%)	χ^2	p-value
Age group (in years)				
15-20	37 (56.9)	28 (43.1)	9.606	**0.022***
21-25	48 (35.0)	89 (65.0)		
26-30	10 (33.3)	20 (66.7)		
>30	3 (37.5)	5 (62.5)		
Sex				
Male	72 (40.9)	104 (59.1)	0.002	0.968
Female	26 (40.6)	38 (59.4)		
Marital status				
Single	95 (40.6)	139 (59.4)	1.456	0.483
Married	3 (60.0)	2 (40.0)		
Separated/divorced	0 (0.0)	1 (100.0)		
Tribe				
Igbo	78 (41.5)	110 (58.5)	2.436	0.487
Hausa	1 (100.0)	0 (0.0)		
Yoruba	1 (20.0)	4 (80.0)		
Others	18 (39.1)	28 (60.9)		
Religion				
Christianity	97 (40.9)	140 (59.1)	2.830	0.243
Islam	1 (100.0)	0 (0.0)		
African Traditional/Others	0 (0.0)	2 (100.0)		
Level				
ND1	44 (52.4)	40 (47.6)	7.267	0.064
ND2	21 (36.2)	37 (63.8)		
HND1	11 (32.4)	23 (67.6)		

HND2	22 (34.4)	42 (65.6)		
Father's Education Level				
No formal Education				
Primary Education	4 (40.0)	6 (60.0)	2.140	0.544
Secondary Education	26 (47.3)	29 (52.7)		
Tertiary Education	33 (42.9)	44 (57.1)		
	35 (35.7)	63 (64.3)		
Father's Occupation				
Civil Servant	35 (35.4)	64 (64.6)	2.712	0.438
Self Employed	54 (46.2)	63 (53.8)		
Unemployed	3 (37.5)	5 (62.5)		
Other	6 (37.5)	10 (62.5)		
Mother's Education Level				
No formal Education	1 (14.3)	6 (85.7)	3.781	0.286
Primary Education	23 (48.9)	24 (51.1)		
Secondary Education	29 (37.2)	49 (62.8)		
Tertiary Education	45 (41.7)	63 (58.3)		
Mother's Occupation				
Civil Servant	24 (41.4)	34 (58.6)	1.669	0.644
Self Employed	60 (38.7)	95 (61.3)		
Unemployed	4 (50.0)	4 (50.0)		
Other	10 (52.6)	9 (47.4)		

*** Statistically Significant**

Table 7 shows the socio-demographic factors affecting the knowledge of self-medication among students. The age of the students showed statistically significant association with the knowledge of self-medication among students (p=0.022)

Table 8: KNOWLEDGE SCORE OF RESPONDENTS

KNOWLEDGE	FREQUENCY (N=240)	PERCENTAGE (%)
Poor / No Knowledge	98	40.8
Good Knowledge/Understanding	**142**	**59.2**

In table 8 above, 142 (59.2%) had good knowledge and understanding of self-medication.

Table9: PRACTICE SCORE OF RESPONDENTS

PRACTICE	FREQUENCY (N=240)	PERCENTAGE (%)
Yes	**183**	**76.3**
No	57	23.7

The table above shows that 183 (76.3%) practiced self-medication while 57 (23.7%) did not practice self-medication.

Table 10: SOCIO-DEMOGRAPHIC FACTORS AFFECTING PRACTICE OF SELF-MEDICATION.

Practice of Self Medication				
VARIABLES	**No N=57 (%)**	**Yes N=183 (%)**	**χ^2**	**p-value**
Age group (in years)				
15-20	22 (33.8)	43 (66.2)	5.281	0.152
21-25	28 (20.4)	109 (79.6)		
26-30	6 (20.0)	24 (80.0)		
>30	1 (12.5)	7 (87.5)		
Sex				
Male	43 (41.8)	133 (75.6)	0.169	0.681
Female	26 (21.9)	38 (78.1)		
Marital status				
Single	55 (23.5)	179 (76.5)	3.257	0.196
Married	1 (20.0)	4 (80.0)		
Separated/divorced	1 (100.0)	0 (0.0)		
Tribe				
Igbo	39 (20.7)	149 (79.3)	6.871	0.076
Hausa	1 (100.0)	0 (0.0)		
Yoruba	2 (40.0)	3 (60.0)		
Others	15 (32.6)	31 (67.4)		
Religion				
Christianity	56 (23.6)	181 (76.4)	3.835	0.147
Islam	1 (100.0)	0 (0.0)		
African	0 (0.0)	2 (100.0)		
Traditional/Others				
Level				
ND1	23 (27.4)	61 (72.6)	5.369	0.147

ND2	18 (31.0)	40 (69.0)		
HND1	5 (14.7)	29 (85.3)		
HND2	11 (17.2)	53 (82.8)		
Father's Education Level				
No formal Education	1 (10.0)	9 (90.0)	1.923	0.589
Primary Education	15 (27.3)	40 (72.7)		
Secondary Education	20 (26.0)	57 (74.0)		
Tertiary Education	21 (21.4)	77 (78.6)		
Father's Occupation				
Civil Servant	26 (26.3)	73 (73.7)	0.724	0.868
Self Employed	26 (22.2)	91 (77.8)		
Unemployed	2 (25.0)	6 (75.0)		
Other	3 (18.8)	13 (81.3)		
Mother's Education Level				
No formal Education	0 (0.0)	7 (100.0)	3.287	0.348
Primary Education	14 (29.8)	33 (70.2)		
Secondary Education	17 (21.8)	61 (78.2)		
Tertiary Education	26 (24.1)	82 (75.9)		
Mother's Occupation				
Civil Servant	15 (25.9)	43 (74.1)	1.669	0.644
Self Employed	35 (22.6)	120 (77.4)		
Unemployed	4 (50.0)	4 (50.0)		
Other	3 (15.8)	16 (84.2)		

From table 10 above, there is no statistically significant association between the sociodemographic factors of the respondents and their practice of self-medication.

Table 11: EFFECT OF KNOWLEDGE ON PRACTICE OF SELF-MEDICATION

*** Statistically Significant**

Table 11 above shows the effect of knowledge on the practice of self-medication. Knowledge of self-medication showed statistically significant association with the practice of self-medication

Practice of Self Medication				
Knowledge of Self - Medication	**No N=57 (%)**	**Yes N=183 (%)**	**χ^2**	**p-value**
Poor/No Knowledge	31 (31.6)	67 (68.4)		
Good Knowledge/Understanding	26 (18.3)	116 (81.7)	5.683	**0.017***

(p=0.017).

DISCUSSION

This study found out that more than half of the respondents (59.2%) had good knowledge of self-medication. This is in contrast with the finding among community pharmacy consumers in Saudi Arabia, which documented poor knowledge among most of the respondents (68.0%).[9] This finding is slightly lower than what was found among basic science undergraduate medical students in Western Nepal (74.54%).[10] It is also slightly lower than the level of self-medication knowledge seen in Kolkata (74.0%).[11] A study conducted among rural residents in Lagos Nigeria documented good knowledge among 93.5% of the respondents and this was seen among residents with the highest level of education.[8] This is much higher than the level of self-medication knowledge among our respondents. This could be as a result of their level of education, as most of the respondents who participated in the study were graduates (42%).[8] Generally, the high level of knowledge seen across most of these study population is because of their level of education.

The prevalence of self-medication in our study is 76.3%. It is slightly higher than that documented among Egyptian medical and non-medical students (62.9%).[12]This finding is in contrast with the

results of a similar study conducted among Saudi medical students (26%).[13] This could be because they have been taught the dangers of self-medication as they were medical students and possibly because of strict policies on drug dispensation and administration in Saudi Arabia, which is not the case with Nigeria. However, our findings also corroborate with the findings documented among Jordanian medical and pharmacy students (78.5%).[14]In a similar study carried out in a medical college in Kolkata, the overall prevalence of self-medication was 65%.[11]The prevalence of self-medication among rural residents in Lagos Nigeria is 92.3% and this was significantly higher among respondents with the highest level of knowledge.[8] The practice of self-medication is on the increase especially among students. This could be attributed to the higher level of medical and pharmaceutical knowledge about medications and their uses, among undergraduates, especially medical students, thus, it is likely that this knowledge is sufficient to practice self-treatment.

In Lagos Nigeria, it was found out that almost all the rural residents which constituted the cross-sectional study population (92.3%) had practiced self-medication in the last one month preceding the study.[8] This is comparable with our recent (within the past one month) self-medication practice level of 76.3%.

A study on self-medication among social science university students in Northwest Ethiopia revealed that headache (69.1%) was the primary complaint that prompted self-treatment and therefore, analgesics (53.2%) were the mostly used drugs.[15] Headache (81.9%) also constituted the main symptom provoking self-medication among medical and non-medical students in Jordan, and self-treatment with pain-killers (77.6%) was significantly the main practice among the students.[16] These studies corroborate the findings in our study as the commonest symptoms or illnesses that prompted self-medication among the students were headache/body pains (56.8%) and fever (36.1%). This explains why analgesics (60.1%) which are also anti-pyretic were the most common self-prescribed medication. Similar to our finding is another study conducted in western Nepal which documented analgesics (73.2%) and anti-pyretic (68.8%) as most commonly self-prescribed medications.[10] Another study in Nepal found out that analgesics (75.8%) was the commonest self-prescribed medication.[9] Also in corroboration with our finding is the result of a study conducted in Abichu campus, Ethiopia, with the most reported symptom and self-prescribed medication being fever/headache (69.3%) and paracetamol (92.0%) respectively.[18]However, our finding is in

contrast to a study done in Kolkata, which documented antacids (81.2%) as the most common drug the respondents self-medicated with.[11]

On the source of information or knowledge regarding self-medication, this study found out that family (25.5%) had the greatest influence on most of the respondents that practiced self-medication. This is comparable with another cross-sectional study on self-medication carried out among the rural population of Meghalaya.[19]However, it is in contrast with another study on the patterns of self-medication among medical and non-medical university students in Jordan, which reported that the primary sources of advice for taking self-medication were physicians (55.8%), pharmacists (52.6%), internet websites (44.2%), with the least being family members (36.9%).[16]Friends and family, chemists and internet were the primary sources of self-medication knowledge among students of Nepal.[20] In contrast to our finding, another study conducted among first year medical students in Nepal documented pharmacist (60.31%) and text books (46.03%) as the most common self-medication information source.[21]In Kolkata, the commonest source of self-medication information and knowledge is textbooks and teachers (74%).[11]

From our study, the commonest sources of these drugs were community and local pharmacies (37.2%) and patent medicine stores (31.7%). This is in contrast with another cross-sectional study carried out among medical students in University of Nigeria, Nsukka, Enugu Campus, which found which had patent medicine stores (77.4%) and then, community pharmacies (21.3%) as the commonest sources of these drugs.[22] This could be a reflection of the density or number of patent medicine stores relative to community pharmacies. It could also be because more pharmacies are located around our study area (Abia State Polytechnic, Aba) while more patent medicine stores are located around Enugu campus, as almost all students live either within or around their school premises.

Though there is paucity of data on the side effects commonly associated with the practice of self-medication, this study found out that 27.3% of the respondents who had ever practiced self-medication had experienced one or more side effects. The majority of these effects were non-specific (32%) while others experienced dizziness (16%) following self-medication. Other side effects reported include; Headache, Stomach upset, Stomach pain, Woozy Eyes, Weakness/Tiredness, Vomiting, skin irritation etc. This is not surprising as most of the respondents

stated that they practiced self-medication whenever they felt sick (40.4%). Using the same medication for different illnesses which may present with similar symptoms can account for these side effects which these respondents have experienced.

According to a study done to establish the burden, risk factors and effects of antimicrobial self-medication in low and middle income countries shows that out of 31,340 participants, the reported negative outcomes of antimicrobial self-medication included allergies (5.9%), lack of cure (11.8%), and death (5.9%).[23]

The main reasons for practicing self-medication among students in the index study are time-saving (24%) and family influence (19.6%). This is in contrast to a study conducted in Kolkata, which had most of the medical students (respondents) practicing self-medication because they perceived their illness as minor (74.3%).[11]Another study conducted among medical students in Kolkata revealed that reasons for seeking self-medication were minor illness (79.2%) and previous experience.[21] These factors also account for the practice seen among university students in Palestine.[17]Among community pharmacy consumers in Saudi Arabia, the most common reasons for buying medication without a doctor's prescription were that the symptoms were too minor to visit a doctor (54%), time-saving (40%) and minor illness for which they knew the required treatment (40%).[9] This corroborates with the finding in the index study as these reasons are mainly a result of poor economy and under-developed health care system in developing countries. Due to limited health care facilities which are also not evenly distributed, too much time is spent and protocols observed in accessing health care. This leaves people feeling that consulting a doctor is time wasting as they can treat themselves based on previous experience.

In the present study, the age of the respondents showed statistical significance (p=0.022). The mean age of the respondents was 23 ±2.4 years and the practice of self-medication was more among students aged 21-25 years. A cross-sectional study on the prevalence and pattern of self-medication among medical students in a Nigerian university showed that self-medication was commonest among students aged 22-24 years (86.8%).[23] This in corroboration with our finding, tallies with the mean age of students in Nigerian tertiary institutions, especially universities and polytechnics due to age at graduation from secondary schools, time (in years) lost to delayed school

admission, age at entry into the institution, time spent in school and age at graduation from the tertiary institution.

The respondents' sex, marital status, tribe were not significantly associated with their overall knowledge and practice of self-medication. However, their parents' level of education and occupation, though not statistically significant, are important determinant of the prevalence and patterns of self-medication among the students as most of their parents had tertiary level of education (father- 40.8%; mother- 45%) and were employed (father- 90.1%; mother- 88.8%). This study found out that family influence (19.6%) was a major factor influencing the practice of self-medications among the students. This could be attributed to their parents' level of education and occupation as their socio-economic status could be enough to practice self-treatment.

CONCLUSION

This study reported a high knowledge and high prevalence of Self-medication among the students of Abia State Polytechnic, Aba. Headache and body pains were the major symptoms for which students self-medicated with analgesics procured from community pharmacies. Age was a significant factor influencing self-medication among the students.

RECOMMENDATION

In order to further improve the overall health of young people and prevent the occurrence of side effect associated with self-medication practice, the following recommendations are made;

1. There should be intensified campaign against irresponsible self-medication and health education on the risks associated with self-medication practice targeted at the students.
2. Accessible and affordable health care services at all levels should be advocated, with re-enforcement and implementation of the National Drug Policy in Nigeria, in order to increase the awareness of appropriate self-medication practices even among students.

3. Health care facilities/ hospitals should reduce the waiting time and protocols in their facilities, in other to reduce the rate at which students procure drugs without prescription.
4. Local and community pharmacists should be properly guided on the dispensation of prescription-only drugs and indiscriminate drug sales.

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