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## Knowledge, attitude, and practice of self-medication among residents in Yenagoa metropolis

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### Abstract

Self-medication is the use of medications, herbs, or home remedies with the intent of having a therapeutic effect without a prescription. It is the selection and use of medicines by individuals to treat self-recognized illnesses or symptoms without the consultation of healthcare professionals. Furthermore, self-medication forms a vital part of self-care. This study investigated the knowledge, attitude, and practice of self-medication in the Yenagoa metropolis. A descriptive cross-sectional survey was used to assess the knowledge, attitudes, and practices of self-medication among 1826 residents that were randomly selected in the Yenagoa metropolis. A structured questionnaire was employed to collect the field data, the data was then analyzed using IBM SPSS Version 23 was used. Results showed that the knowledge level of respondents on the subject of 'Self-medication' was high and most residents have a positive attitude towards self-medication. Over half of the sample population, 52.2% get drugs for self-medication from chemists, and 44.4% of respondents source their drugs for self-medication from pharmacies. Regarding reasons for self-medication, 25.6% of respondents believe self-medication saves time, 14.1% said they tend to adopt self-medication because of their perceived distance from health facilities, 15.9% argued that clinical fees are high, 9.9% say doctors are too busy with many things while 13.6% respondents are found to be recycling old prescriptions for similar symptoms. Half of the respondents reported (50.7%) regularly sharing their prescriptions with friends and family as a source of self-medication. The results in Table 3 show that the grand mean of 3.58 is above the accepted mean cut-off point of 3.00, revealing that respondents are knowledgeable about the benefits of self-medication. The result showed that the perceived benefits of self-medication by respondents are primarily for economic reasons having the highest mean score of 4.16. Respondents reported time-saving and treatment of minor ailments as a reason for self-medication with a mean score of 3.89.

It was also observed that most respondents engaged in diverse forms of practice of self-medication such as sharing of prescriptions from friends, families, and peer groups. This study was able to uncover that people who are actually self-medicated are not totally ignorant of the ills of this practice but just not enough knowledge to enable them to take a strong stance against self-medicating. The residents of this metropolis have quite some bad attitudes towards proper health protocols when it comes to drug administration and consumption although this is linked to several factors. This study's findings suggest that a lot needed to be done to prevent self-medication in Yenagoa Bayelsa State. Proper counseling of respondents should be done using methods that are better understood by patients.

**Keywords:** Self-medication, attitude, knowledge, practice

### Introduction

Self-medication is the use of medications, herbs, or home remedies with the intent of having a therapeutic effect without a prescription (Hitesh *et al.*, 2018) [4]. It is the selection and use of medicines by individuals to treat self-recognized illnesses or symptoms without the consultation of healthcare professionals (Bekele *et al.*, 2020) [1]. It forms a vital part of self-care (Hitesh *et al.*, 2018) [4]. While self-medication is prevalent in developing countries, it is also practiced in developed countries and can be encouraged with the availability of over-the-counter drugs (OTC) in a system. Studies on the prevalence of self-medication carried out by Babatunde *et al.*, (2016) in some selected countries showed the following prevalences; Kuwait (92%), India (31%), Nepal (59%), Europe (68%), Sudan (73.9%), Cameroun (55.7%), Nigeria (85%). Self-medication with over-the-counter drugs is also known as 'Responsible Self-Medication'. No wonder the WHO described responsible self-medication "as a practice that can help prevent and treat diseases that do not require medical

consultation, therefore mild symptoms such as headache and body pain will not require the consultation of a doctor” because it can be separated from the use or practice of prescription drugs. Studies have shown that a lot of factors could influence the increase of self-medication, these include socio-economic factors, easy access to drugs, an increase in ability to handle certain illnesses, and better accessibility of medicinal products. Owonaro *et al.*, (2015) [9], also pointed out the level of education as one of the reasons that encourage the practice of self-medication. In a typical Nigerian scenario, the practice of prescription medicine has been abused against the norm where medicines that ought to be regulated are abused without proper supervision. This issue of non-regulation and easy accessibility to these medicines has been a major contributor to the problem under discussion. Self-medication when practiced without the right medical history of a patient, according to Hitesh *et al.*, (2018) [4] can lead to incorrect drug usage, high chances of microbial resistance, and depletion of funds. Adverse drug reactions, drug resistance, and drug addiction are serious health challenges that can lead to prolonged suffering and are all fall-outs of self-medication. This study evaluated the patterns and other correlates of self-medication among residents of the Yenagoa metropolis here in Bayelsa State. Thus, the study encompasses selected communities within the Yenagoa metropolis.

## Materials and Method

**Study Site:** This study was carried out in Yenagoa, Bayelsa state which is situated in southern Nigeria at the core of the Niger Delta. The capital city “Yenagoa” has spread to cover several sub-communities which there form the Yenagoa Metropolis. These communities include Igbogene, Yenigwe, Akenfa, Agudama, Akempai, Edepie, Etegwe, Okutukutu, Opolo, Biogbolo, Yenizuegene, Kpansia, Yenizue-Epie, Okaka, Ekeki, Amarata, Onopa, Ovom, Swali and Azikoro.

**Study Design:** A descriptive cross-sectional design was used in this study.

## Sampling Techniques

A simple random sampling method was utilized in this study

## Data Collection

A structured questionnaire was used as the research tool to collect the field data. The questionnaire had six sections with section - A structured to collect respondents’ demographic information while section B-F was the research questions. The instrument was certified by the supervisor after a pilot study before the formal distribution to the respondent in the study area.

## Data Analysis

Descriptive statistics such as frequency and mean values were used to present data and further expressed in charts using IBM SPSS version 23 and Microsoft Excel (Ver. 2013). The hypotheses were tested by subjecting data to Pearson’s correlation coefficients.

## Ethical Issues

Ethical approval was obtained from the Bayelsa State Ministry of Health Ethics Committee. The Participant’s

information sheet and consent form was given to all participants.

## Results

### Demography of the Respondents

From the results obtained, 14.4% of respondents were 10-19 years of age (Teens), the age group 20-29 were the highest respondents at 46.9%, 28.8% of respondents were around the age group 30-39, 5.7% of responses came from the age group 40-49, 2.4% from age group 50-59 while 2.6% respondents came from above 60years as seen in Figure 1

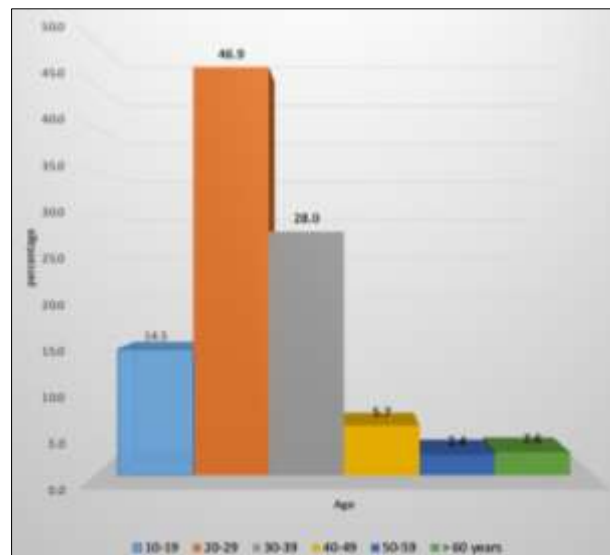


Fig 1: Age of Respondents.

### Sex of Respondent

From the results, 52.8% of the respondents were female while 47.2% of the respondents were males as seen in Figure 2

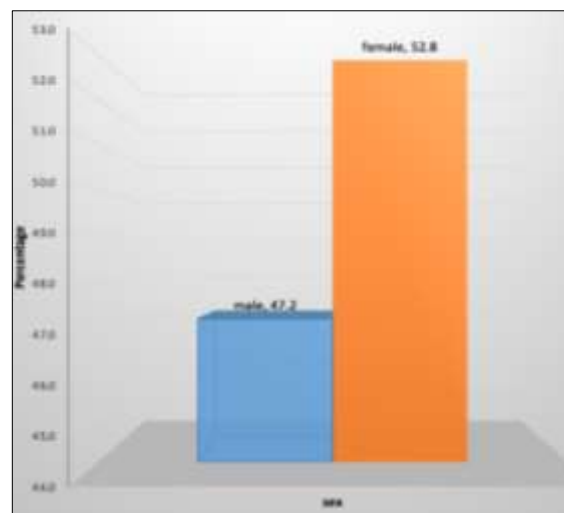
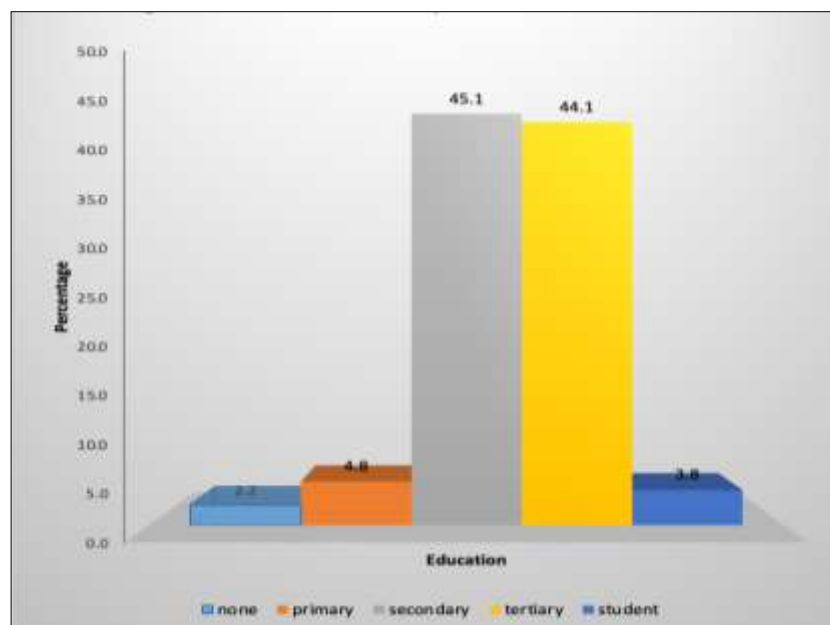


Fig 2: Sex of respondents.

### Highest Level of Education of Respondents

The result showed that 45.1% were those with SSCE as their highest level of education. More so, those with university degrees formed about 44.1% of the sample population, 4.8% of respondents had primary education, 3.8% are currently students in diverse levels of study while 2.2% of respondents indicated they have no educational exposure as seen in Figure 3



**Fig 3:** Respondents' level of education.

### Respondent's knowledge of the definition of Self-medication

The results in table1 show that the grand mean of 3.36 is above the accepted mean cut-off point of 3.00, revealing

that respondents are knowledgeable on the definitions of self-medication with most of the respondents agreeing that self-medication is the taking of drugs without a doctor's prescription with a mean score of 3.6

**Table 1:** Respondent's knowledge of the definition of Self-medication

Items	Mean	Std. Error of mean
Taking drugs without prescription	3.67	0.030
Taking a fraction of the total dose prescribed	3.00	0.029
Using drugs to self-administer treatment for psychological or physical ailments	3.39	0.029
The selection and use of medicines by individuals (or a member of the individual's family) to treat self-diagnosed or self-recognized diseases	3.46	0.029
The self-consuming of medication without getting advice from a physician for either diagnosis or treatment	3.30	0.030
The use of drugs to treat self-diagnosed disorders or symptoms or the intermittent or continued use of prescribed	3.35	0.026
Grand Mean	3.36	0.028

\* Mean values are accepted at the 3.0 mean score=1-5

Scoring: 1.0 = strongly disagree, 2.0 = disagree, 3.0 = don't know, 4.0 = agree 5.0 = strongly agree. N= 1826

### Sources of information about Self-medication

The results in Table 4.2 show that the grand mean of 3.38 is above the accepted mean cut-off point of 3.00 as an accepted mean score on a range of 1-5 revealing that respondents are knowledgeable on the sources of self-medication. The mean score also revealed that respondents obtain information from physicians/pharmacists showing the

highest mean score followed by previous experience. The highest mean score is 4.07 indicating that respondents obtain information from physicians/pharmacists followed by previous experience which a mean score of 3.94. The result also showed that respondents rarely obtain information from books/newspapers and radio/television. This can be confirmed in their mean score of 2.61 and 2.67 respectively.

**Table 2:** Sources of information about Self-medication

Items	Mean	Std. Error of mean
previous experience	3.94	0.024
previous prescription	3.73	0.027
package inserts	3.26	0.031
family members	3.40	0.029
books/newspapers	2.61	0.030
consult a physician/pharmacist	4.07	0.025
radio/television	2.67	0.030
Grand Mean	3.38	0.028

\* Mean values are accepted at 3.0 and above.

Scoring: 1.0 = strongly disagree, 2.0 = disagree, 3.0 = don't know, 4.0 = 5.0 = strongly agree. N=1826

**Respondent's knowledge of the perceived benefits of self-medication and Reasons:** The results in Table 3 show that the grand mean of 3.58 is above the accepted mean cut-off point of 3.00, revealing that respondents are knowledgeable about the benefits of self-medication. The result showed that

the perceived benefits of self-medication by respondents are primarily for economic reasons having the highest mean score of 4.16, secondly, time-saving with a mean score of 3.89, and thirdly for minor illness with a mean score of 3.73 respectively.

**Table 3:** Respondent's knowledge of the benefits of self-medication

Item	Mean	Std. Error of mean
time-saving	3.89	0.028
quick relief	3.65	0.029
Economical	4.16	0.023
no need to visit a doctor	3.23	0.033
for minor illness	3.73	0.030
learning opportunities	2.79	0.033
Grand Mean	3.58	0.029

\* Mean values are accepted at 3.0 and above.

Scoring: 1.0 = strongly disagree, 2.0 = disagree, 3.0 = don't know, 4.0 = agree 5.0 = strongly agree. N=1826

### The attitude of residents in Yenagoa metropolis towards self-medication

**Table 4:** Respondents' attitude towards self-medication

Items	Mean	S.E of mean
I use medications without seeing a doctor. Self-medication should be encouraged	2.64	0.028
I share my medications with my friends and family	2.78	0.028
I would rather treat myself than visit the nearest health facility	3.04	0.024
The pharmacist is well equipped to give correct information to consumers who purchase self-medication products therefore self-medication should be encouraged	2.86	0.026
The doctor/pharmacist should not ask me about the medicine I have taken before seeing him or her	3.10	0.027
I share my past knowledge of medications I have used with my friend	2.21	0.025
The course of medicine should be completed although symptoms subside	1.77	0.025
I prefer practicing self-medication for the minor ailment because it is time-saving and no waiting time and economical than visiting a health facility	2.02	0.023
I read package leaflets of drugs I used for self-medication before using them therefore self-medication should be encouraged	2.98	0.028
I believe what is written in leaflets packages and fully understand what is written in the leaflets	2.50	0.026
I encourage my friends and family to self-medicate	3.00	0.029
I discourage my friends and family to self-medicate	2.24	0.028
I always ensure to check my expiry date and route of administration before self-medicating	1.89	0.026
Antibiotics can be used to treat minor ailments	2.76	0.029
Non-steroidal anti-inflammatory drugs and analgesics can be used to treat minor ailments	2.63	0.031
Grand Mean	2.561	0.027

\* Mean values are accepted at 3.0 and above. (Source: Field report, 2020).

Scoring: 1.0 = strongly disagree, 2.0 = disagree, 3.0 = neutral 4.0 = agree 5.0 = strongly agree .n=1826

Table 4 represents the attitudes portrayed by respondents towards self-medication. First, it was uncovered that most respondents with a mean score of 3.04 prefer to self-medicate than visit a nearby health facility, another group of respondents with a mean score of 3.10 and a standard deviation of 1.158 wish that doctors//pharmacist should not ask them about the medicine they have taken before clinical visitation. Similarly, a set of respondents with a mean score of 3.00 and a standard deviation of 1.224 further promote their families and friends to self-medicate. A large number

of respondents also noted that they self-medicate by reading leaflets of medicines and as such do not need a doctor.

### Patterns and Practice of Self-medication

Results as shown in Table 5 reveals over half of the sample population 50.7% regularly share their prescriptions with friends and family. About 8.1% only share when necessary but 41.2% however have never shared their prescriptions with anyone.

**Table 5:** Sharing prescription

How often do you prescribe to someone who has similar symptoms?		
Items	Frequency	Percent
Always	926	50.7
When necessary	148	8.1
Never	752	41.2
Total	1826	100.0

### Continuation of prescription after symptoms persist

Table 6 showed that only 14.6% of respondents seem to always practice self-medication whenever symptoms persist

after the doctor's prescription. More so, 48.5% seldom self-medicate if symptoms persist after a prescription while



36.9% have never tried continuing a prescription in cases where symptoms persist.

**Table 6:** Continuing of prescription after symptoms persist. N=1826

Items	Frequency	Percent
Always	267	14.6
Sometimes	885	48.5
Never	674	36.9
Total	1826	100

### Reason for self-medication

In obtaining information for the reasons for self-medication, 25.6% of respondents believe self-medication saves time, 14.1% said they tend to adopt self-medication because of their perceived distance from health facilities, 15.9% argued that clinical fees are high, 9.9% say doctors are too busy with many things while 13.6% respondents are found to be recycling old prescriptions for similar symptoms. See Table 6 for details.

**Table 6:** Reason for self-medication. N=1826

Items	Frequency	Percent
Doctor/clinic far from home	258	14.1
High fees the doctor	291	15.9
The doctor is busy with too many patients	177	9.7
No trust in the doctor	44	2.4
Saves time	467	25.6
I have old prescriptions	248	13.6
I have medicines from my family members	174	9.5
Pharmacist advice	167	9.1
Total	1826	100.0

### Sources of drugs for self-medication

Table 7 shows the results from the field survey which captures the common sources of drugs for self-medication. Over half of the sample population, 52.2% get drugs for self-medication from chemists, 44.4% of respondents source their drugs for self-medication from pharmacy shops while a few other finite sources listed by respondents include medical representatives, mobile drug sellers, online shopping, primary health care centres and in some cases, from friends and family.

**Table 7:** Sources of drugs for self-medication

Items	Frequency	Per cent
Pharmacy shops	810	44.4
Chemist	954	52.2
medical representatives	2	0.1
mobile drug sellers	36	2.0
online shopping	1	0.1
primary health centres	18	1.0
friends and family	5	0.3
Total	1826	100

### Discussion

The characteristic descriptors of the respondents considered in the study include age, sex, marital status, and religion. From the study above, female respondents were more than male respondents. The study further cuts across several age groupings in which the highest number of participants in this study were Adolescence who formed about half of the participants. The youths were next to the forming slightly over a quarter of the total respondents while the least participating group was the middle-aged adults. Respondents' level of education was also considered

whereby the highest participants were secondary school certificate holders and university graduates.

The test for respondents' knowledge of "Self-medication" showed that most respondents have a good knowledge of the definition, benefits, sources, and dangers of what self-medication is all about. This corroborates the findings of Karmacharya *et al.*, (2018) [6] in which respondents have good knowledge of self-medication. However, other studies have shown that respondents have a low-level knowledge of self-medication. (Shankar *et al.*, 2016) [11]. On the definition of self-medication, further studies on the knowledge, attitude, and practice of self-medication among Harare health sciences college students, revealed that less than average of respondents had some knowledge about self-medication definition. (Hailemicha *et al.*, 2016) [3]. Research work carried out by Mehta and Sharma (2015) [7] on medical students using out of 75 respondents revealed that 2(2.7%) did not know the definition of self-medication while about 41(54.7%) had knowledge of self-medication definition. On the respondent's knowledge of the sources of drugs for self-medication, most respondents obtain their knowledge of the sources of drugs from consulting a pharmacist or Doctor while those who self-medicated based on previous experience were also high, thereby corroborating the findings of Iyke and Dafe, (2016) [5], in which the survey noted pharmacists as the most common source, accompanied by leaflets and former prescriptions. On the benefits of self-medication, reports from the survey showed respondents perceived benefits for self-medication because self-medication is economical and most were also of the view that it is time-saving. This corroborates with the results of the "Perception and practice of self-medication among non-clinical students in Niger Delta University, Bayelsa State, Nigeria" in which a greater number of respondents were of the view that self-medication is cheaper and saves time. Self-medication can come with certain dangers such as incorrect route and method of administration, improper dose/choice of therapy, unnecessarily delaying seeking medical advice, covering of adverse drug reactions and serious disease. The study also revealed the dangers of self-medication with the risk of adverse drug reactions and the danger of incorrect diagnosis. Respondents understanding of the correlates of self-medication revealed that respondents have a low knowledge. Results revealed that Respondents showed less understanding of the time to take missed doses of drugs with the lowest response and the highest for respondents understanding of the names of medications that they have used in the practice of self-medication. On the aspects of respondents' attitude towards self-medication, the results obtained from the field survey revealed generally that most residents of Yenagoa metropolis indulge in diverse forms of self-medication this is to say that respondents of Yenagoa metropolis have a positive attitude towards self-medication which corroborates the findings of (Mehta & Sharma (2015) [7] which showed that majority of the respondent had a positive attitude towards self-medication. For instance, it was observed that a high percentage of respondents prefer to self-medicate than visit a nearby health facility and another group of respondents strictly self-medicate because they do not wish that doctors/pharmacists ask them about their medication history. Similarly, a set of respondents further promote their families and friends to self-medicate and others self-

medicate by reading leaflets of medicines and as such do not need a doctor.

On the “Patterns”, results of the study showed that sharing of prescriptions between families and friends is a premium. For the “Practice”, several methods are being adopted by residents of the Yenagoa metropolis. First is that there seems to be some professional involvement in the “practice of self-medication” which happened to be reoccurring on a short-term basis. The study further revealed that although the practice of continuing a prescription where symptoms persist against a doctor’s advice thus exists, it is not really a regular practice. Based on these findings on the modes of practice of self-medication, it was observed that the events of self-medication are almost on a regular basis. On the reasons why most people self-medicate, respondents listed the following: self-medication saves time, this is in line with findings carried out by (Bekele *et al.*, 2020) <sup>[1]</sup> the most common reason why individuals use over-the-counter drugs in self-medicating was to prevent time wastage in which findings showed 77.4% and some literature cited high consultant fee, lack of time, quick relief (Reetesh *et al.*, 2011) <sup>[10]</sup>. The distance from health facilities could be discouraging, clinical fees are mostly high, doctors are most times too busy with many things and most respondents are comfortable recycling old prescriptions for similar symptoms. Some factors people consider in selecting drugs for self-medication include price, type of drug, and the pharmaceutical company, and others considered the brand name as a pointer for selecting drugs for self-medication. It was further reported that such decisions are mainly influenced by recommendations from a pharmacist, the brands of an old prescription, and previous experience similarly (Owonaro and Eniojukan, 2016) <sup>[8]</sup> where over 70% of respondents took pain relievers based on previous experience. Some sources in which individuals obtain drugs used for self-medication include; chemists as the major source. Research has shown that chemist is more in Yenagoa metropolis than pharmacy outlets and we have more chemist situated in these communities which makes them more accessible and the first line of medicine purchase. This is in line with similar findings carried out by (Owonaro *et al.*, 2015) <sup>[9]</sup> where most of the respondents get their drugs from patent vendors. This study also reveals respondents get their drugs also from pharmacy shops, medical representatives, mobile drug sellers, online shopping, primary health care centres, and in a few cases, from friends and family. In the Yenagoa metropolis, we have more chemists than pharmacy shops because we have more chemists situated in the communities which increases their patronage higher than pharmacy shops. Self-medication could not be complete without dosage determination and this is influenced by several factors consulting a doctor or pharmacist, from past experiences, using the internet, simply guessing, consulting peers, friends, and family, and sometimes from Emdex.

### Conclusion

The study investigated knowledge, attitude, and practice of self-medication in the Yenagoa metropolis of Bayelsa State in Nigeria, and several truths were uncovered. This study was able to uncover that people who are actually self-medicated are not totally ignorant of the ills of this practice but just do not have enough knowledge to enable them to take a strong stance against self-medicating. The residents

of this metropolis have quite some bad attitudes towards proper health protocols when it comes to drug administration and consumption although this is linked to several factors as cited above. It was ascertained that the practice of self-medication in the Yenagoa metropolis is high and needs intervention as residents comfortably indulge in diverse forms or acts of self-medication with a proper risk analysis. Furthermore, the menace is quite escalating in the area of understudy, age, educational level, occupation, and having access to a health insurance scheme are salient factors of influence.

### Recommendation

Findings here suggest that a lot needed to be done to prevent self-medication in Yenagoa Bayelsa State. Proper counselling of respondents should be done using methods that are better understood by patients.

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