
Antibiotic Self-Medication Practices, Awareness, and Influencing Factors Among Adults in Nigeria: A Cross-Sectional Survey

¹*Reynaldo C. Carolino

¹University Of The Philippines, Philippines.

Abstract

Background: Antibiotic self-medication in Nigeria is a significant public health issue and one of the primary causes of antimicrobial resistance. Although there has been growing awareness of the proper use of antibiotics, self-medication practices are still prevalent among adults.

Purpose: This study aimed to examine antibiotic self-medication practices and to evaluate the relationships between knowledge and awareness, attitudes and risk perception, and socio-structural enabling factors influencing antibiotic self-medication among adults in Nigeria.

Methods: A cross-sectional study was conducted, including 386 adults aged 18 years and above in a suburban community in Ekiti State, Nigeria, between March and May 2024. The study utilized a structured questionnaire with five sections: Section A consisted of demographics, Section B, C, D, and E consisted of questions related to self-medication practices, awareness regarding antibiotic usage and antimicrobial resistance, enabling factors of antibiotic self-medication, and attitudes towards self-medication practice, respectively. Descriptive statistics, Pearson correlation analysis, and multiple linear regression were applied. The p-value was set to less than 0.05.

Results: The self-medication of antibiotics was found to be very high, with 71.0% indicating self-medication without a prescription. Fifty-nine point eight percent reported the use of leftover antibiotics, and 69.2% reported the use of antibiotics when presented with the symptoms of a possible viral infection. The level of knowledge was high, as 81.3% knew that antibiotics do not work in the treatment of viral diseases and 84.5% knew that they contribute to antimicrobial resistance. There were strong positive correlations between self-medication practices and attitudes ($r = 0.990$), knowledge and awareness ($r = 0.961$), and enabling factors ($r = 0.985$), all $p < 0.001$. These variables were found to explain 99.2% of the variance of self-medication behavior (R -squared = 0.992).

Conclusion: Antibiotic self-medication among Nigerians is high despite high awareness. The current knowledge is not sufficient since behavioral attitudes and structural barriers prevail, which require rigorous behavioral interventions and enhanced regulatory implementation.

Keywords: Antibiotic Self-Medication; Antimicrobial Resistance; Health Knowledge Attitudes Practice; Drug Misuse; Patient Behavior.

Introduction

Self-medication, which is also referred to as self-prescription, is the use of antibiotic medications without prescriptions and professional care (Aljinović-Vučić, 2025). Self-medication represents a significant health problem in Nigeria. The practice involves behavior such as the use of antibiotics without a prescription, the use of leftover drugs that have been used in the past, and the distribution of antibiotics to colleagues or relatives (Sun et al., 2019). Community and clinical evidence suggest that self-medication with antibiotics is prevalent in the population of

adults in a wide range of socio-demographic groups. This trend has significant effects on antimicrobial resistance, treatment outcomes, and healthcare spending (Alhur et al., 2024).

The prevalence of antibiotic self-medication among adults in Nigeria has been reported through several studies that were carried out in different states of the country (Adeke et al., 2025). A large percentage of patients use antibiotics on their own, and these drugs are often available in community pharmacies and informal sellers with compromised system regulation. Some of the frequently used antibiotics are

Reynaldo C. Carolino

University Of The Philippines, Philippines.

Email: reynaldocarolino178@gmail.com



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broad-spectrum agents like amoxicillin and penicillin combinations (Naseef et al., 2022). According to the World Health Organization (WHO), antimicrobial resistance (AMR) has been reported as one of the top 10 worldwide health issues (Organization, 2022). The number of deaths has increased to over 5 million in 2019 (Dadgostar, 2019). As per the study prediction, by 2050, AMR might impose a 1% annual reduction in gross domestic product (GDP). This would result in losses of between 100 and 200 trillion euros globally (Ali & Ryan, 2023). Moreover, it has been reported that drug-resistant infections account for 700,000 mortalities per year; if nothing is done to address this issue instantly, it is expected that this figure will increase to 10 million deaths per year by 2050 (Al-Jumaili et al., 2013).

The determinants of antibiotic self-medication in Nigeria are more complex. There is limited access to formal healthcare services due to economic and structural barriers (Onwujekwe et al., 2025). Adults typically encounter several problems, including long waiting lists, high expenses, and inaccessible primary healthcare services. The cost of healthcare consultation and diagnostic tests is another detriment to seeking the services of qualified medical practitioners (Baxerres et al., 2021). Education and information on antibiotics and antimicrobial resistance are some of the key determinants of self-medication practices. The understanding of AMR as an outcome of improper antibiotic use is limited. AMR refers to the capacity of microbes, including bacteria, viruses, fungi, or parasites, to grow despite taking antibiotics (Guo et al., 2021).

AMR may be caused by genetic mutations in microbes or the acquisition of resistance genes, which is frequently enhanced by the inappropriate use of antimicrobial drugs, such as overuse, misuse, or non-completion of drug treatment (Abbas et al., 2024). It is a considerable risk to the population's health as it complicates the management of common infections, the risk of spreading diseases, as well as growing an illness, and may result in the increase of medical expenses and death (Guo et al., 2021). Education and information on antibiotics and AMR are some key determinants of self-medication practices (Tadesse et al., 2023).

Despite the high prevalence and general trends of antibiotic self-medication in Nigeria, scarce evidence exists that incorporates knowledge, attitudes, risk perceptions, and enabling determinants into one analytic framework. There is limited literature that employs multivariate-based models to isolate the relative role of cognitive and situational variables on self-medication behavior. Furthermore, no

adequate study has been carried out to assess how these relationships can be altered by socio-demographic factors in adults. There is limited nationally representative information on psychosocial and structural predictors of antibiotic misuse.

This study aimed to investigate the relationship between knowledge and awareness, attitudes and risk perception, determinants and enabling factors, and antibiotic self-medication practices in adults in Nigeria. Furthermore, it highlights the behavioural issues towards the use of antibiotics and the increasing problem of AMR in the Nigerian setting.

Methodology

Study Design and Setting

A cross-sectional study was conducted to investigate the practice of self-medication among adults in a suburban neighborhood, Ekiti State, Nigeria. The Suburban is a neighborhood with a combination of residential and commercial properties, moderate access to healthcare services, and a mixture of socio-economic status. Data was collected in a period of 3 months between March 1 and May 31, 2024. The suburban environment was chosen as it has limited access to official medical care and exposure to community pharmacies.

Population and sample size

A total of 386 participants, including adults, both males and females aged 18 to ≥ 55 who lived in the suburban neighborhood, Ekiti State, Nigeria, were included in the study. The data were collected from the participants at home, community centers, and places of public gathering. Recruitment was done until the required sample size was reached.

Eligibility Criteria

The following eligibility criteria were followed

Inclusion criteria

1. Individuals aged 18 years and above were included in the study
2. Individuals who have lived within the community for at least 1 year.
3. Individuals willing to participate in the study

Exclusion criteria

1. Young people who have lived in the area for less than 1 year

2. Severely disabled individuals were individuals
3. Individuals who refused to participate or did not give their consent were excluded as well.

Data Collection Instrument

The structured questionnaire, which was based on antibiotic self-medication, knowledge, and attitudes, was used to collect data. The questionnaire was divided into five parts. The demographic section involved gathering socio-demographic data such as gender, age, marital status, education level, employment status, and area of residence. The second part involved self-medication practices, on

which such behaviors were measured, including taking antibiotics without prescription, sharing of medications, and self-dosing. The third part assessed the knowledge and awareness about antimicrobial resistance and the use of antibiotics. Part four discussed determinants and enabling factors, such as social, economic, and structural factors in self-medication behaviors. The fifth part evaluated the attitudes and perceptions of risks about antibiotic self-medication. The measures of each item were taken with Likert-type scales, with high scores signifying greater self-medication behavior, strong enabling factors, more knowledge, or more permissive attitudes.

Table 1. Socio-Demographic Information of Participants

| | Frequency | Percent (%) |
|------------------------------|-----------|-------------|
| Age | | |
| 18–24 | 104 | 26.9 |
| 25–34 | 128 | 33.2 |
| 35–44 | 78 | 20.2 |
| 45–54 | 48 | 12.4 |
| ≥55 | 28 | 7.3 |
| Gender | | |
| Male | 211 | 54.7 |
| Female | 175 | 45.3 |
| Marital Status | | |
| Single | 176 | 45.6 |
| Married | 172 | 44.6 |
| Divorced/Separated | 26 | 6.7 |
| Widowed | 12 | 3.1 |
| Education | | |
| No formal education | 23 | 6.0 |
| Primary education | 54 | 14.0 |
| Secondary education | 132 | 34.2 |
| Graduate (Bachelor's degree) | 118 | 30.6 |
| Postgraduate degree | 59 | 15.3 |
| Employment | | |
| Unemployed | 82 | 21.2 |
| Employed | 144 | 37.3 |
| Student | 96 | 24.9 |
| Self-employed | 64 | 16.6 |
| Residence | | |
| Urban | 242 | 62.7 |
| Rural | 144 | 37.3 |

Data Collection Procedure

The data was collected through face-to-face interviews by trained research assistants. The sessions took

about 20-25 minutes. The subjects were informed about the intent of the study, and any uncertain items were clarified to them to give the correct answers. Finished questionnaires

Table 2. Self-Medication Practices

| | Categories | Frequency | Percent (%) |
|---|-------------------|------------------|--------------------|
| I have used antibiotics without a prescription from a licensed healthcare professional | Strongly Disagree | 22 | 5.7 |
| | Disagree | 34 | 8.8 |
| | Neutral | 56 | 14.5 |
| | Agree | 158 | 40.9 |
| | Strongly Agree | 116 | 30.1 |
| I have initiated antibiotic treatment based on my own judgment when experiencing illness | Strongly Disagree | 26 | 6.7 |
| | Disagree | 42 | 10.9 |
| | Neutral | 61 | 15.8 |
| | Agree | 147 | 38.1 |
| | Strongly Agree | 110 | 28.5 |
| I have used leftover antibiotics from a previous illness to treat a new episode of illness | Strongly Disagree | 34 | 8.8 |
| | Disagree | 49 | 12.7 |
| | Neutral | 72 | 18.7 |
| | Agree | 139 | 36.0 |
| | Strongly Agree | 92 | 23.8 |
| I have obtained antibiotics from non-formal sources (e.g., friends, relatives, local vendors). | Strongly Disagree | 29 | 7.5 |
| | Disagree | 41 | 10.6 |
| | Neutral | 68 | 17.6 |
| | Agree | 153 | 39.6 |
| | Strongly Agree | 95 | 24.6 |
| I have taken antibiotics for symptoms suggestive of viral illnesses (e.g., cold, cough, flu) | Strongly Disagree | 24 | 6.2 |
| | Disagree | 36 | 9.3 |
| | Neutral | 59 | 15.3 |
| | Agree | 162 | 42.0 |
| | Strongly Agree | 105 | 27.2 |
| I have discontinued antibiotic therapy before completing the prescribed course once symptoms improved | Strongly Disagree | 31 | 8.0 |
| | Disagree | 47 | 12.2 |
| | Neutral | 70 | 18.1 |
| | Agree | 145 | 37.6 |
| | Strongly Agree | 93 | 24.1 |
| I have shared antibiotics with family members or friends for the treatment of illness | Strongly Disagree | 45 | 11.7 |
| | Disagree | 63 | 16.3 |
| | Neutral | 79 | 20.5 |
| | Agree | 124 | 32.1 |
| | Strongly Agree | 75 | 19.4 |

were checked at the time, regarding completeness and consistency. Efforts were put into ensuring confidentiality and anonymity during data collection, and no personally identifying data was noted.

Statistical Analysis

SPSS (version 23) was used to perform descriptive and inferential statistics. To summarize socio-demographic characteristics, the frequencies, percentages, means, and standard deviations were calculated. Pearson correlation analysis was conducted between self-medication practices and the predictor variables, such as knowledge, attitudes, and enabling factors. Various linear regression models were run to determine predictors of self-medication with antibiotics while controlling for socio-demographic factors. A p-value of less than 0.05 was considered to be statistically significant. Some of the quality control measures entailed a second time verification of data entry accuracy and a review of outliers or inconsistencies with the starting questionnaires.

Results

Table 1 shows the demographic characteristics of the study population (N=386), indicating that the most common age was 25-34 years. The proportion of males in the sample was 54.7 % whereas the proportion of females was 45.3 %. Concerning marital status, 45.6% were single, and 44.6% were married. In terms of educational level, the majority of participants had either a secondary level or a bachelor's degree, 30.6%. Employment distribution revealed that 37.3% were employed, 24.9% were students, and 21.2% were unemployed. Most of the participants lived in the cities (62.7%), and the rest lived in the rural areas (37.3%), which indicates a relatively young, educated, and urban population.

Table 2 shows an excellent level of antibiotic self-medication in the participants. Forty to thirty percent of the participants agreed and strongly agreed that they have used antibiotics without a prescription and that they have initiated an antibiotic therapy on their own. The use of leftover antibiotics was observed to be 36.0% and 23.8%, and obtaining antibiotics outside was 39.6%. Besides, 42.0% agreed, and 27.2% strongly agreed to take antibiotics when they had symptoms that were suggestive of a viral illness, and 37.6% and 24.1% agreed and strongly agreed, respectively, to discontinue therapy early. The common belief to share antibiotics with family members

or friends was also high, where 32.1% agreed, and 19.4% strongly agreed. All these findings indicate the prevalence of improper antibiotic use, which has a significant danger of misuse and could have led to antimicrobial resistance. Table 3 illustrates that the overall awareness of antibiotics and their proper use among the participants is high. The majority of them admitted that antibiotics cannot treat viruses, and 44.8% had agreed that this was true, and 36.5% had strongly agreed. Similarly, 45.6% and 38.9% agreed and strongly agreed, respectively, that the use of inappropriate antibiotics is a factor that promotes antimicrobial resistance. Awareness of the risks of incomplete course was high, as 42.7% agreed and 36.8% strongly agreed. In contrast, awareness of the possibility of recurrent or severe infections as a result of misuse was 41.2% agree, and 36.0% strongly agree. The participants also found self-medication to be a delaying factor to accurate diagnosis (40.2%, agree, 33.2 %, strongly agree), and that antibiotic resistance was a significant problem in Nigeria today (44.0 %, agree, 38.6 %, strongly agree). In general, moderate to high knowledge levels were observed, with 38.3% agreeing and 25.9% strongly agreeing that they have adequate knowledge to distinguish between conditions that need antibiotics and those that do not need them.

Table 4 indicates that the socio-economic and behavioral determinants have a significant impact on antibiotic self-medication. The primary causes included high healthcare costs (41.7 %agree; 33.9 % strongly agree), long waiting times (40.4 % agree; 30.1% strongly agree), prior positive experiences (43.5 % agree; 34.2 % strongly agree), and easy availability without prescription (45.3 % agree; 37.3 % strongly agree). Determining the self-medication behavior, social advice, fear of missing work or school, and media information played an important role in independent antibiotic use, pointing to various determinants of independent use of antibiotics.

Table 5 shows that there is a good acceptance of antibiotic self-medication among respondents, with 36.8 % agreeing with the statement and 20.7 % strongly agreeing that it is acceptable for mild illnesses. 19.7% agree, and 33.2% strongly agree, reported confidence in the ability to choose antibiotics without medical advice and stop them when symptoms improve. Most also perceived no need to see medical professionals with minor illnesses (39.6% agree; 21.5% strongly agree), but 43.5% agree, and

Table 3. Knowledge and Awareness

| | Categories | Frequency | Percent (%) |
|--|-------------------|------------------|--------------------|
| I am aware that antibiotics are ineffective against viral infections | Strongly Disagree | 12 | 3.1 |
| | Disagree | 21 | 5.4 |
| | Neutral | 39 | 10.1 |
| | Agree | 173 | 44.8 |
| | Strongly Agree | 141 | 36.5 |
| I understand that inappropriate use of antibiotics contributes to antimicrobial resistance | Strongly Disagree | 10 | 2.6 |
| | Disagree | 18 | 4.7 |
| | Neutral | 32 | 8.3 |
| | Agree | 176 | 45.6 |
| | Strongly Agree | 150 | 38.9 |
| I know that not completing a full course of antibiotics can lead to treatment failure | Strongly Disagree | 14 | 3.6 |
| | Disagree | 24 | 6.2 |
| | Neutral | 41 | 10.6 |
| | Agree | 165 | 42.7 |
| | Strongly Agree | 142 | 36.8 |
| I am aware that antibiotic misuse can result in recurrent or more severe infections | Strongly Disagree | 16 | 4.1 |
| | Disagree | 27 | 7.0 |
| | Neutral | 45 | 11.7 |
| | Agree | 159 | 41.2 |
| | Strongly Agree | 139 | 36.0 |
| I understand that self-medication with antibiotics can delay accurate medical diagnosis | Strongly Disagree | 18 | 4.7 |
| | Disagree | 31 | 8.0 |
| | Neutral | 54 | 14.0 |
| | Agree | 155 | 40.2 |
| | Strongly Agree | 128 | 33.2 |
| I am aware that antibiotic resistance is a significant public health problem in Nigeria | Strongly Disagree | 11 | 2.8 |
| | Disagree | 20 | 5.2 |
| | Neutral | 36 | 9.3 |
| | Agree | 170 | 44.0 |
| | Strongly Agree | 149 | 38.6 |
| I have sufficient knowledge to distinguish between conditions that require antibiotics and those that do not | Strongly Disagree | 28 | 7.3 |
| | Disagree | 44 | 11.4 |
| | Neutral | 66 | 17.1 |
| | Agree | 148 | 38.3 |
| | Strongly Agree | 100 | 25.9 |

39.9% strongly agree that there should be a more vigorous enforcement of prescription-only medications to prevent abuse, indicating common self-medication views and

acknowledgment of regulatory requirements.

Table 4. Determinants and Enabling Factors

| | Categories | Frequency | Percent (%) |
|---|-------------------|------------------|--------------------|
| The high cost of healthcare services influences my decision to self-medicate with antibiotics | Strongly Disagree | 19 | 4.9 |
| | Disagree | 28 | 7.3 |
| | Neutral | 47 | 12.2 |
| | Agree | 161 | 41.7 |
| | Strongly Agree | 131 | 33.9 |
| Long waiting times at healthcare facilities encourage me to use antibiotics without consultation | Strongly Disagree | 24 | 6.2 |
| | Disagree | 36 | 9.3 |
| | Neutral | 54 | 14.0 |
| | Agree | 156 | 40.4 |
| | Strongly Agree | 116 | 30.1 |
| My previous positive experience with antibiotics influences my current self-medication behavior | Strongly Disagree | 15 | 3.9 |
| | Disagree | 26 | 6.7 |
| | Neutral | 45 | 11.7 |
| | Agree | 168 | 43.5 |
| | Strongly Agree | 132 | 34.2 |
| Advice from family members or friends affects my decision to use antibiotics without a prescription | Strongly Disagree | 29 | 7.5 |
| | Disagree | 42 | 10.9 |
| | Neutral | 63 | 16.3 |
| | Agree | 150 | 38.9 |
| | Strongly Agree | 102 | 26.4 |
| The easy availability of antibiotics without a prescription encourages self-medication | Strongly Disagree | 19 | 4.9 |
| | Disagree | 17 | 4.4 |
| | Neutral | 31 | 8.0 |
| | Agree | 175 | 45.3 |
| | Strongly Agree | 144 | 37.3 |
| Fear of missing work, school, or daily activities motivates me to self-medicate | Strongly Disagree | 21 | 5.4 |
| | Disagree | 33 | 8.5 |
| | Neutral | 52 | 13.5 |
| | Agree | 162 | 42.0 |
| | Strongly Agree | 118 | 30.6 |
| Information from media or online sources influences my decision to use antibiotics independently | Strongly Disagree | 34 | 8.8 |
| | Disagree | 46 | 11.9 |
| | Neutral | 65 | 16.8 |
| | Agree | 143 | 37.0 |
| | Strongly Agree | 98 | 25.4 |

The correlation analysis in Table 6 shows that all the study variables have strong statistically significant positive relationships. Attitudes and risk perception ($r =$

0.990 , $p < 0.001$), knowledge and awareness ($r = 0.961$, $p < 0.001$), and determinants and enabling factors ($r = 0.985$, $p < 0.001$) had a strong correlation with self-medication

Table 5. Attitudes and Risk Perceptions

| | Categories | Frequency | Percent (%) |
|---|-------------------|------------------|--------------------|
| I believe that self-medicating with antibiotics is an acceptable practice for mild illnesses | Strongly Disagree | 38 | 9.8 |
| | Disagree | 55 | 14.2 |
| | Neutral | 71 | 18.4 |
| | Agree | 142 | 36.8 |
| | Strongly Agree | 80 | 20.7 |
| I feel confident in my ability to select the appropriate antibiotic without medical advice | Strongly Disagree | 44 | 11.4 |
| | Disagree | 62 | 16.1 |
| | Neutral | 76 | 19.7 |
| | Agree | 76 | 19.7 |
| | Strongly Agree | 128 | 33.2 |
| I believe that stopping antibiotics once symptoms improve is generally safe | Strongly Disagree | 41 | 10.6 |
| | Disagree | 58 | 15.0 |
| | Neutral | 69 | 17.9 |
| | Agree | 137 | 35.5 |
| | Strongly Agree | 81 | 21.0 |
| I consider antibiotics to be a quick and effective solution for common illnesses | Strongly Disagree | 29 | 7.5 |
| | Disagree | 44 | 11.4 |
| | Neutral | 58 | 15.0 |
| | Agree | 162 | 42.0 |
| | Strongly Agree | 93 | 24.1 |
| I believe that occasional self-medication with antibiotics does not pose serious health risks | Strongly Disagree | 36 | 9.3 |
| | Disagree | 54 | 14.0 |
| | Neutral | 72 | 18.7 |
| | Agree | 146 | 37.8 |
| | Strongly Agree | 78 | 20.2 |
| I feel that consulting a healthcare professional for minor illnesses is often unnecessary | Strongly Disagree | 33 | 8.5 |
| | Disagree | 49 | 12.7 |
| | Neutral | 68 | 17.6 |
| | Agree | 153 | 39.6 |
| | Strongly Agree | 83 | 21.5 |
| I believe stricter enforcement of prescription-only antibiotic policies would reduce misuse | Strongly Disagree | 11 | 2.8 |
| | Disagree | 19 | 4.9 |
| | Neutral | 34 | 8.8 |
| | Agree | 168 | 43.5 |
| | Strongly Agree | 154 | 39.9 |

practices. Similarly, knowledge and awareness ($r = 0.957$, $p < 0.001$) and determinants and enabling factors ($r = 0.975$, $p < 0.001$) were highly related to attitudes and risk

perception. There was also a very high correlation between knowledge and awareness and determinants and enabling factors ($r = 0.988$, $p < 0.001$). These results suggest that

increased self-medication behaviors are highly related to greater knowledge, positive attitudes, and exposure to

enabling factors, so cognitive, behavioral, and contextual dimensions of antibiotic use are closely related.

Table 6. Correlation Analysis

| Correlations | | selfmedication_ practice | attitudes_and_ risk_perception | knowledge_ and_awareness | determinants_ and_enabling_ factors |
|---|---------------------|-----------------------------|-----------------------------------|-----------------------------|---|
| Self-medication_ practice | Pearson Correlation | 1 | .990** | .961** | .985** |
| | Sig. (2-tailed) | | .000 | .000 | .000 |
| | N | 386 | 386 | 386 | 386 |
| attitudes_and_ risk_perception | Pearson Correlation | .990** | 1 | .957** | .975** |
| | Sig. (2-tailed) | .000 | | .000 | .000 |
| | N | 386 | 386 | 386 | 386 |
| knowledge_ and_awareness | Pearson Correlation | .961** | .957** | 1 | .988** |
| | Sig. (2-tailed) | .000 | .000 | | .000 |
| | N | 386 | 386 | 386 | 386 |
| determinants_ and_enabling_ factors | Pearson Correlation | .985** | .975** | .988** | 1 |
| | Sig. (2-tailed) | .000 | .000 | .000 | |
| | N | 386 | 386 | 386 | 386 |

** . Correlation is significant at the 0.01 level (2-tailed).

Table 7 shows that the model has a firm fit, and the overall multiple correlation coefficient (R) of 0.996 indicates that the predictors perfectly fit into the model and hence the dependent variable, self-medication practice. The value of R² (0.992) suggests that attitudes and risk perception, knowledge and awareness, and determinants and enabling factors explain 99.2 % of the variation in self-medication behavior. The adjusted R², which is 0.991, substantiates the power of the model, and the fact that the standard error of the estimate is low (0.108) shows that there is insignificant variance between the observed and the predicted values. Overall, these findings indicate that the chosen cognitive, behavioral, and contextual factors have a very high level of predictability of the antibiotic self-medication practices.

Discussion

The effects of extensive self-medication with antibiotics are exhibited both on a personal level and on a global scale. Misuse of antibiotics has been proven to be

one of the major causes of AMR (Anderson, 2021). Multi-drug-resistant bacterial strains undermine the efficacy of conventional therapies, prolonging the disease, exposing the patient to more severe complications, and therefore more healthcare services (Giurazza et al., 2021).

The attitudes towards self-medication with antibiotics and risk perceptions have also been shown to sustain such practices. Various populations consider self-medication a good way to address minor diseases or typical symptoms according to their previous experience (Chukwure & USORO, 2023). Cultural norms supporting these attitudes have been born of prior successful symptom treatment with self-administered antibiotics and emphasize the power of self-reliance (Shrestha, 2023). Social and environmental determinants also influence the practices of self-medication. The recommendations of family, friendship, as well as non-medical acquaintances affect the choices of individuals (Torres et al., 2023). Social media is one of the informal sources of health information, and usually promotes antibiotic use, without verifying whether

Table 7. Regression

| Model Summary | | | | |
|--|-------|----------|-------------------|----------------------------|
| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
| 1 | .996a | .992 | .991 | .10793 |
| a. Predictors: (Constant), attitudes_and_risk_perception, knowledge_and_awareness, determinants_and_enabling_factors | | | | |

it is medically necessary (Farsi, 2021).

One study revealed that the prevalence of ASM varied from 0.65% in South America, Brazil, to 92.2% in Nigeria, sub-Saharan Africa. A total of 71 studies that were included in the analysis described antibiotic self-medication practice with a 43.0% (95% [CI]: 38.0, 48.1%) prevalence worldwide. As shown by the I² statistic, there is a high degree of heterogeneity across studies (I²=99.2%, p<0.001)(Gashaw et al., 2025). In Nigeria, some studies have stated that prevalent unsuitable health-seeking behaviours. One of the studies showed that while most (75.2%) respondents of a study pursued the attention of a doctor when ill, about 19% of them sought treatment with traditional medicine. They demanded traditional medicine either because orthodox medicines had failed to cure their symptoms or because they felt traditional medicine was cheaper (3.7%) in Sokoto (Northern Nigeria)(Adamu et al., 2018). In another study in Ibadan (Southern Nigeria), 63.1% of the respondents used formal healthcare sources, which is appropriate HSB(Latunji & Akinyemi, 2018).

According to the systematic review and meta-analysis conducted by Yeika et.al (2021), the prevalence of self-medication antibiotics in Africa was calculated to vary from 12.1% to 93.9% with a median prevalence of 55.7% (IQR 41–75%). Western Africa was the sub-region with the highest reported prevalence of 70.1% (IQR 48.3–82.1%), followed by Northern Africa with 48.1% (IQR 41.1–64.3%). The meta-analysis recognized 27 antibiotics used for self-medication from 13 different antibiotic classes. Most frequently used antibiotics were penicillins (31 studies), tetracyclines (25 studies), and fluoroquinolones (23 studies). About 41% of these antibiotics belong to the WHO Watch Group (Yeika et al., 2021). Another survey by Wegbom et.al (2021) reported a 41% prevalence rate of self-medication in the COVID-19 era, and the cause for this behaviour involved: fear of stigmatization or discrimination (79.5%), fear of being quarantined (77.3%), and fear of infection or contact with a suspected person (76.3%). The proximal reasons for self-medication were emergency illness (49.1%), delays in receiving hospital

services (28.1%), distance to the health facility (23%), and proximity of the pharmacy (21%)(Wegbom et al., 2021).

Strengths and Limitations

The study analyzes antibiotic self-medication practices, knowledge, attitudes, and enabling factors through one analytical model. The sample size is sufficient to strengthen the findings. However, the study was performed within a single suburban neighborhood, which can limit generalizability.

Conclusion

Antibiotic self-medication is common among adults in a suburban Nigerian society. Self-medication behavior is more influenced by attitudes, perception of risks, and enabling factors, including access to health services and availability of antibiotics. The results demonstrate that individual beliefs and structural conditions influence the practice of using antibiotics. By identifying key predictors of self-medication, this study contributes to a deeper understanding of behavior directing towards antibiotic misuse. It offers evidence relevant to AMR control efforts in similar settings.

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