Assessment of Public Knowledge and Attitude Towards Antibiotic Use and Antibiotic Resistance: A Community Pharmacy-Based Study

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Introduction

- The abuse and misuse of antibiotics is a significant public health concern in Nigeria and many parts of the world. It is not specific to hospital settings, but also seen in community pharmacies. This explains the trend in antibiotic resistance in Nigeria.[1]
- Lack of awareness and knowledge of antibiotic use among other factors have been reported as a major contributing factor responsible for abuse and misuse of antibiotics and subsequent antimicrobial resistance.[2,3]

Objectives

The aim of the study was to:

- Access the knowledge and attitude of the Nigerian public towards antibiotic use and antibiotic resistance.
- Identify sociodemographic predictors of antibiotic knowledge and attitude.

Conclusion

Majority of our respondents have good knowledge of antibiotic use and resistance, while there was no significant difference in attitude.

References

1. Chukwu EE, Oladele DA, Awoderu OB, Afocha EE, Lawal RG, Abdus-salam I, et al. A national survey of public awareness of antimicrobial resistance in Nigeria. Antimicrob Resist Infect Control [Internet]. 2020 Dec 20;9(1):72. Available from: https://aricjournal.biomedcentral.com/articles/10.1186/s13756-020-00739-0

2. World Health Organization- Antimicrobial resistance.pdf [Internet]. 2020. Available from: https://www.who.int/news-room/fact-sheets/detail/antimicrobial-resistance

3. Auta A, Banwat S, David S, Dangiwa D, Ogbole E, Tor-anyiin A. Antibiotic Use in some Nigerian communities: Knowledge and Attitudes of Consumers. Trop J Pharm Res [Internet]. 2014 Jan 21;12(6):1087. Available from: http://www.ajol.info/index.php/tjpr/article/view/99922

Method

- A cross-sectional questionnaire-based survey was carried out in five randomly selected community pharmacy premises in Lagos and Abuja, Nigeria.
- Lagos is the largest city in Nigeria and the most populous city in Africa with a population of over 15 million dwellers while Abuja is the capital city of Nigeria.
- Data was collected from consenting participants using a 43-item self-administered questionnaire that was adapted from previous studies, modified to suit our study's research question and validated.
- The data was analyzed using Statistical Product and Service Solutions (SPSS Version 25).
- We conducted a multiple logistic regression to determine predictors of antibiotic knowledge and attitude. Other appropriate descriptive and inferential statistics were determined with $p < 0.05$ being considered statistically significant.

Results

Table: Identification of Drugs as Antibiotics

Drugs	Not Correct n (%)	Correct n (%)	Mean±SD
Metronidazole (Flagyl)	95 (9.9)	869 (90.1)	0.90±0.29
Trimethoprim/Sulfamethoxazole (Septrin)	84 (8.7)	880 (91.3)	0.91±0.28
Levonogestrel (Postinor2)	490 (50.8)	474 (49.2)	0.49±0.50
Ampicillin/Cloxacillin (Ampiclox)	37 (3.8)	927 (96.2)	0.96±0.19
Tetracycline	33 (3.4)	931 (96.6)	0.97±0.18
Ciprofloxacin	39 (4.0)	925 (96.0)	0.96±0.19
Chlorpheniramine maleate (Piriton)	621 (64.4)	343 (35.6)	0.36±0.48

- Majority of the respondents were females (526, 54.7%) and were aged 25-34 years (358, 37.3%).
- About 621 (64%) and 490 (50%) of the participants wrongly identified Chlorpheniramine (Piriton) and Levonogestrel (Postinor-2) as antibiotics respectively.
- Over half (562, 58.3%) of the respondents posited that antibiotics should be taken immediately after unprotected sex to prevent STIs.
- The predictors of knowledge are education status and residence of respondents while education only is a predictor of attitude.

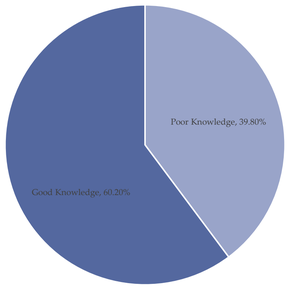

Fig 1. Bar Chart representing knowledge of respondents

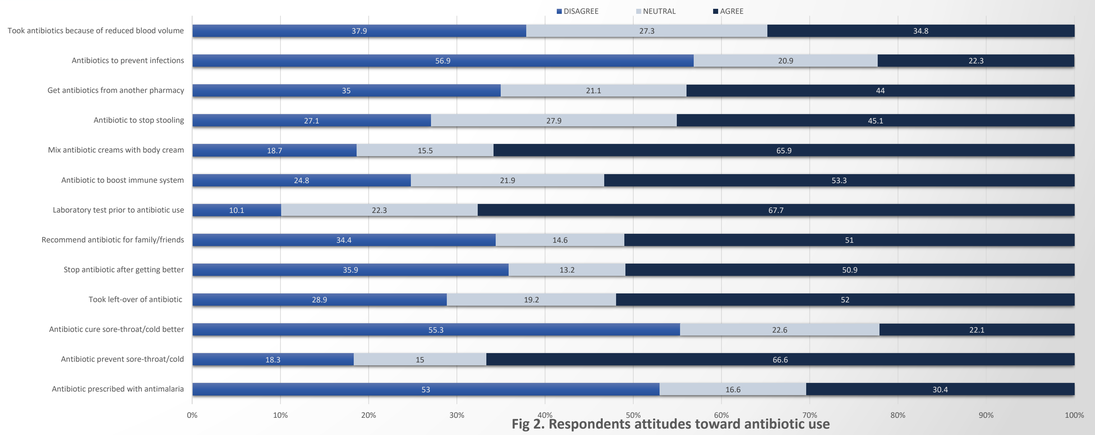

Fig 2. Respondents attitudes toward antibiotic use