Drivers of Antibiotic Self-Medication in an Urban Liberian Setting: A Cross-Sectional Study from Liberia

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Introduction

- Inappropriate antibiotic use drives antibiotic resistance, especially in low- and middle-income countries like Liberia.
- In urban areas, dense pharmacies and care-seeking habits fuel misuse, while education gaps hinder informed antibiotic use.
- This study investigated the predictive roles of urban residency and educational level in inappropriate antibiotic use within Montserrado County, Liberia.

Methods

- Cross-sectional study was conducted at 14 private retail pharmacies, selected by stratified random sampling from 7 health districts in Montserrado County.
- Exit interviews were conducted with Clients (≥18 years) from August - September 2023.
- A validated, semi-structured questionnaire was used for data collection
- Data on demograpy, availability of prescriptions, knowledge of antibiotic use and resistance were collected.
- Participant characteristics were summarized, and bivariate logistic regression tested associations with self-medication (urban residence, illiteracy), using $p < 0.05$ and 95% CI.

Results

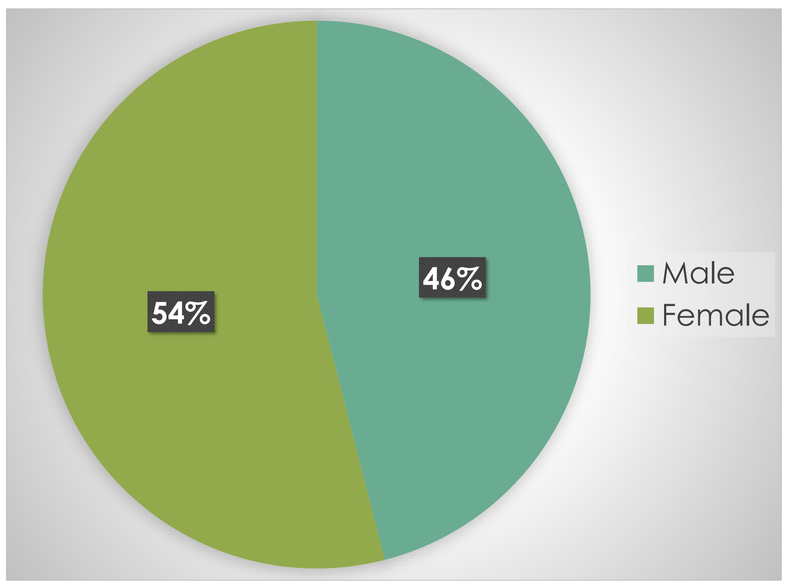

Figure 1 : Gender distribution of study participants

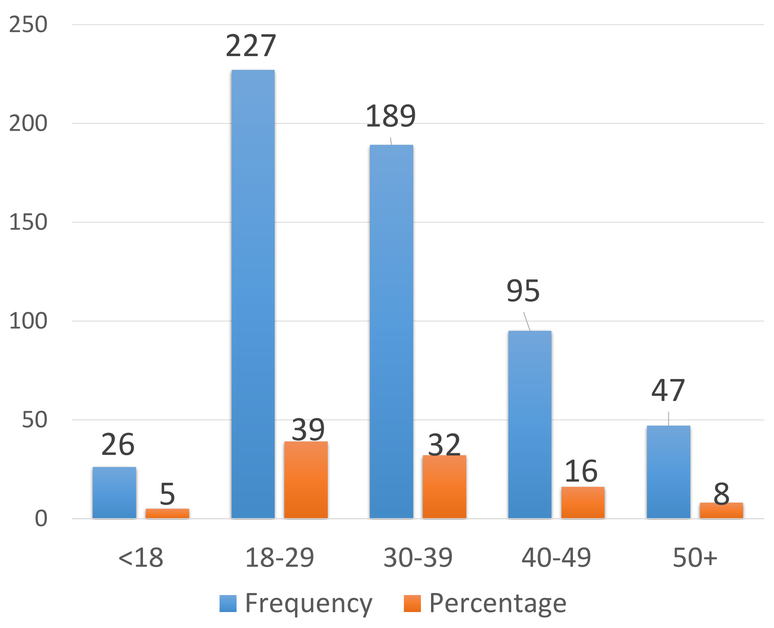

Figure 2: Age distribution of study participants

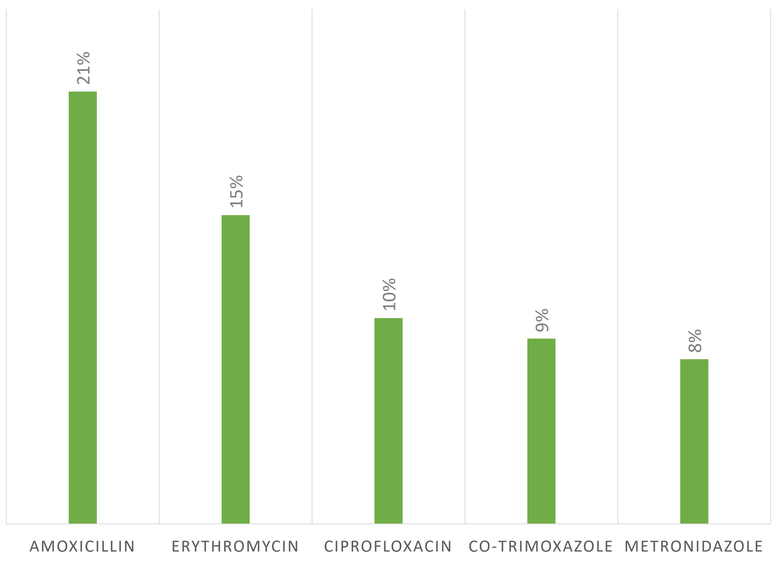

Figure 3: Categories of the Antibiotics purchased without a prescription

- Urban residents were 1.8 times more likely to self-medicate (p=0.002, 95% CI: 1.2–2.7)
- Illiterate individuals had 2.3 times higher odds of inappropriate antibiotic use (p<0.001, 95% CI: 1.6–3.4)
- At multivariate analysis, residing in an urban area was a predictor of self-medication (aOR=1.5, p=0.03).

Conclusion

- This study reveals a high prevalence of antibiotic self-medication among residents of Montserrado County.
- Urban residency and low literacy emerged as significant predictors of inappropriate antibiotic use.

Recommendations

- Strengthen urban pharmacy regulation
- Implement literacy-sensitive education campaigns
- Expand accessible primary healthcare services

References

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