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# Prevalence and determinants of self-medication with antibiotics among general population in Afghanistan

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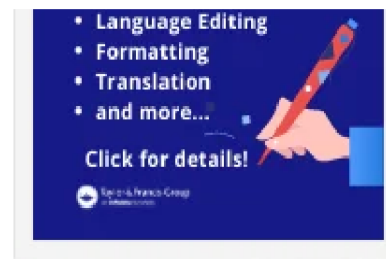
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## Abstract

# Objective

Self-medication with antibiotics (SMA) is a common cause of antibiotic resistance, a major public health problem. Designing effective interventions, by exploring prevalence and factors influencing SMA, is crucial, particularly in low and middle-income countries like Afghanistan. This research aimed to identify the prevalence of SMA and explore reasons for practicing SMA among people living in Kabul, Afghanistan.

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# Methods

A community-based cross-sectional study was conducted from May to November 2017 in 12 community pharmacies operating across Kabul, Afghanistan. We recruited 385 participants who visited these pharmacies using convenience sampling. Multivariable logistic regression was conducted to identify the factors associated with the use of SMA.

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# Results

Out of 385 participants, 282 (73.2%) practiced SMA during the last year. Overall, 241 (62.6%) were “very concerned” about the use of SMA, and 156 (40.5%) highlighted it is bad to practice SMA. The top three antibiotics used for self-medication were penicillin (ATC class: J01C), metronidazole (ATC: P01AB01), and ceftriaxone (ATC: J01DD04). Economic problems, lack of time to visit doctors, and ease of use were cited as the main reasons for practicing SMA. Furthermore, female participants were less likely to practice SMA compared to male counterparts, and participants in the age group between 25-34 years were less

likely to practice SMA compared to participants below age 25.

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## Conclusion

While efforts should be directed to enforce strict drug regulations system and awareness programs, priority should be given to provide accessible, affordable, and quality health care services to increase citizen's compliance to appropriate drug prescriptions.

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**Q Keywords:** Afghanistan antibiotics antibiotic resistance Kabul low-income count self-medication

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## Declaration of interest

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## Author contributions

RR and DB contributed equally. RR, DB and SHM designed the study, analyzed the data, wrote, and revised the manuscript. SMRH, SHM, MAA contributed to data collection and revision of the manuscript. AO, CAM, YK, MHD, TS, SQ, RS, TT, FP, AAR, SA, SM and SM reviewed and revised the manuscript. All authors approved the final version of the manuscript.

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