

LESSONS FROM A CROSS-SECTIONAL STUDY ON ANTIBIOTIC USE IN THE POPULATION OF THE REPUBLIC OF SERBIA DURING COVID-19

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Background: Antimicrobial resistance is one of the major global public health concerns. Recent studies highlighted the threats of inappropriate use of antibiotics, especially during the health crises such as COVID-19 pandemic.

Methods and Objectives: A cross-sectional study was conducted in December 2022, with a total of 1014 respondents. The sample of the general population of the Republic of Serbia was obtained through stratification and three-stage sampling. The data were processed using descriptive and inferential statistics. Pearson's chi-square test was employed to assess the significance of differences. Logistic regression models were utilized to analyze the use of antibiotics and the impact of knowledge as potential predictor of antibiotic use. Data analysis was performed using SPSS 20.0.

Results : The majority of respondents took antibiotics (76.8%) during 2022, most of them by a doctor's prescription (78.4%), with the following most common reasons: sore throat, cold, fever and cough. More than two-thirds of the respondents which were infected with the SARS-CoV-2 virus, took antibiotics, while 64.8% of them had a prescription. Less than a third of all respondents (31.3%) received some advice about the rational use of antibiotics, and half of them changed their opinion about the use of antibiotics after receiving this information. Multivariate ordinal logistic regression analysis showed that female gender (OR=0.55; $p<0.001$), a higher level of education (OR=1.44; $p=0.001$), and the willingness to change opinions regarding the usage of antibiotics after receiving information about the rational use of antibiotics (OR=1.28; $p=0.046$), were significant predictors of better knowledge about antibiotics. Employed ($B=-0.900$; $p=0.038$) and unemployed persons ($B=-0.951$; $p=0.047$) have a 60% lower chance of desirable behavior regarding antibiotics use compared to retired persons, while students ($B=-1.613$; $p=0.016$) have an 80% lower chance of desirable behavior compared to retired respondents.

Conclusions: Effective communication and education about the appropriate use of antibiotic for specific population groups could mitigate the risk of antimicrobial resistance, ensuring better preparedness for future public health crises.

Keywords: antibiotics; antimicrobial resistance; antimicrobial stewardship; COVID-19