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Correlates of Premature Mortality in Serbia

This study investigates the relationship between premature mortality and various indicators of economic and social development among municipalities of Serbia. I explore how different indicators, especially those linked to economic factors, correlate with indicators of premature mortality rates in Serbia. I conducted a comprehensive correlational analysis using vital statistics, mortality data, and data from the Social Inclusion and Poverty Reduction Unit of the Republic of Serbia and other sources. Key social and economic development indicators were selected, such as social cash benefits and air pollution indicators, such as average annual PM2.5 levels. I employed a nonparametric approach to rank correlation, ensuring robustness in the face of potential data distortions. The study primarily focused on standardized rates of potential life years lost and different aspects of avoidable mortality rates (amenable and preventable). My findings revealed surprising patterns. While there was a strong correlation between various forms of premature mortality and the indicators of socioeconomic development, no significant correlation was found between premature mortality and net wage levels in Serbia. A slight negative correlation was observed between the median age of potential life years lost and net wages. The most significant correlation was found between the standardized rate of premature mortality and the percentage of social cash benefits recipients, indicating poverty as a key predictor of premature mortality in Serbia. Additionally, the study discovered unique patterns in premature mortality due to SARS-CoV-2, revealing a negative correlation with typical mortality determinants and a positive correlation with the number of doctors per 1,000 inhabitants. This study highlights poverty as the primary predictor of premature mortality in Serbia, challenging previous assumptions that primarily linked such mortality to economic indicators like net wages. The findings suggest a critical need for a renewed strategic approach to healthcare and poverty reduction, aligning with current health and demographic realities. While the healthcare system shows comparable staffing levels to economically better-positioned countries, it falls short in terms of modern equipment, organization, and specialist availability, notably in the context of the SARS-CoV-2 pandemic. This disparity underscores the urgent need for healthcare

infrastructure and training investment, emphasizing primary and secondary prevention strategies. The study also calls attention to the complex interplay between socioeconomic factors and health outcomes, providing a nuanced understanding that can inform future public health policies and interventions in Serbia.

Keywords: Premature mortality, COVID-19, air pollution, public health