

Abstract

This study investigates how environmental regulation affects individuals' physical health, mental wellbeing, and healthcare utilization by focusing on China's landmark air pollution control policy, the 2013 Air Pollution Prevention and Control Action Plan (APPCAP). Using panel data from the China Health and Retirement Longitudinal Study (CHARLS) and exploiting geographic variations in PM_{2.5} reduction targets across prefectures, we employ a difference-in-differences design to estimate the policy's causal effects on middle-aged and elderly adults. We find that APPCAP significantly improved health outcomes: the policy reduced the probability of being diagnosed with lung diseases by approximately 14% relative to the baseline mean and improved mental wellbeing by approximately 5%, as measured by depressive symptoms. However, we find no significant effect on healthcare expenditure or utilization. We examine several channels through which environmental regulation may affect health outcomes, including reduced air pollution and enhanced environmental awareness. Our findings show that both channels contribute to the observed health improvements, with public awareness of air pollution playing an important role beyond the direct effects of pollution reduction. Notably, the health benefits of environmental regulation are particularly pronounced among males, individuals aged 60 and older, rural residents, and individuals with below-average levels of education—populations facing greater pollution exposure or fewer resources for private defensive investments. We interpret the null healthcare result in light of these heterogeneity findings: the populations experiencing the largest health gains are precisely those facing the greatest barriers to healthcare access, suggesting that improved health status may not translate into observable changes in healthcare-seeking behavior among disadvantaged groups. The findings remain robust across various model specifications, including alternative outcome measures, different standard error clustering, and placebo tests.

Keywords: Air Pollution Prevention and Control Action Plan; environmental regulation; physical health; mental wellbeing; healthcare utilization; middle-aged and elderly; difference-in-differences