Is wealthier always healthier? The impact of national income level, inequality, and poverty on public health in Latin America

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ABSTRACT

Despite findings indicating that both national income level and income inequality are each determinants of public health, few have studied how national income level, poverty and inequality interact with each other to influence public health outcomes. We analyzed the relationship between gross domestic product (GDP) per capita in purchasing power parity, extreme poverty rates, the gini coefficient for personal income and three common measures of public health: life expectancy, infant mortality rates, and tuberculosis (TB) mortality rates. Introducing poverty and inequality as modifying factors, we then assessed whether the relationship between GDP and health differed during times of increasing, decreasing, and decreasing or constant poverty and inequality. Data were taken from twenty-two Latin American countries from 1960 to 2007 from the December 2008 World Bank World Development Indicators, World Health Organization Global Tuberculosis Database 2008, and the Socio-Economic Database for Latin America and the Caribbean. Consistent with previous studies, we found increases in GDP have a sizable positive impact on population health. However, the strength of the relationship is powerfully influenced by changing levels of poverty and inequality. When poverty was increasing, greater GDP had no significant effect on life expectancy or TB mortality, and only led to a small reduction in infant mortality rates. When inequality was rising, greater GDP had only a modest effect on life expectancy and infant mortality rates, and no effect on TB mortality rates. In sharp contrast, during times of decreasing or constant poverty and inequality, there was a very strong relationship between increasing GDP and higher life expectancy and lower TB and infant mortality rates. Finally, inequality and poverty were found to exert independent, substantial effects on the relationship between national income level and health. Wealthier is indeed healthier, but how much healthier depends on how increases in wealth are distributed.