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| **Early childhood poverty trajectories and health development from birth to 8 years of age in the Taiwan Birth Cohort Study** |
| **Background/Objectives**  Poverty in early life is a major cause of health disparities. Considering both poverty status and the health development of children as dynamic processes can help us better understand how child poverty affects child health; yet the relevant research remains scare. Thus, we aimed to examine the effect of poverty trajectories during the first five years of life on general health trajectories from birth to school-age.  **Methods**  Data for the analysis came from the Taiwan Birth Cohort Study (TBCS), a nationally representative sample of 17,852 children who completed the five waves of interview surveys between 2005 and 2013 and had available data of poverty histories. Child poverty variable was measured by parental monthly income from age 6 months to 5 years old, and child’s overall health variable was reported by the mother from age 6 months to 8 years old. We first used latent class growth modelling to estimate poverty and health trajectories, then applied multinomial logistic regression to analyse the relationship between the two trajectory variables while controlling for child and maternal characteristics.  **Results**  Among 17,852 TBCS children, there were four types of poverty trajectory: persistent poverty (5.7%), move into poverty (5.9%), move out of poverty (5.5%) and never poverty (82.9%), and five types of health trajectory: persistent poor health (5.1%), poor health in infancy (9.5%), poor health in preschool age (4.8%), poor health in school age (15.1%) and always good health (65.5%). We found that poverty in early childhood had cumulative and long-term effects on children’s poor health development. Regarding cumulative effects, children in persistent poverty group were 2.3 times more likely to be in persistent poor health, and 1.69, 1.96, 1.73 times more likely to be in poor health at each particular life stage (infancy, preschool age and school age, respectively) than were those in the never poverty group. In addition, both moving into poverty (OR = 1.53, 95% CI, 1.29–1.81) and moving out of poverty (OR = 1.32, 95% CI, 1.10–1.58) had significant adverse influences on the health of children in school age, indicating the long-term effects of early childhood poverty.  **Discussion**  Our results suggest that children born in poverty, persistently growing in poverty, and moving into poverty before age five contributed greatly to inequality in health development throughout childhood.  **Keywords**  poverty trajectory, health trajectory, early life, birth cohort, Taiwan  *This work was financially supported by the Health Promotion Administration, Ministry of Health and Welfare* |