

China's Maternal Care Services System Promoting Early Childhood Development in Poor Rural Areas: Evidence from a Cross-Sectional Survey.

Tianchen WU¹, Huifeng SHI¹, Xiaona HUANG², Chunxia ZHAO², Xiaoli WANG^{1,3*}

1. Department of Maternal and Child Health, School of Public Health, Peking University, 38 Xueyuan Road, Haidian District, Beijing 100191, China
2. Section of Health and Nutrition and water, Environment and Sanitation, United Nations Children's Fund China, Beijing 100600, China
3. National Health Commission Key Laboratory of Reproductive Health, 38 Xueyuan Road, Haidian District, Beijing 100191, China

Introduction: The law on maternal and child health care came into force since 1995 in China and the Chinese government has established a three-tier maternal care system covering the whole country. This system nowadays provides a series of antenatal care services, including health care, parenting education, and psychological support for pregnancies from pre-pregnancy to childbirth and benefits maternal health in both rural and urban areas, especially in poor rural areas.

Objective: We aimed to examine the direct and indirect effects of antenatal care that contributed to early childhood development (ECD).

Method: A cross-sectional survey was conducted in poor rural areas located in Shanxi and Guizhou provinces, in 2013. We retrospectively collected how often mothers received antenatal care services during the last pregnancy, demographic information of mothers and children, nurturing care (stimulation, early learning, responsive caregiving, nutrition), and maternal depressive symptoms. Developmental delay was assessed by Age and Stage Questionnaire Chinese version. Unconditional logistic regression was used to examine the effect of antenatal care on ECD. Multivariate generalized structural equation model (GSEM) was used to analyze the structure of the causal relationship between antenatal care and ECD.

Participants: 1660 mother-child pairs were involved in our study, mothers were aged 27.0 ± 4.7 years old and children were 18.8 ± 8.4 months, 951 (57.29%) of the children were boys. 485 (29.2%) mothers never received any antenatal care services during the last pregnancy (AC1), 387 (23.3%) mothers received one to three times antenatal care (AC2), 788 (47.5%) mothers received at least four times antenatal care (AC3). The prevalence of developmental delay was 28.84%.

Results: After adjusted confounders, antenatal care during the last pregnancy could reduce the risk of child developmental delay. The OR in AC2 group was 0.61 (95%CI: 0.45-0.83) and 0.46 (95%CI: 0.35-0.61) in AC3 group. A significantly causal pathway was confirmed using GSEM: antenatal care \rightarrow nurturing care and maternal depressive symptoms \rightarrow developmental delay (relative chi-square=2.23, RMSEA=0.027, CFI=0.958).

Conclusion: Attending antenatal care would reduce the risk of developmental delay in offspring. We confirmed that contribution was due to a series of antenatal care services changed parenting behaviors, delivered nurturing care skills to mothers, and reduced risk of depressive symptoms, and then promoted ECD. The integration of early childhood development interventions with government-provided public health services is an effective way to promote ECD in developing countries.

Funding: This study was funded by the United Nations Children's Fund (0860/A0/05/502 Health & Nutrition Grant).