

Impact of non-health policies on infant mortality through the social determinants pathway

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Infant mortality is an indicator of population health and a measure of global health inequalities.¹ Despite advances in medical sciences and acknowledgement of the role of hygiene and sanitation, survival of infants continues to be a challenge worldwide. Evidence suggests that the survival of infants after the age of one month is mainly influenced by the external environment in which the infant lives,² hence, non-health policies targeting the socioeconomic environment are as important as health policies for post-neonatal mortality.³

Studies both in India and globally suggest that poverty and household income are important upstream determinants of infant mortality.^{4,5} The Government of India's Mahatma Gandhi National Rural Employment Guarantee Act targets unemployment and under-employment, and therefore poverty, by providing "at least 100 days of guaranteed paid employment every year to households whose adult members volunteer to do unskilled manual work".⁶ Improved income triggers a cascade of structural and behavioural factors such as better housing and living conditions, food security, access to clean water and proper sanitation, access to health care, infant care and feeding practices that influence the proximal risk factors of infant mortality – malnutrition, diarrhoea and acute respiratory infections. Thus, while the employment programme addresses the central issues of rural poverty, it is likely to transcend its intended goals to improve infant survival.

A review of wage-for-employment programmes in 13 countries in Africa and three countries in Asia (Bangladesh, China and India) demonstrates their positive impact on household income and food security.⁷ However, these studies do not demonstrate the impact of such programmes on actual

food consumption and nutrition of the target population, or the consequences on child health. Some studies have analysed the impact of employment programmes on infant-feeding practices⁸ and child nutrition,⁹ but none has demonstrated the composite pathways through which employment may influence child survival.

Studies in 19th-century England show higher infant mortality in households with a working mother, which they attribute to the lack of mother's time for infant care, inadequate care, early introduction of artificial feeding and poor living conditions.¹⁰ The Maternal and Infant Nutrition Intervention study in Matlab, in rural Bangladesh, showed that improved household food security is associated with inadequate feeding practices in infants aged less than six months.⁸ The authors explain this as an adverse effect of improved household food security, because increased availability of cow's milk, fruit and fruit juices resulted in early weaning of infants.⁸ This shows that employment does not act on health in isolation, but through a pathway of determinants, the direction and strength of which is greatly influenced by the role of factors such as infant-feeding practices.

In its 2010 report, the World Health Organization's Commission on Social Determinants of Health presents a conceptual framework of the determinants pathway, starting with the biological and behavioural risk factors at the proximal end (closest to the disease), followed distally by the sociocultural and economic factors and finally policies (health and social), governance and the sociopolitical context.¹¹ Further, the theories of social epidemiology, such as the social production of disease/political economy of health, and ecosocial theory of Krieger,¹² reinforce the concept that

the determinants of health are interconnected in a complex web. Non-health policies do not act on health in isolation but in a composite synergistic pathway of structural, sociocultural, behavioural and biological determinants.

Some work has been done to evaluate the impact of non-health policies on health, for example: a housing estate regeneration project in the United Kingdom of Great Britain and Northern Ireland;¹³ agriculture, food and nutrition policies in Slovenia;¹⁴ and a conditional cash transfer programme in Mexico.¹⁵ However, what is needed is a framework or model to help analyse the dynamic interactions of the causal pathways of socioeconomic, behavioural and biological determinants through which the policy impacts are transmitted, and relevant quantitative and /or qualitative research is needed to develop and test this framework.

Understanding this pathway involves studying the effect of human behaviour, household conditions, structural factors, culture and context as social determinants that act between the intervention and outcome. Such an approach towards understanding the impacts of non-health policies on health will contribute towards developing a practical proposition for the concepts of WHO's Commission on the Social Determinants of Health and the Adelaide Statement on Health in All Policies.¹⁶ It will also help to provide the evidence for the possible impact of non-health policies on health, will contribute towards identifying appropriate policy interventions and inform policy-makers. ■

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