

Women focused development intervention reduces neonatal mortality in rural Bangladesh: a study of the pathways of influence

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ABSTRACT

Background: There has been a substantial reduction in hazard of childhood death in Bangladesh over the period. The reduction is statistically similar for children aged 1-4 years, irrespective of their mothers' participation in the development program. The reduction was much greater among infants whose mothers participated in the development program. However, how the development intervention does influence neonatal survival is not known.

Objective: Study the impact of BRAC's women focused development interventions on neonatal mortality in Matlab.

Methods: A case-control study, including 117 cases (died within 28 days) and 351 controls (live children and taken from the nearest door of cases) who born during the year 1999-2000 was the main method employed. Twelve case studies of both cases and controls were done to complement the quantitative data. ICDDR, B surveillance database provided the sampling frame. The risk ratio was estimated to see how BRAC program participation reduces the risk of mortality, the stratified analysis was done to see the effects of third variables over the association, and the log regression was done to see the net effect of variables on neonatal death.

Results: Neonates of BRAC non-members were at 1.9 times increased risk (CL 1.09-3.25) of dying compared to neonates of BRAC members. This association works through two intermediate variables including antenatal care and family planning. Age of mothers and occupation of fathers acted as confounders over this association. Mothers' physical violence and psychological stress, pre-maturity and low birth-weight had respectively 2.2, 1.7, 13 and 2 times increased risk of neonatal death. However, BRAC membership did not

have any influence over these factors. When simultaneously accounting for all variables in a multivariate log regression, a dose response association was maintained for antenatal care, family planning, physical violence and pre-maturity.

Conclusion: There has been a substantial reduction of neonatal mortality among mothers who participated in BRAC intervention. For an effective reduction in the number of these deaths, program planners should think about ways to address all risk factors together rather than only antenatal care and family planning.

Acknowledgements: The financial support of the Ford Foundation and Aga Khan Foundation is acknowledged.

Key words: Neonate, Mortality, Women's development, BRAC, Bangladesh.