

Conclusions: Pregnancy remains a major health risk for the women in many developing countries. Deaths and sufferings can be prevented by timely referral to hospital. Women in Bangladesh rely very much on services provided by trained or untrained persons in their neighbourhood. Knowledge of the signs of emergency, requiring timely and adequate services, is lacking in the community. Cost of services and behaviour of hospital staff are also important issues that influence the decision-making process. These findings will help design interventions to reduce the delay between the onset of complications and the arrival at the hospital, and improve quality of care at the THC level.



Presence of a Daughter in the Family and Old-Age Survival of Mothers in Matlab, Bangladesh

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Objective: Examine if having a daughter in the household improves the survival of older women in Bangladesh.

Methods: Data for this study came from the ICDDR,B's Demographic Surveillance System (DSS) which records all vital events in Matlab, a rural area of Bangladesh. A cohort of more than 4,500 women aged 60 years and over in the 1982 DSS census of Matlab was followed up for ten years to record survival, marital status, and presence of sons and daughters in the family. The effect of these variables on survival was modelled by using discrete-time hazards regression. Independent variables, obtained from the DSS database, were included in the models as time-varying covariates.

Results: A woman with at least one son living with the family had 17% lower risk of mortality than a woman with no son present. Living with a daughter reduced the risk of mortality by about 24%. The positive effects of living with a son or daughter on old-age survival are similar for both married and widowed women. A woman who is married, household head, literate, Muslim, or who lives in the intervention area (where maternal and child health services are provided) has lower risk of mortality than a woman who is a widow, not a household head, illiterate, Hindu, or lives in the comparison area (where normal government health services are provided).

Conclusions: Previous studies have shown that Bangladeshi parents have a preference for sons, and that a widow living with her adult son has better survival chances. Research has also shown that parents desire at least one daughter. Our findings that women living with daughters have a higher survival probability provide a justification of parents' preference for having at least one daughter. Since preference for a son has a negative effect on contraceptive use, the family planning programme could use our findings to show parents that a daughter can provide the same old-age security as a son can. This may reduce preference for sons and thereby enhance the pace of fertility decline.



Prevention of Diarrhoea in Rural Bangladesh: Evaluation of an Intervention for Hygiene Behaviour Change

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Objective: Evaluate the SAFE Pilot Project, an intervention to change hygiene behaviour implemented by CARE Bangladesh.

Methods: This intervention took place in rural Chittagong, southeastern Bangladesh. Priorities and interventions were developed for hygiene behaviour change based on initial quantitative and qualitative studies. Two models of

participatory extension were compared: Model 1 represented a "limited model" working through community meetings organized by tubewell caretakers; and Model 2 represented an "expanded model" working through caretaker groups plus school programmes, child to child activities, and key community persons. The baseline and final surveys took place in May 1993 and May 1994 respectively. Baseline and final cross-sectional survey data were compared in the two intervention areas and two contiguous control areas. Subjects for this analysis were from 720 households in 120 tubewell-user areas (180 households in each of the 4 study areas), respondents (mothers), and other family members as reported by the respondents. The main outcome measures were observed, demonstrated, and reported hygiene behaviours of the respondent and other family members. Reported two-week and 24-hour diarrhoea prevalence rates in children of less than 5 years were also used.

Results: The baseline survey of the four study areas showed that there was initially no significant difference between the intervention and the control areas. Access to hygienic latrines and latrine use was poor, knowledge of the causes of diarrhoea and of prevention was low, and hand-washing behaviour was poor. Environmental contamination with faeces and diarrhoea rates in children of less than 5 years were high. The final survey, after nine months of SAFE intervention, showed dramatic effects of the SAFE Pilot Project in the intervention areas on the improvement in latrine use, water use, hand-washing behaviour, and environmental sanitation. There was little change in the control areas. Two-week and 24-hour diarrhoea prevalence rates in children below 5 years of age decreased by almost two-thirds in the intervention areas compared to the control areas.

Conclusions: These results show that the SAFE approach to hygiene behaviour change can have significant beneficial effects on knowledge and behaviour, as well as on risk of diarrhoea in children. Where prevention of diarrhoea is the concern, programmes and policies should focus on the identification of locally important risk behaviours and locally developed, and locally appropriate, interventions, rather than general messages and hardware targets.

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Factors Influencing Birth Weight in a Rural Community of Bangladesh

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Objective: Describe the characteristics of birth weights of children in rural Bangladesh.

Methods: A cohort of newborn children with respiratory infections and diarrhoea was studied. A census was conducted in 10 villages of Mirzapur, and over 2,200 prospective mothers were listed. Pregnant women were identified and followed up by a female health worker. Women were encouraged to have an antenatal check-up and hospital deliveries. Home deliveries were reported either by the traditional birth attendant or family members. A group of 288 children was enrolled at birth. Birth weights were measured with a Salter scale and recorded from 280 newborns. Most weights (71%) were recorded within 36 hours of birth.

Results: Forty-one percent of the newborns had weight below 2.5 kg. Weights taken at different intervals after birth varied. The mean weight was 2.84 kg (\pm SD 0.50) for those taken in less than 1 hour of birth. Averages of those recorded within 1-24 hour(s) were: 2.47 kg (\pm SD 0.44), and 2.31 kg (\pm SD 0.41) for the time interval between 24 and 36 hours. There was a significant difference ($p < 0.04$) in the mean weights between male (2.6 kg \pm SD 0.5) and female infants (2.4 kg \pm SD 0.5). A highly significant difference ($p < 0.003$) was also observed in respect of birth weights of children and years of schooling of mothers. The average birth weight of infants whose mothers had 6 or more years of schooling was higher (mean 2.83 kg \pm SD 0.5) than those with 5 or less years of schooling (mean 2.48 kg \pm SD 0.5). The difference in the birth weights of infants of mothers with no schooling compared to those with less than 5 years of schooling was not significant. Infants born before full term had significantly ($p < 0.001$) lower birth weights than those born at full term.

Conclusions: In underprivileged communities, many children are born with low birth weights. Except births in hospitals, however, very few studies describing birth weight in Bangladesh have been carried out. Findings of this