

A MULTILEVEL ANALYSIS OF DETERMINANTS OF INFANT
MORTALITY IN RURAL NORTHEASTERN THAILAND

by

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ABSTRACT

A MULTILEVEL ANALYSIS OF DETERMINANTS OF INFANT MORTALITY
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The study of "A Multilevel Analysis of Determinants of Infant Mortality in Rural Northeastern Thailand" utilized field survey data conducted from January 1986 to March 1986. Married women aged 15 to 49 years with experience of at least one live birth were randomly interviewed in depth. Only live births during the period January 1, 1980 to December 31, 1984 were analysed. For a better understanding of the infant mortality situation in Thailand, the author begins with the estimate of regional probability of dying between live birth and selected age by applying the indirect technique developed by Brass, Trussell and Feeney. The data for indirect estimation are from the final revised estimates of population of the 1980 Census conducted by the National Statistical Office, Office of the Prime Minister.

In the multivariate analysis, each group of influencing factors was investigated for its effect on neonatal, postneonatal and infant mortality. There are four groups of factors, biological, socioeconomic, demographic, and maternal health behaviour and child care. Biological factors can explain much for neonatal mortality, while maternal health behaviour and child care seems to have a great effect on postneonatal and infant mortality. A micro model of neonatal, postneonatal and infant mortality is determined. Previous pregnancy loss, previous use of contraceptive practice, allocation of time to child care, women's power, sanitation and domestic environment, first and fourth birth order and higher, prenatal care and maternal age from 15 years and over, are all determinants of neonatal mortality. For postneonatal mortality analysis, previous pregnancy loss, health utilization, sanitation and domestic environment, second birth order, immunization and length of breast feeding of at least three months are found to be determining factors. Factors determining infant mortality in the micro model are previous pregnancy loss, health utilization, women's power, sanitation and domestic environment, birth spacing, second birth order and higher, immunization, prenatal care, length of breast feeding of at least three months, and maternal age at 40 years and over. The salient community level factors, that is, those which are statistically significant (at least at the .05 level in the multilevel models) are summarized. In neonatal mortality analysis, availability of a motorable road, village size, the interaction between education of mother and accessibility to health services and the interaction

between primary health care development and availability of a motorable road are influencing factors. At the village-level, availability of a motorable road, availability of electricity, village size and village health technology are the factors affecting postneonatal mortality. The results also indicate that the salient community-level factors determining infant mortality in rural northeastern Thailand are availability of electricity, village size, availability of village school and village health technology. Considering the determinants of neonatal, postneonatal and infant mortality, it is interesting that the maternal and child health programme still has an important role and should be set to have the first priority in the health development programme in an attempt to reduce infant mortality as a policy implication. Reducing differences in inequity in community development, such as providing community facilities and health services, will also help to create equity in development, and will eventually result in the decline of infant mortality in the northeast region.

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