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Determinants of Infant Mortality in Kersa District, Eastern Ethiopia: A Case Control Study

Abstract

Background: Infant and child mortality rates have long been used as indicators of the level of socio-economic development of a country. Various studies have been conducted to show the factors affecting infant and child mortality in both developed and developing countries. These factors are socio-demographic, socio-economic and environmental with examples including ethnicity, levels of education of the mother and father, housing conditions, crowding, the availability of latrines and early termination of breastfeeding.

Objective:

To assess the determinants of infant mortality in Kersa District, Oromia Region, eastern Ethiopia from January, 2010 to May, 2011.

Methods

A case control study was conducted among 200 cases and 800 controls. Cases were defined as all deaths within the first year of life. As controls, there were four selected children born within one week of a deceased baby who was of the same gender, living in the same residence area that did not die within their first year of life. Socio-demographic, socio-economic and environmental factors were assessed for all live births in the 2007-2010 period. Completed live-birth registrations of babies with those mothers who lived in the

Results

Eighty-five (42.5%) of the cases were female and 115 (57.5%) were male. All deaths 200 (100%) were registered among Muslims. They were Oromo by ethnicity 198 (99%) and the majority was married 176 (88%). Gestational age of less than 37 weeks, illiteracy among mothers, seeking health care outside of a health care facility, a monthly income of less than ETB500, an unprotected source of water, unsanitary waste disposal, mother's age of less than 20 years at current delivery, and limited spacing between the mother's previous child were found to be predictors of infant mortality after controlling for possible confounders.

Conclusions and Recommendations

Many predictors of infant mortality were identified. The illiteracy of the mothers, early age of delivery, and unsanitary waste disposal were strongly associated with infant mortality among others. Improved maternal and child education of pregnant women and mothers is needed. Women need to be encouraged to delay marriage and pregnancy. Spacing of children should be encouraged. Birth control methods should be provided on request to women. Improved environmental sanitation, a safe water supply, and better service availability for reproductive health are recommended. Finally, delivery in a health facility by a qualified healthcare provider to improve the infant mortality rate is recommended.