ABSTRACT

Background: This study examines the socioeconomic and biodemographic determinants of infant, neonatal and post neonatal mortality in Egypt. It also tries to reach better understanding on the relative importance of these factors. **Methods**: Population-based cross-sectional secondary data analysis of the 2005 Egypt Demographic and Health Survey (EDHS). Cox's proportional hazard models have been fitted to select the significant determinants of infant and post neonatal mortality, while logistic regression models were adopted for the neonatal period. **Results**: 13,851 live births were analyzed with 463 deaths before the first birthday; the total follow up time is 144,835 baby-months, giving an IMR of 32 per 10,000 baby-months. After adjusting for all socioeconomic and biodemographic factors, the analyses reveal strong association between infant mortality and biodemographic factors, while the only significant socioeconomic determinant is the mother's education. Also it has been shown that mother's education, child's sex and place of delivery are time dependent covariates. Analyses of neonatal period indicate no association with any socioeconomic factor, while child's sex and place of delivery are significant predictors. Exclusion of neonatal deaths shows that the risk of post neonatal mortality is inversely related to mother's education, and not determined by sex of the child nor place of delivery. The risk of infant, neonatal and post neonatal death is consistently related to birth interval and birth size. **Conclusions**: Biodemographic characteristics represent the most substantial impacts on infant mortality. The only significant socioeconomic predictor (maternal education) has a modest impact, at best, on infant mortality, which appears at later stages of infancy period (namely post neonatal period); since the later proved to be a time varying covariate. Unlike neonatal period, analysis indicates lack of association between post neonatal mortality and child's sex contradicting the biological knowledge, and supporting the hypothesis of gender discrimination and male sex preference.