The effect of socio-demographic, socio-economic and environmental factors on under-five mortality in South Africa: analysis of the 1998 South African Demographic Health Survey dataset

By

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ABSTRACT

This study is based on secondary data analysis of the 1998 South African Demographic and Health Survey (SADHS) data set. The aim of the study was to identify socio-demographic, socio-economic and environmental variables that affect the survival of South African children under the age of five years.

Descriptive analyses, frequency tables, Pearson’s chi-square tests of association and binary logistic regression analysis were used for data analysis in this study. Mothers who lost an under-five child were predominantly Black and rural. Such mothers were characterized by rural residential areas, relatively large family sizes, relatively poorer socioeconomic status, relatively poorer access to basic health services, relatively more child deliveries at home, and low level of education.

The study showed that 269 of the 5,066 children in the study died before celebrating their fifth birthday (5.31%). At the 5% level of significance, the survival of under-five children is significantly influenced by 2 of the 11 predictor variables found to be significantly associated in the univariate analysis and therefore included in the logistic regression analysis. These 2 predictor variables were: place of delivery of child [OR=0.97; P=0.000; CI = (0.96, 0.98)], and use of modern contraceptives by the mother [OR=0.73; P=0.002; CI = (0.59, 0.89)]. The study found that not using modern contraceptives gives a lower chance on death of a child under 5 as well as delivering at home, in the absence of a trained birth attendant. These findings are unexpected and contrary to what was found in the univariate analysis. No real explanation can be given for these findings and it would be interesting to see if the same results are found with more recent data. In order for the South African National Department of Health to fulfil its United Nations Millennium Development Goals, rural mothers and their under-five children must be provided with improved health as well as socioeconomic services.

Key words: Survival, under-five mortality, socio-demographic characteristics, logistic regression, odds ratio.