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INTRODUCTION

Neonatal mortality and morbidity are global challenges; identification of individual and community determinants associated with it is important for targeted interventions. However in most low and middle income countries (LMICs) including Ghana, these problems have not been adequately investigated as the impact of contextual factors remains undetermined despite their significant influence on under-five mortality and morbidity.



METHODS

About 6,900 women, aged 15 – 49 years, living within 412 communities in Ghana were analyzed using the combined datasets of the 2003 and 2008 Ghana Demographic and Health Survey. Two studies were conducted

Study 1: Aims to identify individual (maternal, paternal, neonatal, antenatal, delivery and postnatal) and community (socioeconomic disadvantage communities) determinants associated with neonatal mortality.

Study 2: Aims to determine contextual risk factors (poverty, unemployment, residence, safe water supply) for low birth weight (LBW) in Ghana.

KEY FINDINGS

The following findings were observed:

1. Both individual and community characteristics were associated with neonatal mortality.

2. Infants of multiple-gestation [OR 5.30; P-value < 0.001; 95% CI 2.81 – 10.00], neonates with inadequate birth spacing [OR 3.47; P-value < 0.01; 95% CI 1.60 – 7.57] and low birth weight [OR 2.01; P-value < 0.01; 95% CI 1.23 – 3.30] had a lower chance of surviving the neonatal period.
3. Infants of grand multiparous mothers [OR 2.59; P-value < 0.05; 95% CI 1.03 – 6.49] and non-breastfed infants [OR 142.31; P-value < 0.001; 95% CI 80.19 – 252.54] were more likely to die during neonatal life.
4. Adequate utilization of antenatal, delivery and postnatal health services [OR 0.25; P-value < 0.001; 95% CI 0.13 – 0.46] reduced the likelihood of neonatal mortality..

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5. Dwelling in a neighbourhood with high socioeconomic deprivation was observed to increase neonatal mortality [OR 3.38; P-value < 0.01; 95% CI 1.42 – 8.04].
6. Some contextual-level factors were significantly associated with LBW
7. Being a rural dweller increased the likelihood of having a LBW infant by 43% (OR 1.43; 95% CI 1.01–2.01; P-value < 0.05)
8. Living in poverty-concentrated communities increased the risk of having a LBW infant twofold (OR 2.16; 95% CI 1.29–3.61; P-value < 0.01).
9. In neighbourhoods with a high coverage of safe water supply, the odds of having a LBW infant reduced by 28% (OR 0.74; 95% CI 0.57–0.96; P-value < 0.05).

This will improve early detection and management of high risk pregnancy such as multiple pregnancy

3. Pregnant women should be encouraged to utilize antenatal, skilled delivery and postnatal care by removing all the barriers militating against maternal healthcare utilization.
4. Exclusive breastfeeding program should be strengthened to improve neonatal survival.
5. There is a need to implement appropriate interventions that will reduce the occurrence of LBW infant. Also, the management of LBW infant should be improved.
6. Population-level challenges such as poverty, illiteracy, unemployment, rural residence and lack of safe water coverage need to be addressed comprehensively

IMPLICATIONS AND RECOMMENDATIONS

1. Family planning program should be strengthened in terms of quality, coverage and contents to address the issue of inadequate birth spacing, and birth control.
2. Pregnant women should be mobilized to commence antenatal clinic early in pregnancy.



Kayode GA, Ansah E, Agyepong IA, Amoakoh-Coleman M, Grobbee DE, Klipstein-Grobusch K. Individual and community determinants of neonatal mortality in Ghana: a multilevel analysis. *BMC pregnancy and childbirth* 2014;14:165

Kayode GA, Amoakoh-Coleman M, Agyepong IA, Ansah E, Grobbee DE, Klipstein-Grobusch K. Contextual risk factors for low birthweight: a multilevel analysis. *PloS one* 2014;9(10):e109333

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