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### Original Article

#### Neonatal Mortality Risk Factors in a Rural Part of Iran: A Nested Case-Control Study

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#### Abstract:

**Background:** Due to complex causal framework of neonatal mortality, improvement of this health indicator is quite gradual and it's decreasing trend is not as great as other health indicators such as infant and under 5 mortality rates. This study was conducted to evaluate neonatal mortality risk factors based on nested case-control design.

**Methods:** The study population was 6900 neonates who were born in rural areas of Kohgiluyeh and Boyerahmad province (South of Iran). They were under follow up till the end of neonatal period and the outcome of interest was neonatal death. By using risk set sampling method, 97 cases and 97 controls were selected in study cohort.

**Results:** Prematurity (OR= 5.57), LBW (OR= 7.68), C-section (OR= 7.27), birth rank more than 3 (OR=6.95) and birth spacing less than 24 months (OR= 4.65) showed significant statistical association ( $P < 0.05$ ) with neonatal mortality. The Population Attributable Fraction (PAF) was 0.45 for LBW, 0.40 for prematurity, 0.28 for C-section, 0.30 for birth rank more than 3, and 0.16 for birth spacing less than 24 months.

**Conclusion:** Prematurity, low birth weight, C-section, birth spacing less than 24 months and birth rank more than 3 are important risk factors for neonatal mortality.

#### Keywords:

*Neonatal mortality . Nested case-control study . Risk factors . Iran*

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