

PATH ANALYSIS ON THE DETERMINANTS OF NEONATAL ASPHYXIA AT DR. SAIFUL ANWAR HOSPITAL, MALANG

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ABSTRACT

Background: Neonatal asphyxia is one of the main causes of neonatal mortality. Many factors may have caused neonatal mortality. This study aimed to investigate the determinants of neonatal asphyxia at Dr. Saiful Anwar Hospital, Malang.

Subjects and Method: This was an observational analytic study with case control design. The study was conducted at Dr. Saiful Anwar, Malang, East Java, in June 2016. A total of 53 newborn babies with asphyxia (cases) and 159 newborn babies without asphyxia (controls) were selected by fixed disease sampling for this study. There were three exogenous variables: prematurity, maternal age, and parity. The endogenous variables were birthweight and neonatal asphyxia. The data were collected by a checklist. The data were analyzed by path analysis model.

Results: Low birthweight had positive direct effect on the risk of neonatal asphyxia ($b = 1.61$; 95% CI = 0.86 to 2.37; $p < 0.001$). Prematurity ($b = 0.93$; 95% CI = 0.13 to 1.74; $p < 0.023$), maternal ages < 20 or ≥ 35 years ($b = 0.97$; 95% CI = 0.05 to 1.87; $p < 0.034$), and parity primipara or ≥ 4 parity ($b = 1.00$; 95% CI = 0.155 to 1.85; $p < 0.021$), had positive indirect effects on the risk of neonatal asphyxia via low birthweight.

Conclusion: Low birthweight had positive direct effect on the risk of neonatal asphyxia. Prematurity, maternal ages < 20 years or ≥ 35 years, and parity primipara or ≥ 4 parity, had positive indirect effects on the risk of neonatal asphyxia via low birthweight.

Keywords: neonatal asphyxia, low birth weight, prematurity, maternal age, parity

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