

ABSTRACT

Background: Low birth weight (LBW) is a birth weight of infant of 2499 gram or less, regardless of gestational age. Data from Report on Result of National Basic Health Research 2013 indicated that 11.3% of infants are born underweight in East Java. Risk factors of LBW are influenced by some characteristics, one of the risk factors is environmental factor such as smoke exposure. Passive smoking of pregnant women is woman who exposure of smoke during pregnancy. Data from 2013 indicated that 36% of Indonesian population were an active smoker. This research aims to study the relationship between passive smoker of pregnant women with LBW in Wonokusumo Health Center. **Methods:** This study is an observational analytic research with case control design, which as low birth weight as a case and normal birth weight as a control. Study sample was 68, consisting of 34 cases and 34 control. The dependent variable is low birth weight, while the independent variable is passive smoking of pregnant women. To determine a significant level, the data collected will be tested with the statistical test Chi-square at significance level $\alpha = 0.05$. **Results:** The results showed that a majority (61.5%) of passive smoker of pregnant women are cases. After Chi Square test obtained by value $p = 0.027$ ($p \leq 0,05$) and OR analysis obtained by 3.04(CI 95% 1.117 – 8.274), which means there is a relationship between passive smoker of pregnant women with LBW. **Conclusion:** There is a relationship between passive smoker of pregnant women with LBW in Wonokusumo Health Center.

Keywords: low birth weight, passive smoking, pregnant woman