

### Abstract

Premature birth can be caused by various factors such as maternal factors, fetal factors, and environmental factors. Maternal factors are component that come from pregnant women such as maternal age, parity, infection, antepartum bleeding, and others. Fetal factors can be Gemelli, namely pregnancy with two or more fetuses. The aim of this research was to determine the description and factors associated with preterm birth, especially in Dr. Soetomo in 2018. This research method is observational analytic with case-control study design. The population in this study was all women who gave birth from January to December 2018 at Dr. Soetomo. The total sample in this research was 130 respondents, where the number of case and control groups was the same, namely 65 respondents respectively. Sampling in this study using a non-probability sampling method with a total sampling technique. The independent variables in this study were maternal age, parity, Gemelli, antepartum hemorrhage, preeclampsia, and premature rupture of membranes. The dependent variable is preterm labor. Data taken from patient medical records.

The results showed that premature rupture of membranes, antepartum hemorrhage, and preeclampsia were the most significant factors with the same p-value of 0.000. The highest OR was obtained in the risk factors for preeclampsia with a value of 48.432 (CI 6,327 - 370,733). Gemelli risk factors were found (p-value 0.005). Meanwhile, maternal age and parity did not express a significant relationship with preterm birth.

So it can be concluded, there is a relationship between Gemelli, antepartum hemorrhage, preeclampsia, and premature rupture of membranes with preterm birth.

**Keywords:** *Premature birth, risk factor, age, gemelli, parity, antepartum haemorrhage, preeclampsia, premature rupture of membranes*