

## ABSTRACT

**Background:** Blood sugar level is one of the factors that affect the birth weight of the baby that determines neonatal morbidity and mortality. Pregnancy is a "diabetogenic" condition characterized by postprandial hyperglycemia, fasting hypoglycemia and insulin resistance. Approximately 2-4% of pregnant women are unable to compensate for this situation.

**Objective of the Study:** This study wants to determine the correlation between normal and high blood sugar levels of pregnant women and the weight of babies born in RS PKU Muhammadiyah Gamping.

**Methodology:** This study uses Pearson chi square. In addition the crosstab analysis method in the form of tables which displays contingency table used to identify and know the random sample of 70 patients who gave birth in RS PKU Muhammadiyah Gamping and whether there is a correlation between blood sugar levels with birth weight. High blood sugar levels were determined with GDS values of  $\geq 140$  mg/dl and normal blood sugar levels with GDS values of 70 mg/dl–139 mg/dl.

**Result:** The low birth weight prevalence of 5.7% was born to mothers who had normal blood sugar levels and 14.3% were born to mothers who had high blood sugar levels. So that blood sugar levels of pregnant women affect the birth weight of the baby (OR=3.552; 95% CI: 1.005 -12.552). There are other independent variables that influence to birth weight, for example mother education (OR=7.440; 95% CI: 1.552 – 36.373).

**Conclusion:** It can be concluded that the higher the blood sugar level of pregnant women the higher the weight of the baby is born. So there is a significant correlation between normal and high blood sugar levels of pregnant women and the weight of babies born in RS PKU Muhammadiyah Gamping.

**Keywords:** pregnancy, maternal and neonatal outcomes, birth weight, blood sugar levels