

## DETERMINANTS OF TYPE OF DELIVERY IN SRI LANKA: A LOGISTIC REGRESSION APPROACH

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The intention of this study is to examine the factors which influence the delivery type in new-born infants. The two delivery types of vaginal and cesarean have been studied with maternal factors of Ethnicity, Age, Number of Pregnancies and number of babies and with the factors Gender, Weight, Head Circumference, Height and Shoulder Length of infants. Logistic regression model was administered in this study to diagnose the determining variables in predicting the type of delivery of babies recorded in the General Hospital Ampara. This study was conducted based on the medical records available over a period from January 2015 to December 2015 by analysing 1400 babies from the mentioned metropolis. Mandatory data analysis was done using Minitab 18, SPSS 16 and Excel software. Grounded on this study it was originated that the association of the maternal age, delivery time, infant's weight and infant's shoulder length were statistically significant at 5% significance level for the type of delivery. The logistic model was obtained by getting delivery type as the dependent variable and the model was in better fit with Hosmer and Lemeshow Test. Controlling for the other variables, weight is negatively related to the log odds of having a cesarean delivery. Specifically, for every additional pound of infant's weight the log odds of having a cesarean delivery decreases by .017. Controlling for the other variables, increase of one day of delivery time decreases the delivery type of cesarean by 0.035, when the maternal age increases the log odds of having a cesarean delivery increases by 0.083. Study outcomes suggest that there is a vital necessity to improve health literacy of women on various characteristics of pregnancy and preparation of delivery to identify and manage high risk pregnancies.

**Keywords:** *Vaginal Delivery, Cesarean Delivery, Logistic Regression, Pregnancy, Minitab 18.*