

Estimation of weight of infants at birth based on the mother's pre-natal information.

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Abstract

Background: Risk factors in mothers that may contribute to low birth weights or overweight of babies at birth are nutritional (uterine malnutrition produced due to alteration in placental circulation), heart diseases, hypertension, drug addiction, alcohol abuse, and social economic factors. during pregnancy period mothers visits hospital for pre-natal check-ups and information are collected during this period. However, this information is never utilized in making decision in advance towards the weight of the baby expected at birth. The purpose of this study WAS to develop an inverse regression model that predicts the weight of the baby in advance based on the mother's pre-natal information. The parameters of the model were estimated by ordinary least square (ols) method, hence the regression model formulated. The model was applied on secondary data collected from Kakamega county referral hospital. Based on the mother's information collected from the hospital, the baby's weight can be predicted in advance with small error before delivery. Hence, the estimated or predicted weights of the unborn baby will assist the health care practitioner to categorize the baby into low birth weight, normal weight, or overweight. This information will help hospital management and other policy makers (such as ministry of health) to provide a range of available medical, nutritional, and educational interventions.

Keywords: *estimation; weight; pre-natal information; regression*