

Original Article JOGCR. 2023; 8(4): 374-381

[Journal of Obstetrics, Gynecology and Cancer Research | ISSN: 2476-5848](#)

The Effect of Mothers' Hemoglobin Concentration During Pregnancy on the Weight and Height of Babies

Abstract

Background and Objectives:

Low and high hemoglobin concentration is one of the main concerns of women during pregnancy due to its high prevalence and adverse effects. The present study aimed to examine the correlation between maternal hemoglobin concentration and the baby's birth weight and height in 326 pregnant women referred to the Alwiyah hospital for obstetrics and gynecology in Baghdad, Iraq, in 2019.

Materials and Methods:

In the current descriptive-analytical study, pregnant women were classified into two groups: anemia and normal; four groups of moderate to severe anemia, mild, regular, and high hemoglobin; and eight groups with intervals of 12 g/L from severe anemia to high hemoglobin. This study's variables included infants' age, number of children, education level, socioeconomic status, weight, and height. The data was analyzed using SPSS version 19, descriptive statistics, t-test, and logistic regression. In this study, the level of statistical significance was deemed to be 0.001.

Results:

The results showed that the probability of low birth weight and abnormal height increases 4.96 times and 4.13 times, respectively, in mothers with high hemoglobin concentrations versus mothers with low hemoglobin concentrations; these ratios are statistically significant ($P < 0.001$). Also, hemoglobin concentrations ranging from 104 to 115 g/L have the lowest probability. Furthermore, hemoglobin concentrations greater than 125 g/L are statistically significant ($P < 0.001$).

Conclusion:

The current study revealed that high maternal hemoglobin concentrations during pregnancy could significantly impact the baby's weight and height