

# Cross-sectional Maasai Primigravidae Dietary Habit and Pregnancy Outcome Study Loitokitok, Kenya

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## ABSTRACT

The overall aim of this prospective study was to describe the dietary habits of Maasai pregnant women in relation to pregnancy and birth weight. The dietary habits of N = 451 Maasai pregnant women, n = 301 multi para and n = 125 Primigravidae (first pregnancy) were investigated over a period of 30 months between January 1993 and June 1995 in Kajiado District in the Republic of Kenya. The pregnant women initially joined at least during the fourth month of pregnancy and were followed until within 24 hours of delivery. Their food intake and weight were monitored and recorded monthly and their socioeconomic profiles as well as with height and weight were noted at the time of joining the study.

The study concluded that both food avoidance and induced vomiting played a significant role in the reduction of mothers' weight and foetus birth weight among the Primigravidae at the ninth month pregnancy. Although at the time the subjects joined the study, the weight differences between Primigravidae and multi para were trivial, never the less, by the ninth month, multi para had a mean weight of 55.39 kg, as compared to the Primigravidae mean weight of 50.66 kg, showing in a significant weight gain among the multi para at childbirth:  $p = 0.028$ .

Babies born to the multi para weighed on average 2.9 (SD 0.6) kg compared to those of Primigravidae who weighed 2.6 (SD 0.6) kg ( $p < 0.001$ ). Significantly more Primigravidae (71.4 %) than multi para (48.5 %) had induced vomiting at the ninth of month pregnancy ( $p = 0.001$ ). There was some evidence suggesting that more Primigravidae than multi para had protein restricted diet during lunch ( $p = 0.051$ ) and supper ( $p = 0.068$ ) at the ninth month of pregnancy. Nearly half of Primigravidae (47.5 %) were influenced on food intakes by their mothers-in-laws. Multi para during their previous pregnancy had avoided fresh milk (45.3 %) because it would make the baby too big for a safe delivery, unslaughtered meat (46.0 %) because it would cause diseases to both the mother and unborn baby, and young animal meat (34.3%) for unspecified traditional or cultural reasons. After adjusting for husbands' education, induced vomiting among multi para at the ninth month of pregnancy was associated with birth weight (adjusted mean baby weight difference was 0.18 with a standard error of 0.09,  $p < 0.05$ ). Among Primigravidae, restricted protein diet at supper at the ninth month of pregnancy was associated with baby weight (adjusted mean baby weight difference was 0.84 with a standard error of 0.21,  $p < 0.001$ ).

The study concluded that both food avoidance and induced vomiting played a significant role in reduction of weight among the Primigravidae.

This study suggests the need for a further research to assess the impact of cultural practices on the dietary habits of Maasai pregnant women and birth weight, which may or may not require subsequent intervention. A case control study has to be carried out to investigate an association between diet, pregnancy and birth weight. In addition to this, there should be a follow up of the children born to these women to their fifth birth day along with the children born to the control groups, to determine dietary impact on mother's and birth weight and growth and development of children, which is beyond the scope of this study.