ADEQUACY OF NUTRIENT INTAKE, PREVALENCE OF ANAEMIA AMONG PREGNANT ADOLESCENT GIRLS ATTENDING ANTENATAL CLINIC IN TWO HEALTH FACILITIES IN BUNGOMA SOUTH DISTRICT WESTERN KENYA

BY

EVELYN SHIPALA MULUNJI

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ABSTRACT

Background: Adolescent pregnancy associated with significant nutritional, medical, economic and socials risks is a major public health issue globally both to the mother and infant. The increased nutritional demands for adolescent growth coupled with chronic protein energy malnutrition and micronutrient deficiencies, and often early childbearing prevents many adolescent girls from fully realizing their growth potential.

An adequate supply of nutrients is required to maintain the delicate balance between the needs of the mother and those of the foetus. Inadequate supply will result in a state of biological competition between the mother and the foetus in which the well- being of both is at serious risk.

Objective: The aim of this study was to determine adequacy of nutrient intake, prevalence of anaemia among pregnant adolescent girls.

Study design: Cross sectional study

Study **site:** Maternal Child Health Clinic of Bungoma District Hospital and Bumula Health Centre

Methods: 384 Adolescent pregnant girls aged 10- 19 years were consecutively recruited for the study. Nutrient intake levels were determined by a Standardized interviewer administered food frequency questionnaire. Blood samples were used to estimate haemoglobin levels and test for malaria parasites. Stool samples were tested for the presence of hookworms.

Data analyses: The data was analysed using SPSS V.12.01. A nutrient calculator was used to determine the daily nutrient intake. One sample t-test was used to compare the nutrient intake and the RDA. Chi-square test of association was used to determine the factors associated with food intake and anaemia. p-value less than 0.05 was considered statistically significant.

Results: The nutrient intake of folate (55.2%), Vitamin C (56.8%), Iron (68.5%), Proteins (73.2%), Energy (75.3%) and Calcium (96.1%) were below the RDA ($P< 0.001$). The prevalence of anaemia was 61%. Marital status ($p<0.030$) and income status ($p<0.028$) were significantly associated with energy intake. Level of education ($p<0.024$), Perceived food shortage ($p<0.004$) and income status ($p<0.022$) were significantly associated with protein intake. Iron ($p<0.001$) and folate ($p<0.001$) were significantly associated with perceived food shortage. There was a significant association between anaemia and hookworm ($p<0.001$). Folate was not significantly associated with malaria parasites ($p< 0.001$).

Discussion: All intakes were lower in this population, probably because of the low socio-economic status, associated with low level of education, food shortage and food restrictions. The high prevalence of anaemia could be as a result of hookworm that causes iron deficiency through competition with the host reducing the amount of food available for absorption across small intestines.

Conclusion and recommendation: Intake of proteins, energy, calcium, iron, Vitamin C and folate nutrients of study participants were significantly below the RDA and 61% of the participants were anaemic. There is need for introduction of nutrition education in schools to highlight issues of nutrition in pregnancy appropriate policy intervention to address adolescent nutrition and reproductive health need to be initiated by the government.