Thesis Title: Nutrient Intake of Anemic and Non-anemic Pregnant Women in Thai Urban and Rural Areas

Name: Patcharee Laothong

Degree: Master of Science in Public Health (Nutrition)

Thesis Supervisory Committee: Anothai Jathanasen M.N.S.
Ratanaporn Charoenpong M.P.H.
Sumalee Singhaniyom M.Sc.

Date of Graduation: 1 May B.E. 2532 (1989)

ABSTRACT

Two hundred and twenty pregnant women were studied to compare the nutrient intake between anemic and non-anemic subjects in urban and rural areas, using the 24 hour dietary recall method for one day. Blood (hemoglobin) was determined. Intakes of energy,protein, iron and vitamin C (Ascorbic Acid) were calculated and compared to the Thai Recommended Dietary Allowances (RDA) for Thai pregnancy.

The rusults showed that anemic and non-anemic pregnancies in urban and rural areas had energy intake about 93-97 % and iron intake below RDA. Iron intake was 28-32 % of RDA intake and most sources iron were derived from vegetables and fruit (47-57 %) followed by cereal (21-26 %) meat and fish (9-15 %). Other sources were pulses, eggs, dairy products and sugar. Protein and vitamin C intake was above RDA.

Urban pregnancies received significantly more animal protein (P-value = 0.002) and animal iron (P-value - 0.006) than rural pregnancies. Pregnancies in rural areas obtained more plant protein (P-value =0.0001) and vitamin C (P-value - 0.009) than pregnancy in urban areas. Anemic pregancies had slightly less energy, protein, iron and vitamin C than non-anemic pregnancies.

Non anemic pregnancies had a higher intake of energy protein and iron in urban areas in the third trimester than anemic pregnancies but in rural areas iron and vitamin C were higher in the second trimester.

Pregnant women who did not receive vitamin and iron supplementation, showed an increase the prevalence of anemia especially in rural areas (P-value = 0.0146). Vitamin and iron supplementation was compared with percentage adequacy of energy, protein, iron and vitamin C. The results showed that pregnancies with vitamin and iron supplementation had a high percentage adequacy and have effected reduction of the prevalence of anemia more than pregnancies without vitamin and iron supplementation.

There were no signficant difference (P-value > 0.05) between energy, protein,iron and vitamin C intakes in three periods of gestation and the prevalence of anemia in urban and rural areas.

Both groups of anemic and non-anemic pregnancies in urban and rural areas have similar practices with regard to taking fruits between meals instead of with meals. These practices might have effected the efficiency of iron absorption and utilization by dietary vitamin C intake.

Pregnancy with an income below 5,000 baht per year (P-value < 0.00001), low educational level (P-value < 0.00001) and outside workers (P-value < 0.00001), showed an increase in prevalence of anemia.