

The Effect of Food-Based Micronutrient Intervention on the Body Weight Gain, Anemia Prevalence, Ferritin Depletion and Vitamin A Deficiency of Pregnant Woman

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Abstract

The purpose of the research was to analyze how food-based micronutrient intervention affected: a decreasing rate of anemia prevalence, vitamin A deficiency and ferritin depletion of pregnant women, as well as weight gain of pregnant women during pregnancy.

The research was conducted in three sub districts of Bogor Regency for 12 months with 6 months of intervention period. The subjects of the study were divided into two groups. The first group consisted of pregnant women being intervened with food having been fortified with multi micronutrient substances such as iodine, zinc, iron, vitamin A, vitamin C, and folic acid. The second group or the control group was without food intervention. The number of sample for each group was 70 pregnant women. Those chosen as samples were pregnant women of 18-35 years old, being 2-5 month pregnant, having no smoking and drinking habit, and no serious/chronic illness.

The intervention comprised of milk, biscuits and rice noodles. The pregnant women were required daily to consume two portions of milk and two portions of biscuit, or two portions of milk and one portion of rice noodles. One portion of milk, biscuits and rice noodles weighed 35, 28, and 57 grams, respectively. Daily supply of food intervention was 5230 kcal energy, 15.4 g protein, 565.6 RE vitamin A, 98.1 µg folic acid, 114.9 mg vitamin C, 23.2 mg iron, 5.3 mg zinc dan 56.4 µg iodine.

The parameters observed among the pregnant women included haemoglobin, ferritin and vitamin A content in blood, and body weight during pregnancy period. Compared with the controlled group, the food intervention fortified with multi micronutrient substances reduced anemia prevalence, vitamin A deficiency, and ferritin depletion of