

Thesis Title            Weight Gain Chart as an educational tool for improving maternal nutritional status.

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**ABSTRACT**

The objective of this study will be to increase pregnant women's control over their weight gain and food composition so that birth weights will be over 3,000 g and decrease the incidence of low birth weight infants by using a Weight Gain Chart as an educational tool. Data was collected from pregnant women who were enrolled in the antenatal clinic of the Rajvithi Hospital. The sample population of pregnant women was selected on a consecutive weeks according to the following criteria: age 20-34 years, primiparous, singleton pregnancy, height 145-164 cm and healthy before and during pregnancy,

gestational age 16-23 wks at the beginning study during on December, 1988 to February, 1989. A study group of 70 pregnant women who received intervention using a Weight Gain Chart and extensive monitoring of weight gain and nutrition counseling throughout their pregnancy was compared with a similar group of 82 pregnant women (control group) who did not receive intervention. Both groups will received the same information on nutrition counseling and health behavior during pregnancy from a hospital nurse. Data was obtained by interviewing pregnant women and examining hospital record. Caloric and protein intake was evaluated using a "24 hrs dietary recall". The level of total caloric and protein intake was computed using a food exchange list.

The results of the study showed that factors affecting infant outcome such as socioeconomic, maternal age, height which were not significantly different ( $P > 0.05$ ). The mothers of the study group had 2.7 % more weight gained than the control group, fewer numbers of observations of weight gain increment, and duration of weight below the standard during pregnancy at  $23 \pm 2$ ,  $28 \pm 2$ ,  $33 \pm 2$ ,  $38 \pm 2$  wks than the control group. Infants averaged 196 g heavier than those born to the control group (mean 3,123 g study group, 2,927 g control group), and the proportion of infant birth weight over 3,000 g within the study group and control group was 70.0 % and 47.6 %

respectively, weighing less than 2,500 g was 4.3 % and 11.0 % respectively, and the proportion was significant differences between the study and control group ( $P < 0.05$ ). Mothers in the study group had a higher caloric intake: 249.4 Kcal higher at the  $28 \pm 2$  weeks (mean 2,157.5 Kcal study group, 1,908.1 Kcal control group); and 338.9 Kcal higher at the  $33 \pm 2$  weeks (mean 2,146.4 Kcal study group, 1,807.5 Kcal control group). Also the study group had 17.4 g higher protein intake than the control group at  $33 \pm 2$  wks (mean 77.0 g study group, 60.4 g control group) and a higher proper after nutrition attitude score than the mothers of control group. The statistics analysis compared all variables was T-test found that were significant differences between the study group and control group ( $P < 0.05$ ).