

Thesis Title Relationship between Pre-pregnancy Nutritional Status, Average Weight Gain During Pregnancy and Preterm Delivery in Singleton Pregnancy: Siriraj Hospital.

Name Kritsana Jongsongsrerm

Degree Master of Science (Public Health)
major in Nutrition

Thesis Supervisory Committee

Mandhana Pradipasen, M.D., M.S., Dr.P.H.

Paradee Temchareon, B.Sc., M.Ed., M.P.H.

Chutima Sirikulchayanonta, M.D.

Wongdyan Pandii, B.Sc., M.Sc., M.S.P.H.

Date of Graduation 20 May B.E.(1993) 2536

ABSTRACT

The objective of this study was to illustrate the relationship between pre-pregnancy nutritional status, average weight gain during pregnancy and preterm delivery in singleton and first pregnancy. The study subjects included 100 mothers of the preterm and 100 mothers of the full-term delivered at Siriraj Hospital, Bangkok, Thailand during November 1, 1991 to April 31, 1992. The data were collected from the out-patient and delivery records and also by interviewing through the use of a formal questionnaire.

The overall results showed that :-

- The nutritional status before pregnancy, indicated by maternal height and pre-pregnancy body mass index (BMI), were not

significantly different between mothers of the preterm and those of the full-term. ($P = 0.12$ and $P = 0.47$ respectively).

- The nutritional status during pregnancy of mothers of the preterm, indicated by maternal weight gain during pregnancy and calculated as weekly weight gain, was significantly lower than that of mothers of the full-term ($P = 0.001$). Mothers with low rate of weekly weight gain during pregnancy (< 0.27 kg/wk) were twice as likely to experience a preterm delivery as those with normal weekly weight gain during pregnancy ($0.27-0.52$ kg/wk).

- Regarding the average weight gain during each trimester of pregnancy, it was found that the average weight gain in the first and the third trimesters were not significantly different between mothers of the preterm and those of the full-term ($P = 0.31$ and $P = 0.59$ respectively). The average weight gain during the second trimester of mothers of the preterm (0.29 ± 0.14 kg/wk) was significantly ($P = 0.03$) lower than that of mothers of the full-term (0.39 ± 0.14 kg/wk.). Mothers with average weight gain during the second trimester less than 400 gms.wk. were five times as likely to experience a preterm delivery as those with the average weight gain of 400 gms./wk. or more during the same trimester.