

Author: Andi Imam Arundhana

Co Author: Asry Dwi Muqni; Abdul Razak Thaha; Veni Hadju (Nutrition Department Hasanuddin University, South Africa)

Topic: The first 1000 days, infant feeding, and early childhood development

Title: Maternal Preconception Body Mass Index and Gestational Weight Gain: A Prospective Cohort Study to Prevent Low Birth Weight

Presentation Type: Oral

Pregnancy, in human life cycle, is the most critical period of growth and development change. Low birth weight infant would be having in the future the risk of impaired brain development and low educational capacity as well as school performance. On the other hand, big-size-at-birth infants relates to many complications during delivery. Adequate gestational weight gain based on preconception body mass index (BMI) is important for optimal birth infants. The objectives of this study was to examine the relation between preconception BMI and gestational weight gain as well as to calculate proportion of mother who does not meet weight gain recommendation. The prospective cohort study conducted from february 2013 to june 2014 in 37 preconception women of the previous larger multimicronutrient study samples in Makassar city in 2013. We found no significant associations between preconception BMI and gestational weight gain ($p > 0.05$). Based on maternal nutritional status, underweight women at preconception have the highest risk not achieve gestational weight recommended at the 3rd trimester ($RR = 1.43$ [95%CI: 1.00-2.06]) ($p < 0.05$). The change of proportion who did not meet recommendation from 1st to 3rd semester increased in underweight group whereas decreased in normal group (42.68% vs 100%, and 55.0% vs 45.45%, respectively). This study concluded that many of mother can not reach recommended weight gain. The lower nutritional status the lower gestational weight gain in the end of trimester.