

### Effect of a Text Intervention During Pregnancy on Birth Weight in Participants of the WIC Program in Hawaii

Mashaël Huwaikem,<sup>1</sup> Cristina Palacios,<sup>2</sup> and Jinan Banna<sup>3</sup>

<sup>1</sup>Florida International University; <sup>2</sup>Department of Dietetics and Nutrition Robert Stempel College of Public Health & Social Work; and <sup>3</sup>University of Hawaii

**Objectives:** There are limited studies testing the effect of a pregnancy educational intervention on infants' birth weight. This study investigated the effect of a short message service (SMS), or text message, intervention for promoting adequate gestational weight gain on infants' birth weight in a sample of pregnant women in Hawai'i.

**Methods:** A randomized clinical trial was conducted among women participating in the Special Supplemental Nutrition Program for Women, Infant, and Children (WIC) program in Hawai'i ( $n = 83$ ). The intervention group ( $n = 42$ ) received weekly SMS about appropriate energy intake and physical activity and the control group ( $n = 41$ ) received weekly SMS about general health issues for 4 months during pregnancy. Weight and length at birth were obtained from the participant's chart in WIC and compared between groups. Birthweight

was categorized as small (SGA), appropriate (AGA) or large (LGA) for gestational age.

**Results:** Women were age  $27.7 \pm 5.3$ y on average, 65.5% were Native Hawaiian, Pacific Islander or American Indian, 54.8% had some college or more and 37.8% were employed. Infant birth weight was similar in the intervention ( $3431 \pm 682$  g) and control groups ( $3232 \pm 599$  g;  $P > 0.05$ ). Mothers in the control group had higher odds of having a SGA baby (OR: 2.21; 95% CI 0.40, 12.2) but similar risk of having a LGA baby (0.27; 95% CI 0.07, 1.05) compared to the intervention group. After adjusting for mothers' age, education level and employment status, results were similar for SGA (OR: 2.34; 95% CI 0.43, 14.7) and LGA (OR: 0.35; 95% CI 0.08, 1.49).

**Conclusions:** There was no significant difference in birth weight between groups in mothers from the WIC program in Hawai'i. More intensive educational interventions may be needed to observe an impact on birth weight.

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