

Author: Maria Luisa Garmendia

Co Author: Camila Corvalan (Institute of Nutrition and Food Technology, University of Chile), Marcela Araya (Department of Women and Newborn Health Promotion, Faculty of Medicine, University of Chile), Paola Casanello, Juan Pedro Kusanovic (Faculty of Medicine, School of Medicine, Pontificia Universidad Católica de Chile), Ricardo Uauy (Institute of Nutrition and Food Technology, University of Chile)

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

Title: Effectiveness of a normative nutrition intervention (diet, physical activity and breastfeeding) on maternal nutrition and offspring growth: the Chilean maternal and infant nutrition cohort study (CHiMINCs)

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Introduction

Obesity and NCDs are currently the main causes of death and disability in Chile and worldwide. Although these conditions are observed in adulthood, there is now consistent evidence that NCDs originate in early life (first 1000 days). We assessed the effectiveness of a low-intensity and high-coverage nutrition intervention by enhancing existing nutrition health care standards and practices at the Chilean primary health care level.

Methods

The study is a cluster randomized controlled trial involving 12 primary health care centers from the South-East Area of Santiago randomly allocated to: 1) enhanced nutrition health care standards regarding optimal weight gain during pregnancy and diet and physical activity counseling-support (Intervention Group,IG) or 2) routine antenatal care according to national guidelines (Control Group,CG). The main outcome measures were: 1) achievement of adequate GWG and adequate glycaemic control during pregnancy, and 2) healthy infant growth during the first year of age. 2800 and 2300 pregnant women at the first prenatal visit (<15 weeks) were enrolled at the IG and CG, respectively.

Results

Intent-to-treat analyses showed that the IG, compared with CG, had lower GWG (9.5Kg vs 10.6Kg) and decreased percentage of women who exceeded IOM recommendations (28.4% vs 34.5% ($p < 0.05$)). No differences were found between the two groups regarding cesarean-section or birthweight.

Conclusion

A low-intensity intervention at the primary health care level during pregnancy reduced excessive gestational weight gain. Gathered information should contribute to a better understanding of how to develop effective interventions to halt the maternal obesity epidemic and NCDs in the Chilean population.