

ORIGINAL RESEARCH

Development and Validation of The South African Diet Quality Index for Pregnancy (Sa-Dqi-P): The Nuemi Study

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Abstract

Background: Diet quality indexes consist of combinations of foods and/or nutrient components that represent adherence to dietary guidelines. A high-quality diet during pregnancy contributes to optimal birth outcomes. **Objective:** We developed and validated the first diet quality index for pregnancy for South African women. **Methods:** The South African Food-Based Dietary Guidelines and pregnancy dietary guidelines were used as the theoretical basis for the *a priori* development of the South African Diet Quality Index for Pregnancy (SA-DQI-P). To validate the SA-DQI-P, we applied it to data collected for the Nutritional Status of Expectant Mothers and their Newborn Infants study (N=682). We determined the associations between SA-DQI-P scores in tertiles with nutrient intakes, socio-demographic factors, household food security level and biochemical values. **Results:** A lower household density ratio, household access to a toilet, refrigerator and microwave, a higher educational level, being employed and being food secure were significantly associated with a higher score. After correcting for energy intake, higher scores were significantly associated with higher intakes of protein, total fat, saturated fat, cholesterol, calcium, vitamin A, vitamin E, folic acid, vitamin B12 and vitamin C. Significantly more participants who were vitamin A deficient scored in the lowest tertile than those in higher categories. **Conclusion:** The SA-DQI-P is the first DQI developed for a South African population and has proven to be valid in ranking diet quality in pregnant women in our sample. Information regarding the diet quality of this vulnerable group can assist with planning nutrition intervention programmes to improve nutritional status.

Keywords: maternal nutrition; diet quality; diet quality index; pregnancy; South Africa; nutrition assessment