

Dietary Assessment

Assessing dietary intake of pregnant women

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Introduction: Healthy pregnancy interventions that focus on optimal nutrient intake have shown improvements in outcomes for both mothers and infants. Accurate assessment of dietary intake is key for evaluating changes in nutrition behaviours, and adherence to dietary goals of an intervention. Two methods frequently used in interventional studies to assess nutrition are the Short-Form Food Frequency Questionnaire (SFFFQ) and the 3-day Food Intake Record (3dFR), which may be more difficult to obtain.

Objectives: The purpose was to determine the difference between dietary quality scores (DQS) calculated from a self-reported SFFFQ and a SFFFQ completed from a self-reported 3dFR from pregnant women at 12-18 weeks gestation. It was hypothesized that there would be no difference in the DQS from these two tools (null hypothesis).

Methods: Pregnant women completed a self-reported SFFFQ and 3dFR. An investigator, blinded to the self-reported SFFFQ, used the pregnant women's 3dFR to complete a SFFFQ by averaging the number of servings of each food category consumed over the three recording days. Following the methodology of Cleghorn et al. (2016), the DQS was calculated for both SFFFQs, and compared using fixed-effects analysis of variance and Cohen's d effect sizes.

Results: Thirty-five self-reported SFFFQ and 3dFRs were analysed. No significant differences were found between DQS means for the self-reported SFFFQ and SFFFQ completed by the investigator from the 3dFR (10 ± 1.83 vs 10 ± 1.85 , respectively; $p = 0.30$, $\alpha = 0.8$). Cohen's $d = 0.2$, suggesting a small effect.

Conclusions: Results suggest that there is no difference in the DQS of the two measures used to assess dietary intake at 12-18 weeks gestation.

Significance: Examination of dietary habits should be performed using a tool that allows for greatest participant adherence. Tools with higher adherence, such as the SFFFQ, may be chosen to improve research and clinical nutrition assessments into specific nutrition patterns and behaviour for pregnant women.

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