

ABSTRACT

Food Restriction and Body Image Distortion in Pregnant Mothers: Outcomes for Exposed Children

by

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Background: Developmental trajectories in the growing child do not originate at birth. Rather, critical periods may exist in pregnancy, during which the determinants of malnutrition are especially vulnerable to the effects of stress and other complications. Prenatal malnutrition has been consistently associated with negative consequences for the growth, development, and overall physical and mental health of affected offspring in both human and animal models. While most available literature on human prenatal malnutrition comes from famine research, there is some evidence that restrictive eating disorders in pregnant women may be associated with similar outcomes.

Hypotheses: We hypothesize that prenatal exposure to maternal subclinical symptoms of restricted eating disorders, characterized in this study as food restriction and body image distortion (FRBID), are associated with adverse outcomes for children. Specifically, we hypothesize that *in utero* FRBID exposure will be associated with early indicators of psychopathology at 48, 60, and 72 months of age. We also hypothesize that *in utero* exposure to FRBID will be associated with decreased body measurements at birth (birthweight percentile and small for gestational age), and elevated Body Mass Index (BMI) percentiles in early childhood at 48, 60, and 72 months of age compared with non-exposed controls. Finally, we hypothesize that weight percentile change between birth and 48, 60 and 72 months mediate the relationship between FRBID and early indicators of psychopathology and BMI percentiles.

Methods: Data were obtained for 204 mother-child dyads. Thirty percent (n=63) of mothers reported some level of FRBID during pregnancy, whereas 69.6% (n=142) denied any FRBID.

These mother-child dyads were followed throughout pregnancy and have subsequently participated in yearly follow-up assessments at 48, 60, and 72 months. The predictor variables in this study include maternal food restriction during pregnancy and maternal body image distortion, assessed retrospectively with the Food Restriction Questionnaire (FRQ). Participants endorsing symptoms in the FRQ were divided into dichotomous groups of FRBID+ and FRBID-, such that FRBID+ participants endorsed at least one FRBID symptom from birth to 72 months. The primary outcome variables in this study include child's height/weight/ BMI percentile at birth and follow-up, as well as early indicators of child psychopathology (BASC-2) at 48, 60, and 72 months. A potential moderator in this study is weight percentile change, which was assessed by the change of weight percentile from birth to 72 months.

Results: FRBID-exposed children were at a significantly greater risk for select internalizing and externalizing disorders as measured by dichotomous and continuous BASC-2 data at 48, 60, and 72 months when compared with controls. No significant differences were observed in body measurements in unadjusted analyses or after controlling for confounders at any age. Similarly, there was no notable increase observed in the risk for gestational age at birth in unadjusted or adjusted models. No evidence was found to support that changes in weight mediated the relationship between FRBID and any clinical child behaviors.