Father Concern About Child Weight and Nutrition Knowledge Associations with Child BMI

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Learning Outcome: Upon completion, participants will be able to describe how father food parenting practices and nutrition knowledge impact child weight outcomes.

Background: Parents of school-aged children play an important role in shaping child eating patterns and weight outcomes. The specific role of fathers in food-parenting practices and nutrition knowledge may impact these outcomes.

Methods: This study examined father food-parenting practices and nutrition knowledge as predictors of child BMI percentile. This cross-sectional study collected socio-demographic and validated measures via an online survey. Participants included North Carolina father-child dyads ($N = 407$) who ate at least one meal per week with their child aged 6 - 11 years.

Multiple regression analyses were used to examine the prediction of child BMI percentile by father coercive control feeding practices, father food-parenting practices (perceived responsibility for child feeding, modeling FV intake, promotion of child autonomy using praise, concern about child weight), and father nutrition knowledge.

Results: Father concern about child weight was uniquely related to increases in child BMI percentile ($p < 0.0001$). Higher father nutrition knowledge was uniquely associated with a modest decrease in child BMI percentile ($p = 0.0064$). Father coercive control practices, perceived responsibility for child feeding, and modeling of fruit and vegetable intake, and promotion of child autonomy using praise were not uniquely related to child BMI percentile.

Conclusion: Findings illustrate the importance of identifying father food-parenting practices which may result in unhealthy child weight outcomes. Father concern about child weight is complex and warrants further exploration. This study contributes to the literature by demonstrating the potential benefits of increasing father nutrition knowledge to improve child weight outcomes.

Funding source: UNC Greensboro internal faculty award.

First Trimester HbA1c and GDM Diagnosis in a High-risk Population of Pregnant Women

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Learning Outcome: Upon completion, participant will be able to describe the association between first trimester HbA1c laboratory values and diagnosis of gestational diabetes mellitus in a high risk population.

Background: Gestational diabetes mellitus (GDM) is defined as diabetes diagnosed at gestational week 24-28 that is not overt diabetes. Current practice guidelines recommend that all pregnant women be screened for preexisting diabetes at the first prenatal visit. We aimed to evaluate the relationship between first trimester hemoglobin A1c (HbA1c) and GDM diagnosis at gestational week 24-28 in a high-risk population.

Methods: This is a retrospective analysis of first trimester HbA1c levels ($\leq$ 5.4% and >5.4%) and diagnosis of GDM in a high-risk population. Prenatal clinic data included anthropometrics, laboratory values, GDM diagnosis, past medical history, family history, and maternal and fetal outcomes. Statistical analysis was conducted using SPSS v28 and significance was set at $p< 0.05$.

Results: This analysis included 729 pregnant, adult women (79% White, 65% Hispanic) with abnormal GCT. Average participant age was 28.8 $\pm$ 4.3 years. Eighteen percent (n=132) of participants had a first trimester HbA1c >5.4%. Median prepregnancy weight (75 kg, IQR:67, 85) and BMI (29 kg/m2, IQR:26, 33) of participants with a HbA1c >5.4% were significantly higher than median prepregnancy weight (68 kg, IQR:60, 78) and BMI (26 kg/m2, IQR:23, 29) of participants with a HbA1c $\leq$ 5.4%. GDM diagnosis was significantly higher in the HbA1c > 5.4% group (n=45, 34.1%) compared to the HbA1c < 5.4% group (n=119, 19.9%; $p < 0.01$).

Conclusions: In high-risk, pregnant woman, first trimester HbA1c >5.4% is cross-sectionally, significantly associated with diagnosis of GDM, after controlling for age, race, and BMI. This finding warrants further study.

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Feeding Stressors and Available Resources for Parents of Children with Down Syndrome: A Qualitative Analysis

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Learning Outcome: Upon completion, participants will be able to describe the various feeding stressors and resources available for parents/caregivers of children with Down Syndrome.

Background: Challenging eating behaviors or feeding difficulties, commonly displayed in children with Down Syndrome (DS), may amplify perceived stress in parents/caregivers of children with DS. Caregivers may find feeding stressful if they lack resources on how to accommodate for children with DS. The purpose of this qualitative study is to identify feeding stressors and resources used by parents/caregivers of children with DS.

Methods: Fourteen mothers and one grandmother of children (2-6-years-old) with DS, were recruited for individual interviews. Interview questions were developed based on the Transactional Model of Stress and Coping. All interviews were audio-recorded, transcribed verbatim, and coded using NVivo 12 software. Analyses were guided by the deductive thematic analysis and content analysis approaches.

Results: Thirteen of the 15 caregivers reported increased stress around feeding their child/grandchild with DS. These stressors included concerns about diet quality (n=9), chewing and swallowing (n=10), picky eating (n=13), and self-feeding (n=9). Stress related to feeding was higher among participants whose child was learning a new feeding technique or in a transitional phase in feeding. Resources used to address feeding problems included therapists (n=10), dietitians (n=2), and specialty schools (n=5).

Conclusion: Transitions from breastfeeding/bottle feeding to solid foods to self-feeding are stressful events in the lives of caregivers of young children with DS. Caregivers could benefit from medical nutrition therapy provided by a Registered Dietitian, with experience in working with children with special health care needs. The addition of such services may increase strategies and resources for feeding and decrease stress among this population.

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Food Consumption Decreased amongst US Adults during the COVID-19 Pandemic

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Learning Outcome: Upon completion, participants will be able to understand changes in food consumption during COVID-19 pandemic.

This study aims to examine how the COVID-19 pandemic has changed the dietary habits of adults in the United States of America. The study design was cross-sectional. A dietary screening tool (DST) was used to survey 10,035 individuals aged 40-100 by Qualtrics. The food groups included the MyPlate items, fat, and sweet and snacks. SPSS Software was used to analyze the data. Pre and post pandemic responses were compared using Wilcoxon signed-rank tests and McNamar tests. The study was 57.4% female and 42.6% male. Consumption in fruits ($P< .001$), whole grains ($P< .001$), dairy ($P=.001$), protein ($P< .001$), fat ($P< .001$), sweets and snacks ($P< .001$), and vegetables ($P= .031$) significantly reduced since COVID-19 pandemic. Among studied food groups, grain consumption by adults had the biggest reduction while vegetable consumption had the smallest reduction. The reason vegetable consumption had the smallest change might be due in part from government assistance programs or hopes of improving immunity. Overall, the decrease in food consumption might be cause for concern. The reduction may be the result of decreased income, changes in job security, fear of catching the virus in grocery stores, or disruptions in the supply chain. More research must be done to determine the cause of the reduction in food consumption.

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