

## **Food Insecurity Screening in an Urban Pediatric Gastroenterology Clinic**

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**Abstract** (Word Count: 454)

Introduction: Functional gastrointestinal disorders (FGID), also known as disorders of gut-brain interaction (DBGI), encompass a group of chronic gastrointestinal disorders without evidence of organic abnormality on conventional testing. FGID is multifactorial in nature, including genetic disposition, early life/psychosocial events, and diet; symptoms of the disorder pose a significant burden on patients. Food insecurity (FI), which has been shown to affect the dietary choices of patients, is rising in prevalence and has many associated complications, including effects on child health and development. We hypothesize that FI may be a contributing factor to FGID. The objective of this study is to analyze the potential association between food insecurity and FGID in patients under 18 years at an urban pediatric gastroenterology (GI) clinic. No published literature has directly examined this potential relationship.

Methods: This is a case-control study of patients under 18 years old who received care at a pediatric urban GI clinic during the study period of April 3, 2023 until April 24, 2023. Caregivers of all patients seen in the clinic completed a validated, two-question screening tool to identify FI within the past year. The survey was annotated with visit diagnosis by the provider. Statistical analysis was conducted to assess associations between FI and FGID. All patients recruited to the study were given community resources to address potential FI.

Results: A total of 109 pediatric patients were included in the study (mean age 9.07 years old, 61% Male). Of those recruited, 39% identified to be food insecure and 36% had an FGID diagnosis. 49% of patients with FGID endorsed FI and 34% of patients without FGID noted FI. Odds ratio (OR) of FI in those with FGID compared to those without FGID was 1.82 (95% CI 0.82 to 4.05). Of all patients with FGID, functional constipation was the most common with the highest OR of FI 2.17 (95% CI 0.89 to 5.31) compared to all other diagnoses.

Conclusions: Exposure to FI was not shown to be associated with FGID based on current data, which is limited due to low recruitment thus far. However, there may be a trend toward a possible association between FGID and FI or more specifically constipation with FI. Furthermore, this data may indicate a higher rate of FI in patients seen in the GI clinic compared to rates documented by the Children's HealthWatch Philadelphia in this region in 2017. This data suggests that FI is continuing to increase in prevalence. With GI being a field of medicine where dietary modifications are often recommended, the significant burden of FI may pose another barrier to treatment to families. Further studies are necessary to further explore this potential relationship between FI and FGID, and interventions designed to prevent/address FI in pediatric patients are warranted.