

## Pandemic stress may lead to, exacerbate functional GI disorders in children

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Nearly 14% of children around the world have functional gastrointestinal (GI) disorders, including functional abdominal pain, irritable bowel syndrome (IBS) and functional dyspepsia, according to a 2015 meta-analysis (Kortnerink JJ, et al. *PLoS One*. 2015;10:e0126982). These conditions are associated with lower quality of life, cause school absences and lead to high health care costs.

Functional gastrointestinal disorders are referred to as disorders of gut-brain interaction (DGBI) given that their bio-psychosocial etiology involves disturbances within the gut-brain axis.

Psychosocial factors, such as stress and anxiety, have been identified as predisposing factors for DGBI among children and adolescents. Stress can include loss of family members, change in school or housing, or traumatic events such as physical or sexual abuse. Children and adolescents with DGBI are more likely to have comorbid diagnoses of anxiety and depression than children without GI symptoms.

The COVID-19 pandemic has been associated with an increase in stressors among patients and families, such as infection-related worries, economic instability and social isolation. Based on the role stress and anxiety play in conditions such as childhood functional abdominal pain, pediatricians should be prepared to diagnose and manage these disorders.

### **Impact of pandemic on mental health**

A recent study showed that mental health claims for youths ages 13-18, including claims for intentional self-harm and substance abuse and overdose, were approximately doubled in March and April 2020 from the same months in 2019 (<https://bit.ly/3rtl6bf>). All medical claims, however, decreased by approximately half. This pattern of increased mental health claims and decreased medical claims continued through November 2020.

COVID-19 infection also seems to have a dramatic mental health impact. An observational study of more than 230,000 patient health records found that one in three COVID-19 survivors ages 11 and older received a neurological or psychiatric diagnosis within six months of infection (Taquet M, et al. *Lancet Psychiatry*. 2021;8:416-427).

A preliminary multicenter, international study showed that the short-term outcome of children with DGBI, at least during the first few months of the pandemic, did not differ compared to a similar period during the previous year (Staiano A, et al. In press. *J Pediatr Gastroenterol Nutr.*). It is possible that during the early phase of the pandemic, the absence of the stress of school attendance and the presence at home of parents

who otherwise would have been away at work may have counterbalanced the stressful effect of the lockdown and the decreased social interactions.

Nevertheless, based on how much of a role stress and anxiety play in conditions such as childhood functional abdominal pain, pediatricians should expect to encounter an even higher prevalence of these disorders in the future.

### **Diagnosis, management of DGBI**

In the absence of alarm signs, functional abdominal pain and other DGBI can be diagnosed with little or no testing. Screening for celiac disease with serum tissue transglutaminase and for inflammatory bowel disease with stool calprotectin are all that are needed when the history and physical examination are not concerning.

Providing a convincing explanation of what causes the child's symptoms is a key factor in reassuring patients and their parents. The bidirectional communication between the brain and gastrointestinal tract and the role of stress and internalizing disorders in contributing to symptoms and disability should be discussed early during the visit.

The COVID-19 pandemic has made it easier to introduce the discussion about the influence of stress and anxiety on somatic symptoms. Patients and families who may have been reluctant to embrace the role of emotional health on gastrointestinal symptoms now seem more open to such concepts. The way physicians discuss the psychosocial factors and treatment impacts the course of care. When physicians simply suggest that the patient should see a psychologist to help with symptoms, patients and families are more likely to hear "it's all in your head," leading to rejection of the psychosocial treatment.

In view of the frequent impact of DGBI on school attendance and the stress that school re-entry may put on many children, school psychologists may be particularly well-suited to coordinate interventions aimed at reducing worry and optimizing coping. Unfortunately, many areas have a paucity of qualified psychologists and psychiatrists to treat these children. Thus, it is critical that pediatricians and subspecialists become more comfortable in taking care of children with DGBI.

The uneasiness that many medical providers experience when taking care of patients with DGBI may be due in part to lack of training. In a recent survey of pediatric gastroenterologists during fellowship training, only one-third felt very comfortable dealing with patients with functional dyspepsia or IBS, two of the most common pediatric DGBI (Graham K, et al. *J Pediatr Gastroenterol Nutr.* 2019;68:806-810).

The Academy has emphasized that pediatricians have a key role in promoting healthy mental development and supports pediatricians in addressing mental health concerns, which are associated with functional gastrointestinal disorders (see resources).

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### **Resources**

- [AAP mental health website](#)
- [AAP interim guidance "Supporting the Emotional and Behavioral Health Needs of Children, Adolescents, and Families During the COVID-19 Pandemic"](#)
- [AAP policy "Mental Health Competencies for Pediatric Practice"](#)