



Case #709

## **Sensor Based Detection of Pediatric Anxiety**

As many as one in five kids suffer from anxiety and depression and, if left untreated, children with these internalizing disorders are at a greater risk of substance abuse and suicide later in life. Current detection and proper diagnosis of anxiety in young children is difficult and long, requiring multiple structural interviews over days and weeks that require trained specialized clinicians. Drs. Ellen and Ryan McGinnis have teamed up to develop a sensor-based tool to rapidly screen children and detect anxiety at a fraction of the cost and time, without the use of interviews and trained clinicians. A ninety second fear induction task is used with a wearable motion detector and using that data, the system can predict anxiety comparable to existing diagnostic technologies.

### **Applications:**

- Pediatric well visit mental health screening.
- In school assessments.
- Mental health screening and diagnostic tool.

### **Advantages:**

- Rapid screening assessment.
- Critical early identification for preventive care.
- Trained clinicians not required.
- Uses inexpensive sensors and a phone-based app.

### **Intellectual Property and Development Status:**

Software copyright, proprietary database and algorithm in development.  
Looking for both licensing and product development collaboration.

### **References:**

Rapid detection of internalizing diagnosis in young children enabled by wearable sensors and machine learning. McGinnis RS *et al* PMC6334916

### **Inventors:**

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