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An Innovative Treatment Approach for Children With Anxiety Disorders and Medically Unexplained Somatic Complaints

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Abstract

Anxiety disorders in children and adolescents are largely undetected and the majority of youth do not receive services. Given the deleterious consequences of anxiety disorders, early identification and intervention have public health implications. In order to increase identification and treatment of anxious youth, expansion to nonpsychiatric settings (i.e., pediatric medical settings, schools) is necessary. Pediatric medical offices represent ideal settings for detection and intervention for several reasons: (1) access to large numbers of children, (2) high prevalence of unrecognized anxiety disorders in medical settings, and (3) an association between anxiety disorders and medically unexplained somatic symptoms. This paper describes a cognitive-behavioral intervention for youth who present to pediatric medical settings with nonmedical somatic symptoms and undiagnosed anxiety disorders. We explain the rationale for and focus of our treatment approach, present two case studies illustrating the treatment process, and conclude with a discussion of implementation considerations.

ANXIETY DISORDERS are among the most common psychiatric conditions in children and adolescents (Costello & Angold, 1995). Estimated prevalence rates range from 5% to 10% (Anderson, Williams, McGee, & Silva, 1987; Costello et al., 1996; Fergusson, Horwood, & Lynskey, 1993; Klein & Pine, 2002; Kramer & Garralda, 1998), and some exceed 20% (Shaffer, Fisher, Dulcan, & Davies, 1996; Verhulst, Van der Ende, Ferdinand, & Kasius, 1997). Anxiety disorders have an early onset with substantial stability into adulthood (Achenbach, Howel, McConaughy, & Stanger, 1995; Costello & Angold, 1995; Ferdinand & Verhulst, 1995; Klein, 1995; Pine, Gurley, Brook, & Ma, 1998) and are associated with significant immediate and long-term impairment (Achenbach et al., 1995; Costello & Angold, 1995; Ialongo, Edelsohn, Werthamer-Larsson, Crockett, & Kellam, 1994, 1995; Pine et al., 1998). Despite these consequences, anxious youth remain mostly undetected and untreated (Burns et al., 1995; Leaf et al., 1996). The failure to intervene represents a public health concern as anxiety disorders during childhood may have a negative impact on an individual's future adjustment.

Pediatric medical offices can play an important role in addressing the unmet mental health needs of children and adolescents with anxiety disorders for several reasons. First, pediatric medical settings provide access to large numbers of children with untreated anxiety disorders. Approximately 6% to 17% of children seen in primary pediatric care settings suffer from an anxiety disorder (Briggs-Gowan, Horowitz, Schwab-Stone, Leventhal, & Leaf, 2000; Chavira, Stein, Bailey, & Stein, 2004; Costello, 1989), with only a minority receiving mental health

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referrals (Costello, 1989). Chavira and colleagues (2004) found that anxiety disorders have the lowest rate of reported mental health service use compared to children with other diagnoses. Second, most parents do not discuss mental health issues with pediatricians, even when they believe it is appropriate to do so (Briggs-Gowan et al., 2000; Dulcan et al., 1990; Horwitz, Leaf, & Leventhal, 1998). Enhancing communication between pediatricians and parents concerning mental health issues has been associated with a three-fold increase in the likelihood of seeking mental health services (Briggs-Gowan et al., 2000). Finally, when anxious youth are identified, pediatricians may underrefer to mental health providers due to burdens associated with making referrals. Therefore, providing pediatricians with education and support can enhance identification of childhood psychiatric disorders and improve communication with parents, thereby enhancing mental health referrals and treatment.

One way for anxious youth to be identified in pediatric medical settings is by targeting children with medically unexplained somatic symptoms. Research demonstrates a strong relationship between nonmedical somatic complaints and anxiety disorders. Studies of children with nonmedical physical symptoms (e.g., abdominal pain) indicate that the majority meet criteria for a psychiatric diagnosis, most notably anxiety or depression (Faull & Nicol, 1986; Garber et al., 1991; Husain, Browne, & Chalder, 2007; Stevenson, Simpson, & Bailey, 1988; Wasserman, Whitington, & Rivara, 1988; Zuckerman, Stevenson, & Bailey, 1987). In a recent study of 27 youths (ages 8 to 17) with noncardiac chest pain seen by a pediatric cardiologist, 56% were diagnosed with current anxiety disorders (Lipsitz et al., 2004). In a study by Ginsburg, Riddle, and Davies (2006), 96% of anxious children (n = 128) reported having at least one somatic symptom, with an average of six per child; somatic symptoms were associated with greater anxiety severity and impairment. Finally, large epidemiological investigations, such as the Great Smoky Mountains project, demonstrated that 60% of girls with anxiety disorders reported one or more somatic complaints, compared with 12% of girls without an anxiety disorder, and those with anxiety disorders had nearly 100 times greater prevalence of stomachaches and headaches (Egger, Costello, Erkanli, & Angold, 1999).

Despite the frequent co-occurrence of physical complaints and anxiety (Egger, Angold, & Costello, 1998; Ginsburg et al., 2006; Kaden, Shenker, & Gootman, 1991; Martin-Herz, Smith, & McMahon, 1999; Selbst, Ruddy, & Clark, 1990; Sharkey & Clark, 1991; Walker, Garber, Van Slyke, & Greene, 1995), existing cognitive-behavioral interventions have primarily focused on treating either pain or anxiety, rather than targeting each issue as well as their interaction. Pain interventions have emphasized physical symptom management (Sanders et al., 1989; Sanders, Shepherd, Cleghorn, & Woolford, 1994) via challenging maladaptive thoughts about pain, relaxation training, imaginal strategies (e.g., imagining a cartoon character eating away the pain), and working with parents to decrease reinforcement of pain-related behaviors. Although these interventions have demonstrated efficacy for reducing somatic symptoms (see Husain et al., 2007, for a review), the occurrence of co-existing anxiety disorders in this population suggests that focusing solely on pain management is likely insufficient. Similarly, traditional anxiety protocols focus on anxiety reduction and mainly address physical symptoms via educating patients that the symptoms are a component of anxiety that can be expected to remit once their core fears are addressed. Such an approach may underestimate the interference caused by chronic physical discomfort which may warrant a more significant treatment focus. In fact, Ginsburg et al. (2006) found that higher levels of somatic symptoms in anxious youth were associated with more interference in family relationships and global impairment. The authors suggest that targeting somatic symptoms in treatment may lead to enhanced reductions in impairment and improved functioning.

Based on the potential to enhance detection of anxiety disorders in medical settings and to provide integrated treatment for children with nonmedical somatic complaints associated with anxiety, Masia Warner and colleagues (2006) developed a cognitive-behavioral treatment

(CBT) program, Treatment for Anxiety and Physical Symptoms (TAPS), designed to target both sets of symptoms. This paper provides a description of the TAPS intervention, presents two case studies that highlight specific issues involved in treating youth with anxiety and pain, and outlines challenges faced when working within pediatric medical settings.

Treatment for Anxiety and Physical Symptoms (TAPS) Program

The TAPS program jointly addresses anxiety and physical symptoms through identifying contexts in which symptoms occur and interact, as well as applying relaxation, cognitive restructuring, and exposure exercises to target fears related to physical pain (e.g., recurrent abdominal pain) and anxiety-inducing situations. The intervention was developed for youth, ages 8 to 16, with anxiety disorders and recurrent physical complaints with no identifiable medical etiology. Treatment is conducted either at the family's pediatric medical office or at New York University Child Study Center, depending on family preference. Children with panic disorder (PD), obsessive-compulsive disorder (OCD), or posttraumatic stress disorder (PTSD) are not included because TAPS is based on treatments (e.g., Coping Cat) that have demonstrated efficacy in mixed anxiety samples (e.g., separation, social, and generalized anxiety disorders) that have not included PD, OCD, or PTSD. More specific treatment protocols have been developed for these disorders.

Treatment

The TAPS manual combines standard CBT techniques to reduce pain and anxiety (i.e., psychoeducation, relaxation, cognitive restructuring, exposure to feared situations, etc.) with specific procedures outlined in the Coping Cat protocol (Kendall, 1992). Coping Cat was used because of its demonstrated efficacy for treating child anxiety (Kendall, 1994; Kendall et al., 1997). TAPS utilizes some of the structure and language of Coping Cat and includes several of Coping Cat's developmentally appropriate activities, such as explaining feelings identification, recognizing bodily symptoms of anxiety, and using cartoons with thought bubbles to introduce cognitive restructuring. Adaptations were made to Coping Cat to streamline the protocol and to enhance its focus on physical pain and its interference. Modifications were as follows: (a) increased emphasis on the relationship between somatic symptoms and anxiety (e.g., daily monitoring of physical pain and anxiety); (b) instruction in diaphragmatic breathing to reduce physical discomfort; (c) expanded focus of cognitive restructuring for somatic cognitions, such as, “I will feel nauseous on the train and I will not be able to find a bathroom”; (d) use of exposures targeting physical pain (e.g., “If I eat pizza my stomach will hurt”); and (e) increased parent involvement.

The TAPS program consists of 12 weekly individual sessions (approximately 45 to 60 minutes each) that include psychoeducation about the interaction between anxiety and physical discomfort, feelings identification, managing physical responses to anxiety, cognitive restructuring, exposure, and relapse prevention. Parents attend the beginning of each session (10 minutes) to discuss their child's progress and to review homework, as well as the end of each session (10 minutes) to go over session content and ensure that parents understand assignments to be practiced between sessions. In addition, 3 separate parent sessions (45 minutes each) are conducted to provide psychoeducation, parenting skills, and support to families.

Child Individual Sessions

Psychoeducation and feelings identification—The first session focuses on psychoeducation about anxiety disorders and functional pain. Cognitive, somatic, and behavioral symptoms of anxiety are reviewed with emphasis on the association and interaction between somatic symptoms and anxiety, such as how anxiety and pain can exacerbate one

another. Children and parents also learn the rationale and general overview of the TAPS program. For example, the therapist might say the following:

> "Your pediatrician referred you to us because you are having what is referred to as functional abdominal pain. Although your doctor was not able to locate a cause for your stomachaches and diarrhea on your medical tests, we understand that they are painful and distressing for you and are getting in the way of your life. You are having trouble attending and enjoying school and social activities. One thing we have learned in working with kids with stomach problems is that they often also feel nervous about various things such as doing well in school or meeting new people. Unfortunately, we still do not have all the answers as to which comes first, whether you become nervous or anxious because you have stomach pain or you have stomach pain because you feel nervous. What we do know, however, is that discomfort in our body can make us feel more nervous and feeling nervous can make our bodies hurt even more. So, in this program, we will learn ways to help your body feel better and help you feel less worried, because they can go together."

Because this population may have difficulty expressing negative emotion, the first session continues with instruction on identifying and communicating feelings. The session concludes with the identification of specific situations that induce anxiety and pain.

Physical responses to anxiety and pain—The second session focuses on children's physical symptoms. The specifics of children's bodily discomfort (i.e., the specific sensations and symptoms, severity, frequency, duration, situational antecedents) are explored. The child is taught diaphragmatic breathing and instructed to use this technique when pain and anxiety are detected to prevent symptom escalation. During this session a 0-to-8 pain scale is introduced to assign a quantitative measure of anxiety and pain. The child is asked to monitor and record his or her anxiety and physical pain daily to enhance early detection as well as to reveal possible interactions between pain and anxiety.

Cognitive restructuring—Anxious children tend to overestimate the likelihood of negative outcomes in anxiety-provoking situations (Rapee & Heimberg, 1997), and children referred from medical offices seem to catastrophize their physical discomfort, thereby increasing both anxiety and pain. Therefore, the third and fourth sessions aim to enhance realistic thinking. The therapist introduces the connection between thoughts and feelings, helps the child to identify maladaptive thoughts, and provides guidance in challenging negative expectations associated with physical pain and anxiety-producing situations. For example, a socially anxious child with recurrent abdominal pain may avoid a friend's birthday party because, in addition to social worries (e.g., no one will talk to me), she may also be scared of stomach symptoms (such as pain, nausea, needing a bathroom). In addition to cognitive restructuring that addresses the social concerns, this child may be taught to ask him- or herself the following: How likely is it that I will get a stomachache if I go to the birthday party? What is the worst thing that can happen if I get a stomachache at the party? What would be so bad about that? Have I been able to handle stomach pain before? After exploring the evidence, more reasonable expectations are generated, and the child's ability to cope is emphasized.

Exposure—The fourth session also introduces the rationale and procedure for exposure. The therapist describes the role of avoidance in maintaining anxiety and somatic symptoms, and explains confronting feared situations will help reduce anxiety and physical symptoms. In collaboration with the therapist, the child constructs a fear hierarchy that rank orders 10 typically avoided situations, beginning with the least feared. The therapist and child identify contexts that affect the child's anxiety level in feared situations, including safety mechanisms

(e.g., child leaves cell phone at home while at school to prevent calling parent when anxious or stomach hurts).

Exposures are conducted in Sessions 5 to 11. The child and therapist select hierarchy items that gradually expose the child to feared situations, including anxiety about physical pain when relevant. After each exposure, the child's anticipated negative outcomes are compared to actual outcomes to help the child develop realistic expectations and to facilitate their participation in future exercises. The child and therapist then plan relevant exposures that the child can continue for homework. Throughout all exposures, children are guided to monitor their anxiety and physical discomfort. Exposures include typical situations related to separation anxiety (being alone), GAD (making a mistake), and social anxiety (talking to unfamiliar kids). When appropriate, exposures also target fears associated with bodily pain. For instance, a child who is afraid of having stomach pain in school, and is therefore sitting on the toilet for an hour before leaving, will be asked to reduce or eliminate time in the bathroom before school.

Treatment review and relapse prevention—In the final session, the therapist and family review skills learned, identify potential warning signs of relapse, and discuss strategies for relapse prevention.

Parent Sessions

Many parents have a limited understanding of the symptoms and impairment associated with anxiety, ways in which their child's somatic symptoms are related to anxiety, and parental behaviors that can inadvertently maintain anxious and pain-related behaviors. Therefore, three parent sessions were developed to specifically address ways parents can help children manage somatic and anxious symptoms.

Parent Session 1—The initial parent meeting occurs after the first child session. Parents are educated about the symptoms and maintenance of anxiety, and the connection between somatic complaints and anxiety. During the session, the therapist probes for details regarding the child's anxiety and family behaviors that might be addressed in future sessions. For example, the therapist may ask: You had mentioned that your child gets scared during _____situation. What do you think your child is thinking? What does he say when this happens? Have you noticed your child avoiding situations/events that make him anxious? How do you respond?

Parent Session 2 and 3—The second and third parent sessions follow the fourth and eighth child sessions, respectively. The therapist discusses parental responses to anxiety (e.g., sleeping with child nightly) and physical complaints (e.g., allowing child to stay home from school because of stomachaches) that may maintain symptoms. Parents are encouraged to discontinue behaviors that might maintain pain and anxiety symptoms (e.g., allowing avoidance, overprotection) and are taught specific skills such as rewarding nonanxious behaviors, ignoring unwanted behaviors, encouraging independence, and modeling nonanxious coping behaviors (adapted from Rapee and colleagues' (2000) Helping Your Anxious Child: A Step-by-Step Guide for Parents).

Parent sessions also focus on helping parents conduct exposure exercises between sessions. Parents often find it difficult to facilitate exposures due to emotional distress and, in some cases, physical pain (e.g., cramps, vomiting, diarrhea) children may experience. When exposures lead to increases in physical pain, it can be especially hard for families to comply with recommended out-of-session exercises. In these cases, phone consultations are conducted in between sessions to provide support and assistance.

Assessments

Children are referred to our program by their pediatricians and evaluated by a psychologist to ensure appropriateness for the treatment program. Before and after treatment, severity of anxiety and pain is determined based on information attained from child and parent during the diagnostic interview using the Anxiety Disorder Interview Schedule for DSM-IV— Parent and Child Version (ADIS-PC; Silverman & Albano, 1996) and parent- and self-report measures. Severity ratings (CSR) for each diagnosis range from 0 to 8, with ratings of 4 indicating clinically significant impairment. Child's current pain is measured using self- and parent-report of child's pain on an 8-point scale (0=*no pain at all*, 8=*extreme pain*). Following treatment, the evaluator rates clinical improvement using the Clinical Global Scale– Improvement (CGI-I).

Clinical Examples

Two patients are presented to highlight different aspects of the TAPS program. The first illustrates how cognitive strategies and exposure exercises can be tailored to address anxiety predominantly surrounding physical symptoms. The second case illustrates the importance of identifying the interaction between physical symptoms and anxiety for families who are initially unaware of the relationship between anxiety and pain.

Case 1

Ben A. was a 12-year-old boy referred to our program by his pediatric gastrointestinal specialist after numerous exams had ruled out a medical basis for his recurrent stomach pain. During the initial evaluation, Ben and his mother rated his stomach pain at a 5. In terms of anxiety, Ben predominantly feared experiencing diarrhea and nausea in public places and not being able to find a bathroom. As a result of these worries, Ben avoided places such as malls, movie theatres, crowded places, concerts, sporting events, and car rides longer than 30 minutes. Ben also experienced clinically significant social and generalized anxiety. He felt anxious speaking to unfamiliar adults, using the phone, initiating conversations with new peers, and performing in front of others. He constantly worried about grades, school performance, and expressed perfectionistic standards across a range of areas. Furthermore, Ben was often tired, had difficulty staying still (e.g., leg shaking), and had trouble falling asleep.

Ben was diagnosed with agoraphobia without panic (CSR=6), with co-occurring social anxiety (CSR=5) and generalized anxiety (CSR=4) disorder. Although it is not possible to determine causality, the history suggested that Ben's stomach complaints began in relation to his anxiety about social interactions and school performance. Over time, however, his fears and avoidance became predominantly focused on stomach pain. Therefore, treatment largely targeted his avoidance of situations where he might experience stomach distress, but cognitive restructuring and exposures were also directed at his social and perfectionistic worries.

Since Ben's fears of vomiting and not being able to find a bathroom were significantly exaggerated, he was taught to examine the evidence for his fears. To enhance realistic thinking, Ben was instructed to challenge his thoughts by asking questions such as: How many times have you actually had to go to the bathroom when your stomach hurt? If you feel like you have to vomit in a movie theatre, can you find a bathroom? If you feel sick in the car, can you stop to use the bathroom? If you did vomit, what would happen?

Ben then engaged in exposure exercises to face his fears, which included taking the train rather than driving to weekly therapy sessions, car rides of increasing durations on the weekends, going into town with friends, and attending at least one movie a week. Because Ben exhibited significant resistance to these exposures, parent sessions and weekly phone consultations with Ben's mother were used to facilitate treatment compliance. For example, Ben would protest days in advance about taking the train to treatment sessions, complaining that he “felt sick,”

followed by repeated requests for his mother to cancel the session. Ben's mother needed therapist support in between sessions to help her resist the urge to let Ben avoid, tolerate his anticipatory anxiety and physical discomfort ("I feel like I am going to vomit"), and prompt Ben to use strategies learned in the program. Further, after taking the train, Ben's mother was encouraged to assist him in evaluating outcomes (e.g., did he get sick as he predicted?), and to establish a reinforcement plan following completed exposures. In addition to pain-related situations, exposures targeting his comorbid anxiety diagnoses were completed during and outside of therapy sessions, such as having him make purposeful mistakes on homework and initiate conversations.

At the conclusion of treatment, diagnostic severity decreased for agoraphobia (CSR=4), social anxiety (CSR=4), and generalized anxiety (CSR=3), though two diagnoses were still clinically significant. Ben and his mother reported that his stomach problems were less frequent and intense, with pain ratings of 2 and 3, respectively. The evaluator rated Ben as "improved" on the CGI-I, indicating a clinically significant treatment response. A major accomplishment for Ben was that he was able to attend a school trip, which he had adamantly refused earlier in treatment. This trip consisted of 4 hours on the school bus and staying in a hotel overnight with peers. Even though he experienced some stomach discomfort on the bus and at the hotel, Ben was able to manage his anxiety and reported enjoying the trip.

Case 2

Rebecca C., an 11-year-old girl, presented to her gastroenterologist a year prior to study enrollment with frequent stomachaches, constipation, and vomiting. After the pediatrician ruled out medical pathology, the family was referred to our program. Rebecca's self-rating of pain was an 8 (the most severe score), and her mother's rating was a 3. Rebecca reported anxiety related to social situations (e.g., few friends, fears of embarrassment during social situations, performance anxiety) and separation (e.g., sleeping with her parents several times a month, nightmares, concerns about her and her family's safety, avoiding going places without family members). Based on the content and severity of her worries, Rebecca was diagnosed with social (CSR=5) and separation anxiety (CSR=4) disorders. It is noteworthy that even though Rebecca was experiencing significant anxiety, her mother did not perceive her as particularly anxious and thought that Rebecca's stomach pain might be caused by consumption of soft drinks.

Because of her conceptualization, Mrs. C expressed confusion regarding the focus on anxiety when treatment began, stating she was concerned about Rebecca's stomach problems, not anxiety. Treatment initially focused on educating the family about the significance of Rebecca's worries and impairment, and the relationship between anxiety and somatic symptoms. The family was informed that the skills taught in the program would help Rebecca manage her pain and her anxiety, and that both symptoms required intervention to decrease her stomach discomfort.

The next goal was to help the family identify connections between Rebecca's stomach pains and anxiety-provoking situations. Rebecca recorded the intensity of daily anxiety and pain, and identified possible antecedents (i.e., being late to school, interactions with teachers, soda intake). After a few weeks, monitoring demonstrated a relationship between stressful events and stomach pain, rather than other possible triggers such as drinking soda. For instance, Rebecca discovered that her stomach pain was most intense before social activities. Moreover, she realized that she often predicted experiencing stomach-aches in social situations; this expectation increased her anxiety and stomach pain and reinforced avoidance. Thus, the weekly pain and anxiety monitoring chart proved a powerful tool by concretely demonstrating the co-occurrence of her physical symptoms and anxiety, and provided a mechanism to identify treatment targets.

The remainder of treatment focused on cognitive restructuring and exposures related to social situations (e.g., initiating conversations with peers and strangers) and separation concerns (e.g., sleeping alone) typical of cognitive-behavioral anxiety treatment. Following treatment, Rebecca demonstrated reductions in the severity of social (CSR=4) and separation (CSR=2) anxiety. Additional improvement was observed on pain ratings; Rebecca's report decreased to 2, and her mother's report decreased to 0. Overall, Rebecca demonstrated significant treatment gains, as indicated by a CGI rating of “improved.”

Challenges and Implementation Issues

Working in pediatric medical settings offered many benefits for identifying and treating children with somatic symptoms and anxiety, but also presented several challenges.

Treating Families Referred by Pediatricians

As illustrated by the case studies, many families had pursued medical interventions for their child's difficulties for over a year prior to being referred to our program. Since their conceptualizations of the physical symptoms were medical, they were often reluctant to accept a psychological intervention. To address this, we (a) communicated our understanding that their pain was distressing and impairing, (b) informed them that our treatment approach would target both physical complaints and anxiety, and (c) educated families about the interaction of their anxiety and physical symptoms. In addition, these families were particularly sensitive to stigma associated with mental health treatment. For that reason, they were provided the option of receiving treatment at a venue within the medical system (i.e., their pediatrician's office) to increase treatment acceptability and provide further integration of services.

Our clinical impressions of youngsters referred from pediatricians due to recurrent somatic complaints are consistent with the findings of Ginsburg et al. (2006) in that they seem to have more severe anxiety and functional impairment than anxious children from traditional clinical settings. In addition, the children seeking medical treatment for physical complaints appear to experience more severe, chronic, and impairing somatic symptoms (e.g., diarrhea, nausea, chest pain) than those typically associated with anxiety (e.g., restlessness, blushing, muscle tension). Finally, although we cannot determine causality based on our limited clinical information, it appeared that in some cases, the physical complaints began as a component of anxiety in specific fear-provoking situations (e.g., in social situations), whereas in others, the anxiety had developed as a result of experiencing intensified physical symptoms in various situations. Our observations suggested that, regardless of how the physical distress began, the children were currently concerned about typical anxiety-producing situations (e.g., separation from parents) as well as having and managing physical distress, and seemed to require an intervention that attended to both. Of course, only empirical studies can answer questions regarding whether youth referred from medical settings with recurrent physical complaints are phenomenologically different than those from more traditional anxious populations or if they require a modified treatment approach.

Challenges to Working With Pediatricians

Establishing contact with pediatricians—In addition to considerations related to treating families referred from pediatric medical settings, establishing collaborations with pediatricians was challenging. Two different approaches were helpful to identify interested pediatricians. First, pediatricians in academic institutions were often open to partnerships because many were involved in or interested in research endeavors. Second, to expand to community pediatric practices, we enlisted the assistance of the Chairman of Pediatrics at our medical center who reached out to area pediatricians highlighting benefits our program could provide for their practice and the families in their care. Many medical practices responded

favorably to a pediatrician introducing a psychological program and were willing to set up an introductory meeting with our staff.

Pediatrician concerns regarding time—During our initial meetings with pediatric practices, some doctors were apprehensive that collaboration would require significant amounts of time. We emphasized that the treatment could decrease their time burden since families of children with persistent somatic symptoms often make numerous calls and schedule unnecessary medical visits. Further, to reduce pediatrician responsibility, we enlisted the entire medical staff (i.e., doctors, nurses, office managers, secretaries) in the referral process. For instance, office managers prompted doctors to introduce the program to patients whose somatic symptoms were flagged through billing codes, and flyers were placed at the reception desk and in examination rooms so they were easily accessible for doctors and patients. To maintain our working relationships with the staff, without burdening staff's time, we attended their weekly case conferences and sent reminder emails.

Pediatrician concerns about psychological treatment and research—In addition to time limitations, pediatricians were reluctant to refer families to a psychological program due to concerns related to mental health treatment and being involved in a research study. First, pediatricians expressed worry that families would become upset or angry at the suggestion of a psychological explanation for the child's pain. It helped to educate pediatricians that families are more likely to discuss and acknowledge mental health issues if raised by their physician. Also, pediatricians were informed that most families were grateful to be referred to an appropriate intervention, as it often led to symptom relief and a clearer understanding of their child's symptoms. To further reduce pediatricians' uneasiness, we provided them with sample scripts for approaching families about our program. Second, pediatricians wondered whether mental health treatment would discount or ignore somatic symptoms that were real and distressing for their patients. In addition to emphasizing the frequent co-occurrence of pain and anxiety, we frequently consulted with the referring pediatrician to elicit their observations, update them on treatment progress (i.e., reduction of pain and anxiety), and discuss any medical concerns. Lastly, there was some apprehension that patients who did not meet our study criteria would be disregarded. To demonstrate our commitment to serving the families in their care, we responded quickly to referrals and connected families who were not eligible for our study with appropriate community services.

Summary

Given the deleterious consequences of anxiety disorders, early identification and intervention have public health implications. Working in pediatric medical settings has the potential to enhance detection of anxiety disorders and to provide integrated treatment for children with nonmedical somatic complaints associated with anxiety. Although there are many potential benefits to this approach, implementing a mental health treatment for anxious children identified via medical setting presents a number of challenges, such as treatment acceptability and establishing collaborations with pediatricians. Despite issues involved in bringing cognitive-behavioral treatment to medical settings, such work has significant relevance for the treatment of pediatric anxiety and is an important step toward bridging the gap between pediatric medical care and psychological services.

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