

## Commentary

# Parental response to children's abdominal pain: The role of worries about pain

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Abdominal pain, like other recurrent pain, runs in families to some extent. Studies of children and adults with chronic abdominal pain have shown that often one or more persons in the patient's family can be identified as suffering from abdominal pain as well (Walker et al, 1991; Hyams et al., 1995; Saito et al., 2008). In most cases the pain is not explained by a disease, structural abnormality or psychiatric disorder and is thought to be of functional origin (referring to alterations in physiological functioning, or how the body works; Di Lorenzo et al., 2005; Drossman, 2006). Abdominal pain can have a large impact on the child's life. Children who suffer from functional abdominal pain report reductions in quality of life and interference with daily activities such as going to school (Saps et al., 2006; Youssef et al., 2006).

There is a growing interest in understanding a child's pain in the context of his or her family. Parental health behaviors are a shared family influence that is of particular importance in children's pain. When a child is in pain, parents have the difficult task of interpreting the seriousness of the symptoms and deciding how to take action. Any parental action or reaction will teach children how to approach future pain. Below we discuss the role of parental behaviors and worries in the development and maintenance of children's abdominal pain and associated disability, and how clinicians can discuss these issues with the family. Parental behaviors and worries exist in a broader context of family variables such as quality of the child-parent interaction and family functioning which will not be discussed here but the interested

reader is referred to the review by Palermo and Chambers (2005).

According to social learning theory, parental modeling and reinforcement of the sick role increases the likelihood of expression of pain symptoms (Bandura, 1977; Levy et al., 2007). Two types of learning can be distinguished. First, parents model how to behave when having gastrointestinal symptoms. By observing a parent with abdominal pain, children learn how to interpret and cope with gastrointestinal symptoms. As discussed above, abdominal pain tends to run in families and prospective studies have shown that children of parents who suffer from irritable bowel syndrome (IBS) report not only more gastrointestinal symptoms, but also more disability such as school absences than children whose parents do not suffer from IBS (Levy et al., 2004).

Parents may reinforce illness behaviors in their children by offering something the child desires or enjoys. People with IBS recall receiving gifts or being excused from normal activities when suffering from minor illnesses as a child (Whitehead et al., 1982; Whitehead et al., 1994). In pediatric abdominal pain patients, positive attention and activity restriction predict symptom maintenance 2 weeks later (Walker et al., 2002). These data suggest that somatic symptoms may be learned or maintained because of the secondary gain associated with them.

Social learning of the sick role can be reversed through interventions. In acute pain situations like regular inoculations, parents can generally be easily coached to change their behavior and consequently

affect children's coping with pain positively (Broome & Endsley, 1989a,b; Kleiber & Harper, 1999). The mounting evidence suggests that teaching parents to distract their children rather than expressing sympathy has beneficial effects. In a study by Walker and colleagues (2006), attention to children's abdominal pain complaints was associated with an increase in complaints and distraction with a decrease in complaints. This was true for previously well children and children with a history of abdominal pain. Because these studies were limited to acute pain situations the results cannot be generalized to chronic pain where parents are required to change a wide array of behaviors that occur in daily life, outside of the clinic.

A few studies have evaluated the effect of behavioral interventions that included some attention to social learning issues, and all have shown positive effects on reducing abdominal pain complaints in children (Finney et al., 1989; Sanders et al., 1989; Sanders et al., 1994). A recent large study tested an intervention focused specifically on social learning (Levy et al., 2009). Parents and children received three short sessions with a counselor who addressed coping with pain and reinforcement of child illness behaviors. This was compared to an attention-control condition described as "education and support" in which parents and children received general information about the gastrointestinal system and food. Treatment resulted in greater reductions in parental reinforcement of child illness behaviors and child pain than the education and support condition. These findings demonstrate that modification of parents' reactions to their child's symptoms is an effective treatment for children with chronic abdominal pain.

Unfortunately most families do not have access to this type of specialized treatment. Thus addressing social learning in the physician's office may be an important factor in reducing the burden of chronic abdominal pain. However, parents may react defensively to direct questions about social learning issues. By focusing on parental behaviors rather than other causes of the pain parents may feel the physician blames them for their child's illness. Many parents also believe that showing sympathy is important and nurturing towards their child (Walker

et al., 2006) and may become angry at the clinician for disregarding their child's perceived need. A better approach may be to discuss parental fears and worries that are associated with social learning, which is likely to be perceived as less judgmental than recommending behavioral change. In two studies we identified the most common parental worries about their child's abdominal pain (van Tilburg et al., 2006; van Tilburg et al., 2009). First we conducted in depth interviews with parents of children who suffer from functional abdominal pain to identify common themes. These were translated into a questionnaire which was administered to a large group of parents, some who consulted a doctor for their child's symptoms and others who did not consult. The questionnaire possesses reasonable to good reliability and validity. It distinguishes four sets of worries and fears. We found that: (1) Parents worry about the meaning of symptoms: they oscillate between showing sympathy for pain that signals something is really wrong versus ignoring complaints of pain they view as benign or transient. (2) Most parents feel inadequate for failing to help their child. (3) Parents consult physicians hoping for a definitive diagnosis, treatment and cure. But as pain often cannot be 'cured,' dissatisfaction with care often results from the inability of physicians to meet these expectations. (4) Parents wondered if stress or familial factors such as genes play a role in their child's pain. We found that parental worries are associated with parental reactions towards child symptoms. Families who consult a physician for their child's pain are more likely to believe that the pain indicates that something is wrong with their child, and they tend to closely monitor their child's symptoms while encouraging activity, as well as being critical towards the child's pain behavior.

These data suggest that discussing parental worries may address social learning contributions to the maintenance or exacerbation of complaints. Physicians usually reassure the family that the pain is real but does not signal disease to address the meaning of the symptoms. But they can do more to address social learning issues. For example, physicians need to acknowledge the nurturing quality of sympathy while informing the parents that children actually find distraction to be more helpful (Walker et al., 2006). In addition, parents

may like to receive clear strategies for when to keep their child out of school, visit a doctor, or use medications, to avoid reinforcement for maladaptive illness behaviors. Most families recognize the role of stress in their child's symptoms and will be open to suggestions for learning relaxation or other proven behavioral techniques that decrease disability and increase control over pain. The physician's continued availability to help the family through the sometimes long and frustrating process of figuring out what is best for the child is extremely important. Acknowledging parental worries combined with offering tools to control the

pain opens the discussion to change parental behaviors to more beneficial strategies such as distraction and relaxation.

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