

Parental Behavior Significantly Influences Kids' Pain Outcomes

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ANAHEIM, California — Parental behavior is highly influential in determining a child's experience of chronic pain and mental health outcomes, new research shows.

Three studies presented here at the American Pain Society (APS) 2018 meeting show that adverse parental behaviors, including catastrophizing and exhibiting anxiety and guilt, have a significant impact on how children respond to chronic pain, physically and emotionally.

"Parental catastrophizing impacts children across all pediatric conditions," study investigator Sara Ahola Kohut, PhD, Hospital for Sick Children, Toronto, Ontario, Canada, told *Medscape Medical News*.

"Parents are often role models for their children with respect to coping with the thoughts, feelings, and physical sensations that accompany a diagnosis of a chronic condition," said Kohut, who is co-investigator on one of the three studies.

As a whole, this research reflects the need to better understand the mechanisms behind the increased risk for poor physical and mental health outcomes in children whose parents suffer with chronic pain or children who have chronic pain of their own.

The first study included 71 parents and adolescent pairs. These participants were part of a secondary analysis of a larger study of parent and child perfectionism in samples of pediatric patients with inflammatory bowel disease (IBD).

For the analysis, Kohut and colleagues assessed the teens for disease and pain characteristics, health-related quality of life, and pain catastrophizing, including rumination, magnification, and helplessness.

Their parents also completed measures assessing levels of catastrophizing related to their child's pain.

Adolescent participants had an average age of 15 years; 54% were female, 63.9% had Crohn's disease, 33.3% had ulcerative colitis, and 2.8% had IBD unclassified.

Disease activity was low to mild in most patients. Forty-six percent of patients were in remission, 30% had mild disease, 21% had moderate disease, and 1% had severe disease activity. Their self-reported health-related quality of life (HRQL) averaged 64.77 on a scale of 0 to 100 (the IMPACT III scale, with higher scores indicating a better quality of life).

The adolescents reported an average pain intensity of 1.82 on a scale of 0 to 10, with 10 representing the worst pain imaginable.

After adjusting for factors including child age, sex, disease activity, and pain, the authors found that parental rumination of the child's pain significantly predicted child HRQL, with higher parental rumination predicting lower child HRQL ($P = .009$).

However, the child's own catastrophizing and other types of parental catastrophizing were not associated with HRQL.

Parental rumination, or, more specifically, being unable to stop thinking about the child's pain, can take its toll by constantly keeping IBD at the forefront of a child's thoughts, Kohut explained.

"Children with relapsing and remitting diseases like IBD may want to 'forget' about their condition during times that they feel well. During these times they do not want to be reminded of their IBD and would prefer to get back to their everyday life and do what is important to them. When a parent continues to focus their attention on pain or IBD symptoms, it becomes an ongoing reminder of a child's IBD."

Furthermore, parental rumination can keep the family's focus on the IBD regardless of current symptoms, as opposed to focusing on other areas of their child's life, such as school, friends, and extra-curricular activities, Kohut said.

The findings suggest that interventions to prevent parental rumination about a child's pain may have important benefits, Kohut added.

"This study highlighted rumination specifically, which can help healthcare providers more readily recognize potentially problematic parent coping. It can also inform educational resource development that can be provided to parents of children with IBD."

"More longitudinal research is needed to see how the relationship between parent rumination and child quality of life changes over time," she said.

Improving Long-term Outcomes

In a second study, pain medicine specialist Gadi A. Revivo, DO, and colleagues with Northwestern University, Chicago, Illinois, examined the charts of 144 adolescent patients aged 8 to 18 years with chronic pain conditions.

These were categorized into one of six diagnostic groups: complex regional pain syndrome (CRPS), abdominal pain, back pain, hypermobility, headache, and fibromyalgia.

The patients took part in an interdisciplinary pain management program involving physical and occupational therapy as well as biofeedback, psychiatric care (including cognitive-behavioral therapy), medical management, and patient education.

Recovery and emotional function was assessed in adolescents as well as their parents by using the Bath Adolescent Pain Questionnaire (BAPQ) and Bath Adolescent Pain-Parental Impact Questionnaire (BAP-PIQ).

Adolescents in all categories reported similar baseline levels of pain intensity and functional scores. Parents also had no significant differences in BAP-PIQ scores; however, BAPQ-Daily with CRPS and hypermobility showed statistically higher scores than headache ($P = .02$).

At post-treatment and 1-month follow-up, adolescents and parents all showed significant improvement in pain and emotional functioning regardless of diagnosis.

Improvements in parental self-blame and adolescent emotion during treatment predicted improvements in physical and emotional outcomes with an 84% specificity for function and 86% specificity for pain outcomes.

"The biggest predictors of long-term outcomes are a child's emotions and parent's self-blame," the investigators note. "Treatment of chronic pain in children should address these components and involve parents in therapy to decrease levels of self-blame and improve long-term outcomes," they add.

Senior author Revivo said the findings underscore the role of parents in pain outcomes.

"The reason we provide the parent questionnaire is because we know we have to coach the parents as well as the adolescents," he told *Medscape Medical News*. "It's not just about treating the child, but teaching the parents how to approach their child in a different manner that is more optimizing of the chronic pain situation."

Potential strategies include shifting parents' emphasis from reacting to the child's pain to focusing on improvement, he said.

"We suggest not asking the children about the pain but to focus instead on functioning. We also encourage parents to help their child learn how to pace themselves and to understand that the pain is something that you can do something about and not necessarily [something] to become increasingly distressed about."

Impact of Parental Pain

The third study, known as the Maternal Chronic Pain Study, conducted by Amanda L Stone, PhD, and colleagues from the Oregon Health and Science University in Portland, examined maternal chronic pain and its impact on children's physical and mental well-being.

"We hear from many moms with chronic pain that they are concerned about not being able to take their children to activities or other ways chronic pain interferes with their lives, and we're trying to understand more about how chronic pain affects parenting," Stone told *Medscape Medical News*.

The multisite study involved 335 mothers with chronic pain and their children ($n = 305$), who were 8 to 12 years old.

Maternal chronic pain was assessed by using the PROMIS-29 Profile, which assesses pain intensity, pain interference, physical functioning, and a range of comorbid psychological symptoms (including anxiety, depression, fatigue, sleep disturbance, and participation in social roles).

The mothers were also asked to complete proxy report measures of the children's symptoms by using the Parent Proxy and Pediatric Short Forms and Children's Pain (PROMIS) Questionnaire.

The children self-reported on their own physical and emotional functioning and negative thoughts about pain and catastrophizing by using the Children's Somatization Inventory and Pain Catastrophizing Scale for Children.

The mothers were categorized as having low pain and low psychiatric symptoms (24.9%), severe pain and low psychiatric symptoms (5.4%), moderate pain and high psychiatric symptoms (45.4%), or severe pain and high symptoms (24.3%).

The results showed that mothers with elevated pain, anxiety, depression, and fatigue, as well as lower physical and social functioning, had children with higher reports of depression, somatic symptoms, and pain frequency.

However, the children's symptoms weren't necessarily clinically elevated, with average scores that were not well above what would be expected.

"They're generally average for what we would expect at this age, but we want to look at what some of these risk factors are and follow them over time to see if at this stage we're able to identify kids who may be at a greater risk for developing chronic pain themselves," Stone said.

"We also hope to give the mothers strategies for parenting if they are having difficulty functioning themselves due to chronic pain to try to prevent the impact that the pain can have on their children."

Notably, mothers with more anxiety and depression and more difficulty in functioning perceived more anxiety in their children than reflected in the children's self-reports.

"We see more significant differences between these higher symptom groups and their perceptions of children's symptoms than the children's reports themselves," Stone said.

The study [is ongoing](#) and still actively recruiting participants.

None of the investigators have disclosed any relevant financial relationships.

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