Research in Action

Asthma and Latinx children's health outcomes

Introduction

Recognizing and responding promptly to children's symptoms of asthma is critical to managing their treatment effectively. Children's emotions, and their felt anxiety, may be key factors in increasing their awareness of asthma. Their self-awareness may result in heightened vigilance of asthma symptoms resulting in preventative asthma management control and behavior.

Among Latinxs, there are culturally sanctioned ways of expressing distress and anxiety, which may be present during asthma attacks. These mechanisms, including "susto" (fright) and "ataque de nervios" are culturally accepted expressions of anxiety characterized by intense emotional reactions to stressful events. Such "ataques" can provide Latinx patients with a way to express anxiety and panic and in some cases, may help children and adults cope with the source of trauma or stress, such as asthma attacks.

The Study

The purpose of the study was to investigate differences in asthma control between Mexican and Puerto Rican children whose persistent asthma required them to use controller medication on a daily basis. It was also hypothesized that culturally appropriate asthma-specific anxiety in Mexican and Puerto Rican children may have a beneficial effect on their pulmonary function including their adherence to using controller medication, asthma control, avoidance of triggers, (such as animal allergens, air pollution / irritants, pollen) and healthcare utilization. In fact, anxiety during an asthma attack could actually result in better asthma outcomes. Additional questions examined whether the differences in asthma control were due to acculturation, social and contextual factors and caregivers' treatment decisions.

Participants in the study included 267 children ages 5-12 years of whom 188 were Mexican and 79 were Puerto Rican, plus 267 caregivers. Children were recruited from two school-based clinics and the Phoenix Children's Hospital Breathmobile in Phoenix, AZ and two hospital clinics in The Bronx, NY.

Almost two-thirds of the children were male (64.8%) and their average age was 9 ½ years. A majority of caregiver participants identified as Mexican (70.4%) and were female (95.1%). More Puerto Rican children had severe persistent asthma than Mexican children (22.7% vs. 9.1%, respectively) and poorly controlled asthma (84.8% vs. 43.6%, respectively).

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Children and caregivers completed the Childhood Asthma Symptom Checklist, which was administered at an initial session at 3-, 6-, 9-, and 12-month follow-up sessions. At all sessions, children completed spirometry testing to assess their pulmonary function and their medical records were reviewed for the one-year study period to obtain data on prescribed asthma medications and asthma-related healthcare visits. Overall retention was 82% during the one-year long period.

Results of the Study

Mexican caregivers were more likely to be low income, married, born outside the United States have more family members having asthma, and to receive more support from their families.

Puerto Rican caregivers were older, had higher levels of education, had lived in the mainland United States longer and reported greater acculturation to mainland U.S. They also reported more depressive symptoms and used both controller medication and alternative medicine (i.e. herbs, teas, prayer) in response to children's asthma.

More Mexican children were found to have both well- controlled asthma and higher levels of anxiety during asthma than Puerto Rican children.

Puerto Rican children showed a longer duration of asthma and more animal triggers.

There was less acute healthcare utilization for both groups over the one year period.

Children who felt anxious during an asthma attack were more likely to have better pulmonary function, fewer symptoms of asthma and fewer asthma related emergency room visits than children whose asthma attacks did not trigger anxiety.

Caregivers' reports of their children's asthma- specific anxiety predicted better pulmonary function for both groups.

Asthma-specific anxiety was not connected to children's adherence to controller medication.

Implications for Practitioners

These findings have important clinical implications for providers and caregivers. Children who have low anxiety during asthma attacks might be at higher risk to disregard their asthma symptoms and have poor asthma control. It is critically important for health care providers and others to pay close attention to those children who have little or no fear of their asthma and high rates of acute asthma-related healthcare utilization.

It is also important to recognize that children with high levels of general anxiety may have excessive restriction of activities, such as not participating in gym class despite providers' encouragement of exercise. Health care providers and others, including pediatricians, therapists and school nurses, should assess whether children's avoidance of triggers is related to asthma or to their more general anxiety.

These findings highlight to healthcare providers the importance of asking children directly about their emotional experiences with asthma. Healthcare providers in particular should be aware of distinctions between anxiety that is focused specifically on asthma in contrast to general anxiety. It is important to identify asthma related emotions and behavior in children and to develop interventions to reduce asthma disparities among minority children.

It is also essential to consider subgroup differences for diagnosis and for treatment of asthma in children who come from vastly heterogeneous backgrounds under the diverse Latinx umbrella.

Further studies are needed to assess the clinical importance of culturally sanctioned anxiety mechanisms, such as "susto" and "ataque de nervios" in asthma treatment and prevention.

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