

Younger and older children had different experiences of asthma and its management

Pradel FG, Hartzema AG, Bush PJ. *Asthma self-management: the perspective of children*. *Patient Educ Couns* 2001 Dec;45:199–209.

QUESTION: How do children experience their asthma and its management?

Design

Qualitative study.

Setting

2 asthma clinics (one located in a large teaching hospital and the other in a community centre) in North Carolina, USA.

Patients

32 children (20 boys, 51% white) who were either 7 or 12 years of age, had moderate to severe asthma, and had no other chronic diseases or mental disability.

Methods

Data were collected during 2 home visits. During the “drawing interview”, children were asked to draw a picture of the last time they were sick; if they did not select an asthma attack, they were asked to do so during the second visit. During the “figurative process interview”, children were shown a piece of paper with a point on a horizontal line, which represented an asthma attack. They were asked to describe their symptoms before and during the attack and how they managed each symptom. Data from 31 drawing interviews and 30 figurative process interviews were analysed and triangulated. Themes were extracted using a list of previously identified themes.

Main findings

Knowledge: in the drawing interview, 24 of 31 children spoke about the cause of their asthma attack – 55% perceived physical activity as the main cause. Older children provided a more comprehensive list of environmental triggers than did younger children; 8 children in the younger group could not explain why they had an attack. The most common symptom mentioned was difficulty breathing. Other symptoms included coughing, wheezing, feeling bad, and throwing up. The onset of an attack seemed unexpected and sudden for most children. Only 5 older children described warning symptoms, citing wheezing, shortness of breath, tiredness, or headache. Most children reported taking asthma medicine during an attack, but less than half of younger children knew that they took the medicine because of the attack. Only 6 children overall knew which type of drug to take for an attack. Younger children identified asthma medicines using general (eg, pill), lay (eg, puffer), or physical terms (eg, blue puff), whereas older children used general (eg, asthma treatment) or biomedical terms (eg, brand or generic names). In the drawing interview, children reported home management strategies such as resting, drinking, and limiting activities. Almost 70% mentioned using health services during an attack. 3 children reported using a peak flow monitor. Younger children responded to symptoms by resting, telling their mother, or not knowing what to do; older children used relaxation and breathing techniques.

Autonomy: during an attack, more than half of the older children self medicated, whereas most of the younger children relied on a caretaker. Over half of all

children told an adult that they were having an attack. All relied on families to seek medical care.

Perceptions: almost 75% of children drew an asthma episode in the drawing interview. For most children, having asthma was associated with restricted physical activity. Both age groups mentioned the benefits of asthma medicine, primarily that it made them feel better. Some younger children disliked the taste and the constraint of taking medicine regularly, whereas older children talked about the personal costs, such as side effects and that medicine did not always work.

Conclusion

7 year old and 12 year old children had different knowledge, perceptions, and autonomy in relation to asthma and its management.

COMMENTARY

The study by Pradel *et al* is important because it addresses how children experience their asthma and its management. Few studies have been done from the perspective of the child with asthma. The findings of this study are consistent with current recommendations for using different educational strategies for different developmental age groups.

Children in the study were classified, based on their chronological age, as being in the concrete or the formal operations stages of cognitive development. However, a formal developmental assessment was not done, and therefore some of the participants may not have been in the cognitive stage identified by the authors. The authors strengthened the credibility of their findings by supplementing the children’s drawings with a guided interview, in which the children described their drawings. These questions may have influenced the emergence of themes, but overall they represent gentle probes to elicit discussion around the phenomenon of study. Children reported few, if any, warning signs of an asthma attack, and they perceived asthma primarily as a restriction on their activity levels. The results of earlier studies support this finding.¹ More research is needed to design and evaluate possible interventions to help children to identify and appropriately act on these warning signs.

The findings of Pradel *et al* suggest the need for nurses to re-educate children with asthma on a routine basis. Children who are diagnosed with asthma and receive education during an earlier cognitive stage will subsequently need re-education more appropriate to higher cognitive stages. Additionally, the findings suggest the importance of standardised packaging for asthma medication and use of language that is meaningful to children. Re-education based on children’s experiences with asthma might also affect compliance with treatment regimens. The authors suggest the need for further research using this methodology with children who are self managing other chronic illnesses.

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1 Yoos HL, McMullen A. Symptom perception and evaluation in childhood asthma. *Nurs Res* 1999;48:2–8.

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