

Can summer camp improve childhood asthma management? Outcomes from Augusta Area Asthma Camp

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Background: Childhood asthma is the most common chronic condition in the U.S., affecting 8.6% of children.¹ Asthma is particularly an issue in Georgia where 16.2% of children have been diagnosed with this condition.² Research suggests an association between pediatric asthma education and a decrease in emergency room visits and hospitalizations, and improved quality of life (QOL).^{3,4} The Augusta Area Asthma Camp, a free week-long educational day camp, was created to address a critical need for asthma education in the community by increasing parent and child knowledge and self-management of asthma symptoms while providing typical summer camp activities in a safe environment. Yet camp effectiveness has not been evaluated. This study explored differences in parent and child related asthma outcomes before and after attending Asthma Camp.

Methods: In summer 2016, children attending Asthma Camp along with their parents/legal guardian were consented and asked to complete pre- and post-camp surveys that collected information about asthma control, education, self-management of symptoms, and physical activity. Paired samples t-tests were used to determine pre- and post-camp differences.

Results: Children (n=43) ranged from 6-13 years (M=8.53, SD=1.80) with the majority Black (65.1%), male (62.8%), from single parent (41.5%), low-income (73.1%), and nonsmoking households (84.65%). Child asthma education scores were low both before (65%, SD=0.22) and after (69%,SD=0.11) camp. Children reported a significant increase in the number of physically active days/week pre (M=3.66, SD=1.99) to post (M=5.48,SD=1.33) camp $t(28)=-4.14, p=0.00$. While we noticed slight improvement in child symptoms (preM=5.38,SD=1.30; postM=5.66,SD=1.24), activity limitations (preM=5.90,SD=1.16; postM=6.01,SD=1.13), emotional function (preM=5.57,SD=1.68; postM=5.68,SD= 1.84), and total QOL (preM=5.47,SD=1.25; postM=5.76,SD=1.24) and parent management strategies (preM=3.19,SD=0.52; postM=3.31,SD=0.92) and support (preM=0.50,SD=0.57; postM=0.55,SD=0.59), differences were not statistically significant.

Conclusions: Asthma camp can increase child physical activity and shows promise for improving asthma education, self-management, and parental support. A larger sample and more sensitive measures may improve our ability to detect changes in the participants.

Key words: child asthma, physical activity, self-management, education

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