

**Association of Asthma Educators 2019
Poster Abstract Submission Page (DATA)**

**IMPROVING ASTHMA MANAGEMENT IN SCHOOL-AGED CHILDREN USING AN ECOLOGICAL
FRAMEWORK**

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Background: Pediatric asthma remains a public health concern. Children ages 5-14 years have the highest rates of asthma at 10.1%, with more than 50% reporting one or more asthma attacks and 18.3% of children younger than 18 years being hospitalized for asthma. These statistics highlight the need to improve asthma management for this age group.

An ecological perspective guided this study, focusing on school-aged children with asthma and their parents, examining the level influences impacting asthma outcomes. Achievement of well-controlled asthma is determined by individual, social, and environmental factors. These multiple layers of influence at the intrapersonal, interpersonal, institutional, community, and public policy levels have the potential to impact the ability to effectively manage asthma.

The objective of this study was to evaluate if use of an ecological approach improved asthma management skills for the child with asthma and their parents.

Methods: Using an ecological approach, and partnering with local elementary schools, *Open Airways for Schools*, an American Lung Association asthma management program for children with asthma, was implemented by undergraduate nursing students. Pre/posttest quasi-experimental design was used. Children completed 5 weekly sessions. Parents and children completed pre-and post-tests.

Results: N=99. Paired sample t-tests evaluated the impact of attending Open Airways. There was a statistically significant increase in asthma self-efficacy scores after attending the program ($p < .001$). Specific areas that improved included trigger identification at home ($p = .005$) and at school ($p < .001$), knowing asthma warning signs ($p = .018$) and what to do ($p = .035$), being able to relax and stay calm when wheezing or coughing ($p = .002$) knowing when to stay home from school ($p = .003$) and when to go to the hospital ($p = .019$). No significant difference was found for parents.

Conclusions: Through an ecological approach, undergraduate students are able to improve asthma management skills in children with asthma through use of *Open Airways*.