

Breathing & Belonging: Exploring How Emotional, Psychosocial and Environmental Factors Shape Childhood Asthma

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Background

- Internship placement at the Oasis Project in Homewood, PA through the PHUSP.
- About 6.7% of U.S children have asthma and the rates in parts of PA like Allegheny County (11%) are even higher. (Allegheny County Health Department, 2019)
- Many factors such as neighborhoods, exposure to pollution, poor housing, and limited healthcare access can make asthma worse, but an overlooked factor are emotions. (Lubrano et al., 2020)
- Youth in negative family environments had more severe asthma, especially when dealing with depression or anxiety. (Wood BL et al., 2007)
- Social emotional learning (SEL) can influence symptom awareness reporting and access to care. (Akinbami et al., 2016)

Objectives

Assess associations between environment and emotional articulation and childhood asthma severity.

Hypothesis

We hypothesized that a lack of emotional awareness and environmental triggers would be associated with higher asthma severity.

METHODS

We used the National Survey of Children's Health (NSCH) which collects data on children aged 0-17 on their physical and emotional health.

Analysis Plan

- We used Stata to perform a Chi-squared test to evaluate whether asthma severity was distributed differently across neighborhood condition and emotional articulation levels among children with asthma.

Environment and Emotions Can Significantly Influence Childhood Asthma Severity

		How Often Can This Child Recognize And Name Their Own Emotions?				
		Always/Most of the time	About Half of The Time	Sometimes/ Never	Total	
Asthma Severity	Mild	Observed	328	54	39	421
		Expected	319	51	51	
	Moderate/ Severe	Observed	158	23	39	220
		Expected	167	26	27	
	Total		486	77	78	641

Pearson chi2(2) = 9.8899 P-value = 0.007

Table 1

		In Your Neighborhood, Is There Poorly Kept or Rundown Housing?			
		Yes	No	Total	
Asthma Severity	Mild	Observed	338	2,143	2,481
		Expected	365	2,116	
	Moderate/ Severe	Observed	181	869	1,050
		Expected	154	896	
	Total		519	3,012	3,531

Pearson chi2(1) = 7.6878 P-value = 0.006

Table 2

Results

There was a statistically significant association between asthma severity and both emotional awareness and perceived neighborhood conditions. Children with moderate to severe asthma were more likely to have difficulty recognizing and naming their emotions. Separately, children with moderate to severe asthma were also more likely to live in poorly kept neighborhoods.



The Oasis Project Environmental Work (Before and After)

Discussion

This highlights the need for more integrated support systems, such as the Oasis Project.

- Collaborative networks that combine resources across sectors like education and environmental health for overall community development.
- The Oasis Project provides youth with mentoring, job opportunities and search all within a central campus.
- In future research, we aim to explore how these types of community-based interventions intersect with environmental/emotional exposures and their impact on asthma severity.

Limitations

- There may be confounding by other variables due to factors such as socioeconomic status, access to surveying and underlying health conditions
- Factors may independently influence both exposure levels and asthma outcomes

Conclusions & Recommendations

Among children, findings highlight the need for emotional and environmental supports in managing asthma.

- We recommend the Oasis Project incorporates childhood asthma awareness and how environment and emotions can affect severity.

References

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