



The Health Effects of Air Pollution on Children in Mott Haven, Bronx

Anisa Kurtesi WCSN, Selena Maragh WCSN, Silvia Salerno WCSN
Wagner College Evelyn L. Spiro School of Nursing

Introduction

Research shows that young children in the Mott Haven community have developed health issues due to the areas poor air quality brought upon air pollution (1). Our research question is How air pollution affects young children's health and how we can mitigate those harmful health effects. Our proposed solution to mitigate these adverse effects on their health is to create an educational program called "Get Some Fresh Air." This program will strive to raise awareness of air pollution in the Mott Haven community and its effects on children's health, as well as provide the necessary tools they can utilize to lessen the negative effects of air pollution.



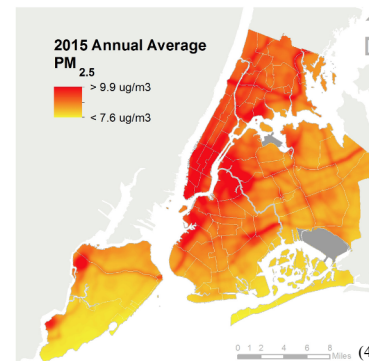
- ### Community Assessment
- Mott Haven, South Bronx, NY
 - 68.3% Hispanics and Latinos (2)
 - 27.7% non-hispanic African American(2)
 - In 2019 poverty rate in Mott Haven was 39.6% (2)
 - Deemed the third poorest neighborhood in NYC(1)
 - 1 in 6 adults are unemployed(1)
 - 59% of residents spend 30% of their monthly gross income on rent(1)
 - Top causes of death are heart disease and cancer (1)
 - 2nd highest rate of alcohol related hospitalization
 - 5th highest rate of drug related hospitalizations (1)
 - Highest rate of asthma hospitalization rate among children ages 5-14 (1)
 - Obesity rate of 33% (1)
 - 15% rate of diabetes (1)
 - Air pollution- Levels of PM25 (most harmful air pollutants) are 10 micrograms per cubic meter in Mott Haven compared to 9.1 (Bronx) and 8.6 (Citywide) (1)

- ### Problem
- Our problem is how air pollution affects young children's health in Mott Haven, Bronx.
 - Air pollution is defined as the presence of toxic chemicals in the air that affects an individual's health.(1)
 - Mott Haven is a low income area located in the Bronx and this area has a lot of factories and industrial buildings. These factories play a major role in increasing the pollution. (1)
 - The percentage of air pollution in Mott Haven is generally higher than other parts in the Bronx.
 - Recent studies have shown that about 20% of school children attend school near this area. (1)
 - Air pollution has caused young children to develop asthma. There has been about 647 visits of young children that have asthma in Mott Haven compared to the entire Bronx.(1)
 - Inhaling the bad quality of air affects children's lungs and causes them to have other major health problems. These problems affect children's growth and may cause a lapse in their health.
 - Children in Mott Haven are also having a rise in cases of hypertension, obesity and diabetes. These issues have been exacerbated from air pollution.(1)
 - The U.S. as a nation is being affected by air pollution and according to the World Health Organization (WHO) 93% of young children are affected by air pollution. Majority of these children live in urban areas and the BREATHE project believes children gets exposed when they commute to school. (1)
 - Children that have to commute by walking to school and back home are getting exposed twice. This makes their chances of getting sick really high.

- ### Proposed Solution
- Our proposed solution is an innovative health program, called "Get Some Fresh Air", that educates parents of Mott Haven on how to decrease environmental/household air pollution.
 - The program will hold assembly meetings for parents to attend to in schools. Parents will be given pamphlets so that they can have the presented information with them when coming home.
 - The specific community health goal is to increase awareness of air pollution and ways to decrease exposure to children.
 - Learning objectives:
 - Parents will learn that air pollution can lead to several health effects in children including asthma exacerbations, respiratory infections, cardiovascular diseases, and cancer.
 - Parents will be able to list which air pollutants, like lead and carbon monoxide, are harmful to children's health when exposed to them.
 - Parents will learn interventions that can decrease air pollution levels and apply them to their everyday lives to avoid exposure.
 - Interventions: Conserve energy and electricity at home, recycle and reuse, carpool, use public transportation, bike, or walk whenever possible, choose a cleaner commute, use environmentally safe cleaning products if possible, stop smoking, etc. (3)



NO SMOKING



References

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- Program activities:
- Smoking cessation
 - Air Now
 - Air Pollution Health Risk Assessment

