



An Anti-Smoking Curriculum Increases Health Literacy for Parents and Guardians of Children with Asthma in East Harlem



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Abstract: East Harlem, New York has among the lowest health indices compared to 41 other NYC communities. East Harlem is composed of predominantly Blacks, Latinos, and Immigrants who have been identified as vulnerable and underserved populations. Health literacy has been linked to poor health indices, making it a top priority for **IECCD**. A mixed-method exploratory study was conducted with parents and guardians of asthmatic children in East Harlem to assess the impact of participation in Dr. Betty's Smoke-Out Challenge, an anti-smoking curriculum developed to increase health literacy rates, teach graduate-level concepts, and provide leadership and communication skills. The parents and guardians received interactive, engaging tools to increase their self-efficacy and their readiness to change. The study assessed changes in attitudes and tobacco-use behaviors after participation in the anti-smoking curriculum. Quantitative data included pre- and post-knowledge-based tests to assess changes in health literacy. There was a 29.5% improvement in knowledge from pre-test to post-test. Qualitative findings of a telephone interview one month after the anti-smoking curriculum indicated that all current smoker participants intended to quit smoking within the next 6 months. Smokers reported a reduction in cigarettes smoked daily from 8 to 2 cigarettes. While 72.7% of the participants indicated having skills to quit smoking, 63.7% still had concerns about smoking, indicating a need for additional anti-smoking and health literacy programming. Participation in Dr. Betty's Smoke-Out Challenge significantly increased health literacy for the participating parents and guardians and positively impacted attitudes about smoking and tobacco use behaviors. These findings can aid healthcare providers and health administrators in understanding benefits of health literacy programming for healthcare practices. New initiatives with elected officials, community partners, community organizations, and **IECCD** to address the findings are currently underway.

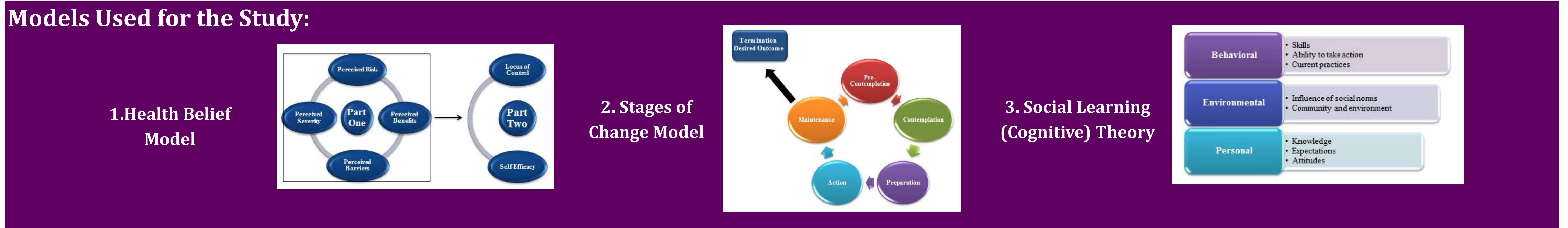
Background: Each year, greater than \$900 Billion are spent on the treatment of chronic diseases in the United States (CDC, 2014). Asthma has been documented as the most commonly-diagnosed chronic childhood disease (Perez-Rivera & Langston-Davis, 2007). New York State spent more than \$1.3 Billion in 2012-2013 for medical costs and lost productivity due to asthma (DiNapoli, 2014). Without preventive measures, costs will continue to rise. The Surgeon General's 2006 Report indicated that a causal relationship exists between parental smoking and a child's asthma symptoms (U.S. Department of Health and Human Services, 2006). East Harlem is a vulnerable population with the 2nd highest childhood asthma rates in New York City as well as the highest hospitalizations and Emergency Department visits in the city (Myers, Walters, & Perez-Rivera, 2012). Parents and guardians in East Harlem need health literacy to understand the negative impact of smoking on their child's asthma. Dr. Betty's Smoke-Out Challenge addressed this need with parents and guardians of children with asthma. The **IECCD** curriculum provides interactive activities using simplified, tailored graduate-level concepts to address knowledge, attitudes, and behaviors around smoking and childhood asthma. It encourages active engagement with parents, children, teachers, and healthcare providers. New initiatives are currently underway to address health literacy needs in East Harlem in collaboration with New York State 68th District Assemblyman Robert J. Rodriguez, MBA, a district with 160,000 of predominantly Blacks, Latinos, and Immigrants that are medically-underserved constituents with high Emergency Department utilization and high overall health expenditures.

- Goals:**
- Assess changes in health literacy after participation in the Dr. Betty's Smoke-Out Challenge Curriculum.
 - Assess changes in health behaviors and perceptions after participation in the Dr. Betty's Smoke-Out Challenge Curriculum.
 - Assess the possible benefits of implementing health education programming for parent and guardian populations to increase health literacy and improve their child's asthma management/health outcomes.

Description: A mixed-method exploratory study was conducted to assess changes in parent and guardian health literacy after participation in the Dr. Betty's Smoke-Out Challenge Curriculum. Dr. Betty's Smoke-Out challenge curriculum includes graduate-level concepts taught at a low-literacy level to teach individuals how to manage their health and promote healthy lifestyles.

Topics for discussion within the study included:

- Health indices of the East Harlem community to increase awareness about asthma as a chronic disease and the severity of asthma.
- The potential consequences of smoking and how it is related to asthma.
- The Impact of media advertisements on their decision to smoke or inability to quit
- Tips to reduce exposure to secondhand smoke and ways to share positive messages.
- Gaining Advocacy, leadership, and communication skills necessary to have an active voice in the community.
- Resources and services available if they are smokers to help them when they are ready to quit.



Methods: Parents and guardians were asked to participate in two (2) three (3) hour sessions of the Dr. Betty's Smoke-Out challenge curriculum. They were also asked to participate in a 10-15 minute telephone interview one (1) month after participation in the curriculum. Quantitative data for analysis was comprised of pre- and post-knowledge test scores collected before and after participation in the curriculum. Qualitative data was comprised of telephone interview responses. The quantitative and qualitative data were triangulated to assess for the strength of study findings as well as to verify the conclusions drawn from the two data types.

- Results:**
- Analysis of the quantitative data indicated a 29.5% change in parent and guardian health literacy rates from pre- to post-test.
 - Analysis of the qualitative data indicated that 100% of participants self-identifying as current smokers intended to quit within the next six (6) months.
 - Participants self-identifying as current smokers indicated a reduction in the number of cigarettes smoked daily from 8 to 2 after participation in Dr. Betty's Smoke-Out Challenge Curriculum.
 - 72% of the participants indicated having skills to quit smoking.
 - 63.7% still had concerns about smoking.
 - Triangulation of the data indicated that participation in the anti-smoking curriculum significantly increased health literacy and positively impacted attitudes about smoking and tobacco use behaviors.

Conclusions: Participation in Dr. Betty's Smoke-Out Challenge (Anti-Smoking) Curriculum significantly increased participant health literacy with as little as two (2) three (3) hour sessions. Participation in the curriculum also served to positively impact parent and guardian attitudes about smoking and tobacco use behaviors. Based on these findings and past literature, it is necessary to develop, implement, and provide continued health education on smoking and healthy lifestyles in order to improve health outcomes, manage chronic diseases such as asthma, and promote lifestyles for more quality years of life.

