

New intervention helps Latino parents of asthmatic children quit smoking

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Asthma is the most common chronic illness affecting Latino children in the United States, and secondhand smoke is a serious contributing factor. Now a new study from The Miriam Hospital's Centers for Behavioral and Preventive Medicine and Brown University suggests that clinically-based smoking cessation programs may not be enough to help Latino smokers with asthmatic children kick the habit.

In the study, Latino parents with an asthmatic child were more likely to quit smoking when they received a culturally-tailored intervention that provides feedback about how much [secondhand smoke](#) their children were exposed to, compared to parents who followed existing [smoking cessation](#) clinical guidelines. Researchers say these findings reinforce the importance of educating parents about how their own smoking can affect their children with [asthma](#).

The study appears in the February issue of the *Journal of Consulting and Clinical Psychology* in a special edition focused on smoking cessation in underserved populations and innovative treatments. It is the first study to target smoking cessation in Latino caregivers of asthmatic children.

"Caregivers who continue to smoke despite their child's asthma need an intervention that not only provides feedback about the harmful effects of cigarette smoke on themselves and their child, but also factors in their cultural values and readiness to quit," said the study's lead author, Belinda Borrelli, PhD, of The Miriam Hospital's Centers for Behavioral and [Preventive Medicine](#). "Our findings suggest that standard smoking

cessation clinical guidelines alone may only have limited success with this population."

Borrelli, who is also a professor of psychiatry/human behavior at The Warren Alpert Medical School of Brown University, adds that they targeted Latinos specifically for the study, given that 16.5 percent of Latinos smoke yet few smoking cessation programs have been developed specifically for the country's largest minority group. Meanwhile, asthma - which is exacerbated by secondhand smoke - is much higher among Latinos than other racial or ethnic groups.

Overall, asthma has now become the most common pediatric chronic illness in the United States, affecting an estimated 4.8 million children. More than half of American children under the age of 5 live in homes with at least one adult smoker, placing them at greater risk for a variety of illnesses, including asthma. Research has shown that these children take more asthma medications and use emergency services more frequently than asthmatic children who are not exposed to secondhand smoke.

Investigators identified 133 Latino [smokers](#) who were caregivers of a child with asthma. These caregivers were randomly assigned to receive one of the two smoking cessation interventions delivered in the home by a bilingual Latina health educator: a behavioral action model (BAM) and a precaution adoption model (PAM).

The BAM followed clinical guidelines that focus on problem-solving and building coping skills to help smokers who are ready to quit. Meanwhile, the PAM was intended to help parents better connect their smoking to their child's health by providing physiological feedback about [cigarette smoke](#) exposure. It was also designed to be consistent with the values of Latino culture, including the importance of family, communication and intimate relationships.

In addition to measuring carbon monoxide levels of parents in the PAM group, the research team also assessed children's secondhand smoke exposure by placing two nicotine monitors in the home for one week. They then mathematically converted these smoke levels into "cigarette equivalents," telling parents, "Your child was exposed to as much smoke as if she/he smoked "x" number of cigarettes him/herself the week that the sampler was placed."

Overall, secondhand smoke levels in the homes of both groups were measured at the beginning of the study and after three months, and parents' smoking status was assessed at the end of the study as well as at two-months and three-months post-study. According to investigators, approximately 28 percent of participants in the PAM intervention had quit smoking three months after treatment, compared to about 18 percent of those receiving the BAM intervention. Significant decreases in asthma-related illness were only observed in the children of participants in the PAM intervention.

"Theory-based treatments that have been effective in other areas of behavior change can be successfully applied to smoking cessation interventions," said Borrelli. "In addition, the integration of smoking cessation into well-accepted interventions like asthma education can help us proactively reach smokers who might not spontaneously seek help to quit smoking or who do not have ready access to primary care or preventive health services."

Overall, the study group was mostly female and included a range of Latino ethnicities, including Puerto Rican, Dominican, Central American, South American, Mexican and Cuban. More than half of the children of participants had been to the emergency department in the previous year and/or had been hospitalized for asthma. Although parents did not have to want to quit smoking in order to participate in the study, they all received a quit smoking self-help manual and an optional eight

weeks of nicotine replacement therapy, along with the home visits and phone calls from the health educator.

Defining special populations of smokers

Borrelli, who served as editor of this special issue of the journal, also authored a lead introductory article about next steps for special populations research and innovative treatments for smoking cessation. In it, she offers the first definition of "special populations" of smokers, classified as those who have at least a 10 percent higher smoking prevalence than the general population, have disproportionate tobacco-related health disparities, lack access to effective treatments, and are understudied in terms of longitudinal treatment trials. In addition to racial and ethnic minorities, this includes young adults with cancer, people with psychiatric disorders, and homeless individuals.

The article breaks new ground by providing eight criteria to determine whether evidence-based cultural adaptations are justified for smoking cessation treatment. For example, if the target population differs from the general public in terms of rates and patterns of smoking, burden of tobacco-related diseases, predictors of smoking behavior, or treatment engagement, then it may be necessary to tailor the intervention for that particular group. Borrelli also outlines the four phases of cultural adaptation - data collection, treatment modification, pilot test and outcomes - in order to standardize the process.

Provided by Lifespan

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