11-27-2021

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Recommended Citation

Berardi, V., Bostean, G., Ong, L., *et al*. The Role of Ethnicity and Nativity in the Correspondence between Subjective and Objective Measures of In-Home Smoking. *J Immigrant Minority Health* **24**, 1214–1223 (2021). https://doi.org/10.1007/s10903-021-01307-3

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HHS Public Access

Author manuscript

J Immigr Minor Health. Author manuscript; available in PMC 2022 December 27.

Published in final edited form as:

J Immigr Minor Health. 2022 October ; 24(5): 1214–1223. doi:10.1007/s10903-021-01307-3.

The Role of Ethnicity and Nativity in the Correspondence between Subjective and Objective Measures of In-Home Smoking

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Abstract

Background: Studies are needed to understand the association between self-reported home smoking bans and objective measures of in-home smoking according to smokers' ethnicity/nativity.

Methods: Data came from a trial that used air particle monitors to reduce children's secondhand smoke exposure in smokers' households (N = 251). Linear regressions modeled (a) full home smoking bans by ethnicity/nativity, and (b) objectively measured in-home smoking events, predicted by main and interaction effects of self-reported home smoking bans and ethnicity/nativity.

Results: Among smokers reporting < a full ban, U.S.-born and foreign-born Latinos had fewer in-home smoking events than US-born Whites ($p<0.001$). Participants who reported a full smoking ban had a similar frequency of smoking events regardless of ethnicity/nativity.

Discussion: Self-reported home smoking bans can be used as a proxy for in-home smoking. Establishing smoking bans in the households of US-born White smokers has the largest impact on potential exposure compared to other ethnic/nativity groups.

Keywords

secondhand smoke; health disparities; home smoking ban; air monitoring

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Declaration of Interests

The authors have no conflicts of interest to declare.

Introduction

Secondhand smoke (SHS) exposure is responsible for more than 42,000 deaths and $6.6 billion in lost productivity every year in the United States [1]. The home is the primary place where children and adults are exposed. Disparities exist in SHS exposure by ethnicity and nativity, with Latinos being less likely than other racial/ethnic groups to be exposed to SHS in the home [2]. This is at least partially due to lower smoking rates among Latinos, particularly those who are foreign-born [3–5]. SHS exposure is also influenced by home smoking bans, which can reduce smoking and change tobacco attitudes and norms [6]. Consistent with findings for SHS exposure, Latinos are more likely to report full home smoking bans (i.e., no smoking is allowed among anyone, anywhere in the home), compared with non-Latino Whites and non-Latino Blacks [7, 8]. However, gaps remain in our understanding of in-home SHS exposure, specifically regarding whether the effects of home smoking bans on SHS smoke in the home differ by ethnicity/nativity groups.

Most prior studies of SHS exposure have relied on self-reported measures that either asked respondents to recall how often they have been exposed to smoke in their home or used reports of home smoking bans as proxies for in-home exposure [9]. When using such instruments, recall and/or social desirability biases may result in respondents over-reporting home smoking bans and/or under-reporting children's SHS exposure. For instance, studies have found inconsistencies between self-reported smoking status and cotinine, a component of tobacco smoke [10]. leading to calls for additional research into understanding SHS exposure among children and determining whether parent self-reports are reliable [11]. To better understand the validity of self-reported measures (e.g., reported home smoking ban) as proxies for SHS exposure, studies are needed that assess the concordance of these measures with objective assessments of in-home smoking. Air particle monitors are a tool that can be used to objectively characterize SHS exposure and meet this need; however, the challenges (e.g., high cost) associated with these devices have limited their use to relatively few studies, most with small sample sizes and/or very short monitoring periods [12, 13].

In seeking to fully understand the relationship between self-reported home smoking bans and objectively measured in-home smoking, potential ethnicity/nativity differences should be considered since previous studies have found that the accuracy of self-reported tobacco outcomes can vary by race/ethnicity. For example, in a US national study, significant ethnic and gender differences were found in the disparity between self-reported smoking status and objective, bio-verified measures of smoking [14]. Furthermore, ethnic group differences in sensitivity to the modality of tobacco survey administration have also been found [15], with cross-cultural variation in social desirability biases suggested as a potential explanatory mechanism [16]. Ethnic/nativity differences in social desirability may also differentially affect the accuracy of reported home smoking bans. It is also plausible that ethnic/nativity groups have varying cultural norms concerning who is required to adhere to home smoking bans. For example, a study of Latinos found that although households with smokers widely reported implementing full home smoking bans (no one allowed to smoke inside the home), participants reported difficulty enforcing the rules, particularly when the smoker was an

older male relative [17]. Household dynamics like this may affect the degree to which self-reported bans are associated with reduced SHS exposure in homes.

The current study investigates the associations between self-reported home smoking bans, objectively measured in-home smoking via an air particle monitor, and ethnicity/nativity by examining: (1) ethnicity/nativity disparities in self-reported home smoking bans; (2) whether home smoking bans predict objectively measured in-home smoking events; and (3) whether ethnicity/nativity moderates the association between self-reported home smoking bans and objectively measured in-home smoking events. To our knowledge, this is the first study to examine these associations. Given the large disparities in smoking between US-born and foreign-born groups [3], and the potentially varying cultural norms around home smoking bans, the inclusion of ethnicity/nativity in our analyses represents a novel contribution to the field. We expect our findings to allow researchers and public health practitioners to gain a more nuanced understanding of the validity of self-reported home smoking bans as a measurement tool. If ethnicity/nativity does moderate the relationship between home smoking bans and air particle measures, then fully understanding this dynamic will assist public health practitioners in better targeting and tailoring home SHS interventions towards groups at greatest risk for exposure.

Methods

Study Design

Data for this study came from Project Fresh Air (PFA), a randomized controlled intervention trial that used real-time feedback to reduce children's in-home SHS exposure; prior studies document full details of the PFA study design [18, 19]. In PFA, 298 households in San Diego County, CA were enrolled with the following inclusion criteria: parent/guardian 18 years or older (target parent); at least one child under 14 years of age in the household (youngest child was the target child); at least one smoker living in the household who smoked inside or outside near the home; no plans to move outside the County within 4 months; and speaks English or Spanish. The current study focuses on participants' enrollment during an approximately one-week baseline period between PFA personnel's first and second visit to the home, prior to the initiation of the intervention. The study was approved by the Institutional Review Board of San Diego State University.

During the first home visit, trained research assistants installed two Dylos DC1700 air quality monitors in the home. A main room monitor was placed in the room nearest to where most smoking occurred (measured via self-report) and a second monitor was placed in the child's bedroom; only measurements from the main room monitor was used in this study. The monitors were placed at least three feet from the ceiling and one foot from the nearest wall and recorded a measure of particulate matter less than 2.5 μm (PM2.5) every ten seconds.

To gather demographic data and information about household particle generating behaviors over the preceding seven days, PFA personnel administered a computer-assisted, face-to-face interview during the second home visit. The survey was completed by the individual who was consented into the study and participants were provided between $20-$35 for

completing the interview. The first 36 households enrolled in PFA were part of a pilot study sample and were not administered the full questionnaire; therefore, they were eliminated from all analyses. Additionally, seven homes with < 5 days of air particle measures, two homes with incomplete information on the birth country of the target parent, and two homes who did not indicate whether a home smoking ban was in effect were excluded. This led to an analytic sample size of 251 households; participant demographics are shown in Table 1.

Measures

Dependent variables

Home smoking ban.: Smoking ban level in homes was assessed based on the following three questions: “Is smoking allowed anywhere inside the home?”; “How is tobacco smoking handled in your home?”; and “Are certain people or special guests allowed to smoke in your home?”. Following previous research [20, 21], the home smoking ban variable was dichotomized as: “full ban”, with no one allowed to smoke anywhere in the home at any time, and “less than full ban” if there were no restrictions or some restrictions.

In-home smoke events.: Measurements from the main air particle monitor during the approximately one-week baseline period were used as an objective measure of in-home smoke events which implied someone was smoking indoors and potentially exposing children and nonsmokers to SHS. Specifically, we counted peak events (PEs), which is a measure developed to capture distinct instances of air particle generation that are consistent with tobacco smoking [19]. We used the PE metric since home smoking bans are explicitly designed to eliminate this type of exposure. PEs were developed to capture events that rapidly increased to a level above 15,000 counts per 0.01 cubic feet and remained there for an extended period of time. A detailed description of the development and validation of the PE measure can be found elsewhere [19]. Each home was characterized by the daily mean of the number of PEs during the baseline period.

Key independent variables

Ethnicity/Nativity.: Consistent with prior studies [22], we created an “ethnicity/nativity” measure. Participants’ nativity and race/ethnicity were collected during the interview process, where they were asked to identify the country in which they were born, and to specify their race (response options: “American Indian/Alaskan Native”, “Asian”, “Native Hawaiian/other Pacific Islander”, “Black/African American”, “White/Caucasian”, and “Other”) and ethnicity (“Do you consider yourself Hispanic or Latino?”). We combined these measures to create a measure coded as US-born White (reference), US-born Latino, US-born Black, US-born non-Latino Other, Foreign-born Latino, and Foreign-born non-Latino. Due to the small sample size of the FB non-Latino group, we were unable to further disaggregate this last group.

Control variables

Age (target parent/target child).: The person completing the survey reported their age in years. The age of the target child (youngest child of the household) in years was also included, based on previous studies suggesting that home smoking bans are more restrictive

in homes with younger children [21]. Target child age was positively skewed, so it was log-transformed in all regression models.

Sex (target parent).: The person completing the survey reported their sex as male (reference group) or female.

Household income.: Participants were asked to report their total combined household income before taxes for the year prior to the study. The value includes income from wages, salaries, social security, retirement, and help from relatives or friends. Household income was dichotomously coded as households reporting less than or equal to the median reported income, $30,000 USD annually (reference group), and households with more than $30,000 USD annually.

Education level.: Participants' educational attainment was measured by asking respondents their highest level of education completed. The variable was coded dichotomously as "less than high school" (reference group) and "high school graduate or higher."

Number of smokers in home.: Number of smokers in the household was measured as the number of people residing in the home that have smoked over 100 cigarettes in their lifetime and now smoke some or all days [23].

Number of children in home.: Respondents were asked to provide information about the number of children (under age 18) living in the household.

Number of bathrooms.: The number of bathrooms in the house, which serves as a rudimentary proxy for home size, was determined during the initial visit by PFA personnel.

Statistical Analyses

All analyses were conducted using R statistical software. We first calculated descriptive statistics for the sample characteristics (Table 1). Bivariate associations of all variables with ethnicity/nativity were then tested (Table 2) using ANOVA for continuous measures and χ^2 tests for categorical variables. Data were missing from 24 participants for target parent age, 26 participants for household income, and 2 participants for number of bathrooms.

Logistic regressions (Table 3) estimated the odds of having a full home smoking ban. We conducted both bivariate regressions, with each independent variable predicting smoking ban, and a fully adjusted model controlling for confounding factors. For both scenarios, multiple imputation with chained equations was used so that the full sample size could be retained. Ten imputations, each using all non-missing variables, were performed via predictive means matching for target parent age, number of bathrooms, and household income. Regression models were fit for each imputed data set and then pooled to yield a final outcome.

In-home PEs were modeled via Ordinary Least Squares (OLS) regression that used ethnicity/nativity, home smoking ban, and demographic covariates as predictors (Table 4). PEs were log transformed (after adding 1 to account for homes with 0 PEs) because

of its highly skewed distribution and diagnostics showing better fit of models using the transformed variables. We fit both (i) a main effects model and (ii) an interaction model that assessed whether ethnicity/nativity moderated the association between home smoking bans and PEs. Both models used a multiple imputation procedure similar to the one described above for the OLS models. Additionally, to calculate Cohen's *d* as a measure of effect size for the ban level predictor, the average residual square error over all imputed models was calculated and then divided by the pooled estimate for the ban level regression coefficient.

Results

Table 1 presents the characteristics of the study participants. Regarding home smoking, 82% of the sample reported a full smoking ban in the home, and the subjective air monitor detected a mean of 2.62 PEs in the sample households during the approximately one-week data collection time frame. The majority of the sample was US-born, with US-born White and US-born Latinos each representing 25% of the sample, 15% being US-born Black, and 16% being US-born Others. Approximately 17% of the sample was foreign-born, with 13% being foreign-born Latinos and 4% being foreign-born non-Latino. Over 95% of the target parents were women and the average age was 33.12 years. The majority of the sample (57%) reported less than $30,000 annual household income, and 41% had less than a high school education. The mean age of the target child was 4.28 years old (median age = 3.3 years). On average, the households had 1.68 bathrooms in their homes, 2.16 children, and 1.54 smokers per household.

Table 2 presents ethnicity/nativity differences in home smoking bans, PEs, and sociodemographic characteristics. There was no statistically significant difference in the prevalence of full smoking bans by ethnicity/nativity. In-home PEs significantly varied by ethnicity/nativity ($p = 0.0057$). The number of PEs was highest among the US-born non-Latino (4.09), followed by US-born Blacks (3.82), US-born Whites (3.09), US-born Latinos (1.50), foreign-born non-Latinos (1.40), and foreign-born Latinos (1.10). Target parent age, household income, education, the number of smokers in the house, the number of bathrooms in the home, and the number of smokers in the home also significantly varied across ethnicity/nativity groups.

Table 3 presents odds ratios from logistic regressions predicting a full home smoking ban. In bivariate and fully adjusted models, there were no ethnicity/nativity differences in self-reported home smoking bans. Only age of the target child was a statistically significant predictor of reporting a full home smoking ban, with lower odds of reporting a full ban among families with older children (OR = 0.60, $p = 0.003$) in the bivariate model; this result was relatively unchanged in the fully adjusted model (OR = 0.54, $p = 0.003$).

Table 4 presents the OLS regression results predicting PEs. In the main effects model (Model 1), the presence of a full smoking ban was associated with fewer peak events compared to those with less than a full ban ($\beta = -0.86$, $p < 0.001$). There were significant ethnicity/nativity differences in objective smoke in the home, with US-born Latinos ($\beta = -0.35$, $p = <0.001$) and foreign-born Latinos ($\beta = -0.51$, $p < 0.001$) having fewer PEs compared to US-born Whites, net of controls. Those reporting a higher household income

had fewer PEs compared with lower income households ($\beta = -0.22$, $p = .020$). Lastly, the number of bathrooms in the house was negatively associated with PEs ($\beta = -0.28$, $p < 0.001$).

The interaction model in Table 4 (Model 2) revealed that ethnicity/nativity moderated the association between self-reported home smoking bans and PEs. Among those with less than a full ban, US-born Latinos ($\beta = -1.02$, $p = 0.001$) had significantly fewer PEs compared to US-born Whites. For those reporting a full ban, a floor effect was present whereby the number of PEs was similar across ethnic/nativity groups. Because of this consistency as well as the relatively high number of PEs in the households of US-born White participants without a home smoking ban, the change in PEs associated with the establishment of a ban was significantly larger for US-born Whites ($\beta = -1.27$, $p < 0.001$) than for US-born Latinos ($\beta = 0.79$, $p = 0.018$). Similar, but non- significant, patterns were also noted when comparing other ethnic group to US-born White smokers, with foreign-born Latinos most closely resembling the results seen for US-born Latinos.

Cohen's *d* for the ban level predictor was 1.29 in the main effects model and 1.90 in the interaction model, indicating large effects.

Discussion

This study extended the literature on potential SHS exposure by examining the associations among ethnicity/nativity, self-reported home smoking bans, and an objective measure of in-home smoking measured by an air particle monitor. Three main findings addressed our research questions. First, while we found no ethnicity/nativity differences in self-reports of full home smoking bans, there were significant differences in objectively measured smoking events. Second, reporting a full home smoking ban was significantly associated with lower objectively measured in-home smoking. Third, ethnicity/nativity moderated the association between home smoking bans and objectively measured smoking events, with this effect being due to differential levels of PEs across ethnic/nativity groups in homes without a ban, compared to relatively similar levels when a ban is established. These findings have important methodological and substantive implications for future studies, as well as implications for public health practitioners, as we discuss below.

While all groups were equally likely to report a full home smoking ban, our results revealed significant differences in objectively measured in-home smoking events by ethnicity/nativity. Latino smokers, both US-born and foreign-born, had significantly fewer PEs than non-Latino White smokers. This is consistent with the literature showing that: (a) Latinos have among the lowest in-home SHS exposure [5, 3, 4], and (b) Latinos who smoke are more likely to be light and non-daily smokers compared with other racial/ethnic groups [24–26]. However, in contrast with other studies [27, 28], we did not find disparities in-home smoking between non-Latino Whites and other ethnicity/nativity groups (beyond Latinos). It is plausible that our sample sizes for the non-Latino, non-White groups were too small to detect differences. The lack of ethnicity/nativity differences may also reflect the tobacco control environment in the study area (San Diego, CA). California was one of the pioneering states to implement extensive tobacco control policies focused on changing smoking norms

and behaviors [29]. By the early 2000s, smoking prevalence among Californians had been drastically reduced compared with the rest of the nation [29, 30], and calls for smoking bans within designated areas (i.e. workplace, school, homes) emerged as a popular approach by which to reduce smoking [31, 32]. As a result, the state-wide trend towards tobacco use reduction and the high prevalence of full home smoking bans across all ethnicity/nativity groups may play a role in the lack of differences in household smoke exposure across these ethnicity/nativity groups.

Our findings also indicated that the presence of a self-reported full home smoking ban is associated with fewer PEs, and that the level of smoking in homes that have established bans is relatively similar across ethnicity/nativity groups. This outcome highlights both the effectiveness of home smoking bans at reducing SHS within households and population disparities in SHS exposure. Because US-born White households have the highest in-home SHS exposure when a home smoking ban has not been established, the protective effect of a full smoking is largest for this group and, consequently, establishing a home smoking ban is likely to have a large impact on household members' health. For ethnic/nativity groups with lower levels of in-home smoking when a ban is not present (e.g., US-born Latinos), alternative strategies such as a focus on cessation may produce more profound improvements in the health of household occupants.

These findings should be interpreted in the context of several limitations. First, the air particle monitors react to particles from any source, not just cigarettes. So it is not possible to differentiate between behaviors such as tobacco smoking and e-cigarette use, which have different norms concerning indoor use. While previous work has shown that the self-reported use of e-cigarettes was not associated with differential particle outcomes [33], it is possible that more precise, source-specific monitors may be able to detect such differences and therefore lead to different outcomes. Second, because our sample is primarily composed of low income and low education households, our results might not be representative of the broader population. Third, the study was not explicitly designed to examine differences in home smoking bans or PEs by ethnicity/nativity; therefore, the sample size for certain ethnicity/nativity groups was small. This has the potential to limit the degree to which these groups reflect the larger population. Future studies investigating the moderating effect of ethnicity/nativity on home smoking bans and SHS exposure should use larger sample sizes. Fourth, while our findings—especially regarding low SHS exposure among Latino smokers—are generally consistent with ethnicity/nativity disparities documented in other smoking studies [3, 5, 8, 4], the size of the reported associations are small.

Despite these limitations, this study extends our understanding of SHS exposure in the home, being the first, to our knowledge, to use objective measures to assess ethnicity/nativity differences in the report and execution of an in-home smoking ban. In terms of methodological considerations, the results suggest that self-reports of home smoking bans reasonably approximate objective measures of smoking events. These findings also have implications for both researchers and public health interventionists concerning the most impactful strategies for protecting the health of non-smoking household members (e.g. home smoking ban versus cessation) in different ethnic/nativity groups. However, more work is needed to examine the cross-cultural considerations of self-reported SHS exposure including

examinations of family dynamics and other types of smoking such as cannabis and vapes. Overall, this study provides a more nuanced understanding of in-home smoking dynamics and suggests that researchers and practitioners can refine and target SHS reduction strategies in order to reduce SHS exposure in the home.

Acknowledgements

Research reported in this publication was supported by Grant Number R01HL103684 awarded to MFH from the National Heart, Lung, and Blood Institute of the National Institutes of Health. LO was supported by the 2019 Summer Undergraduate Research Fellowship program.

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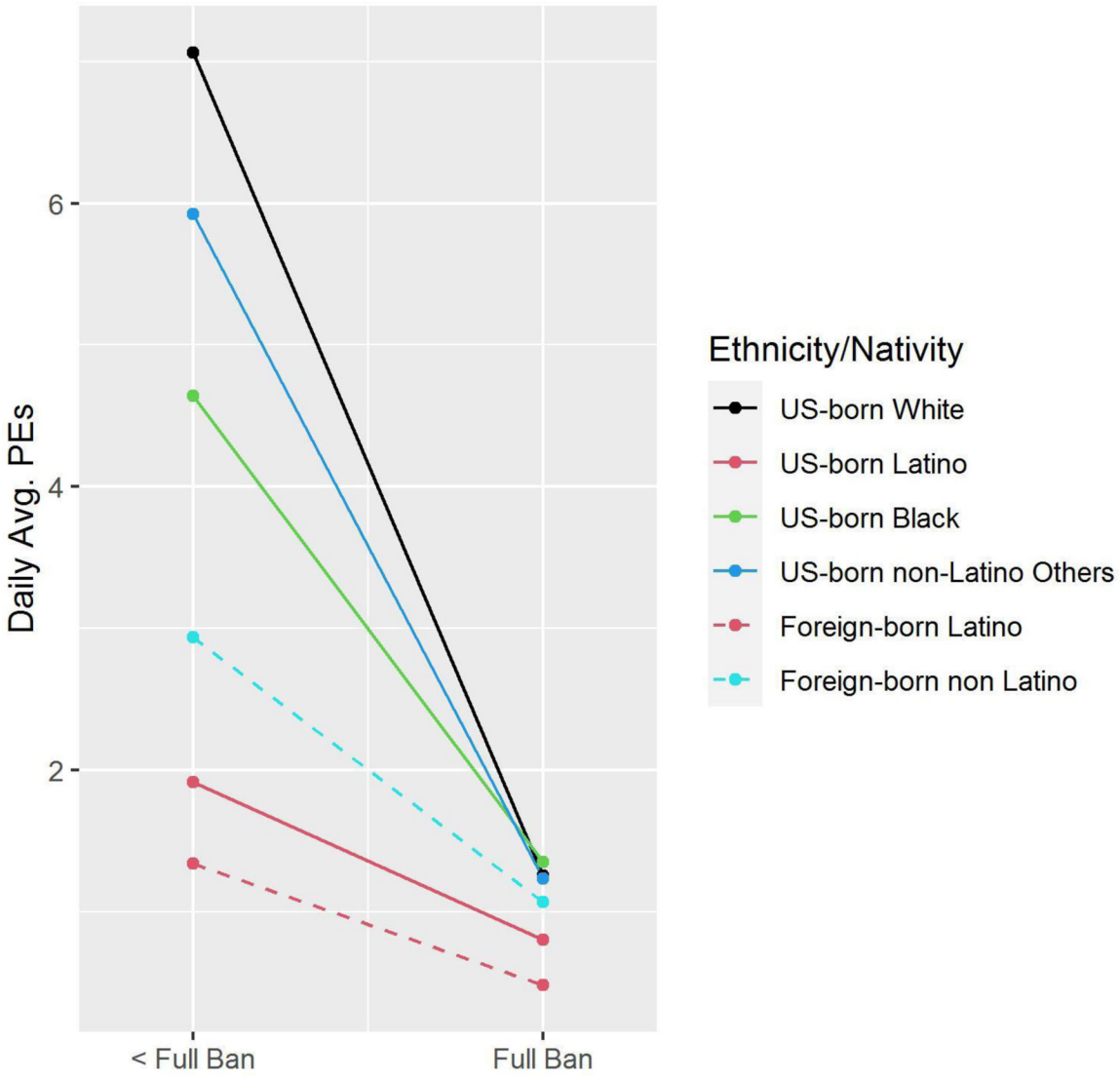

Figure 1:
Estimated mean number of daily Peak Events (PEs) in homes with less than a full home smoking ban and a full smoking ban, stratified by ethnicity/nativity

Table 1.

Sample Descriptives ($N = 251$)

Dependent Variables	
Smoking ban status, %	
Full home smoking ban	82.07
< Full home smoking ban	17.93
Peak events, Mean (Std. Dev.) [M (SD)]	2.62 (4.59)
Independent Variables	
Ethnicity/Nativity, %	
US-born White	25.50
US-born Latino	25.50
US-born Black	15.54
US-born non-Latino Other	15.94
Foreign-born Latino	13.15
Foreign-born non-Latino	4.38
Target parent age, M (SD)	33.12 (8.82)
Target parent sex, %	
Female	95.22
Male	4.78
Household income, %	
< $30,000	56.89
≥$30,000	43.11
Target parent education, %	
< High school	41.43
High school graduate or higher	58.57
Target child age, M (SD)	4.28 (3.75)
Number of baths, M (SD)	1.68 (0.66)
Number of children in home, M (SD)	2.16 (1.15)
Number of smokers in home, M (SD)	1.54 (0.85)

Note:

Households enrolled in the study included a target parent, who completed all survey material plus a target child, who was the youngest child living in the home.

Table 2.

Socio-demographic Characteristics by Ethnicity/Nativity.

	Ethnicity/Nativity						
	U.S.-born White (*n*= 64)	**U.S.-born Latino (*n*= 64)**	**U.S.-born Black (*n*=39)**	**U.S.-born non-Latino Others (*n*= 40)**	**Foreign-born Latino (*n*=33)**	**Foreign-born non-Latino (*n*=11)**	***p*-value**
Smoking ban status, %							0.125
Full home smoking ban	12.50	18.75	28.21	25.00	6.06	18.18	
< Full home smoking ban	87.50	81.25	71.79	75.00	93.94	81.82	
Daily PEs, Mean (Std. Dev.) [M (SD)]	3.09 (5.08)	1.50 (2.39)	3.82 (4.74)	4.09 (7.09)	1.10 (1.45)	1.40 (2.45)	**0.007**
Target parent age, M (SD)	32.50 (7.25)	30.8 (7.87)	35.9 (10.70)	32.2 (9.89)	37.0 (8.82)	30.9 (6.11)	**0.008**
Target parent sex, %							0.630
Female	93.75	96.88	94.87	92.50	100.00	90.91	
Male	6.25	3.12	5.13	7.50	0.00	9.09	
Household income, %							**0.011**
< $30,000	51.79	58.18	63.89	47.37	80.00	20.00	
≥$30,000	48.21	41.82	36.11	52.63	20.00	80.00	
Education, %							**0.002**
< High school	34.38	43.75	41.03	30.00	72.73	18.18	
High school graduate or higher	65.62	56.25	58.97	70.00	27.27	81.82	
Target child age, M (SD)	3.81 (3.32)	3.86 (3.30)	5.49 (4.34)	4.05 (4.34)	5.08 (4.11)	3.63 (2.01)	0.165
Number of baths, M (SD)	1.80 (0.70)	1.68 (0.66)	1.62 (0.62)	1.71 (0.63)	1.26 (0.44)	2.40 (0.52)	**<0.001**
Number of children in home, M (SD)	2.06 (1.08)	2.28 (1.15)	2.03 (1.22)	2.15 (1.17)	2.27 (1.28)	2.09 (1.04)	0.846
Number of smokers in home, M (SD)	1.62 (0.86)	1.45 (0.80)	1.41 (0.85)	1.80 (0.91)	1.15 (0.57)	2.18 (0.98)	**0.002**

Notes:

p-values come from chi-square tests for categorical variables and ANOVA for continuous variables

p-values < 0.05 (two-tailed test) are shown in **bold**

Table 3.

Bivariate and Multiple Logistic Regressions Predicting Full Home Smoking Ban (vs. < Full Ban)

	Bivariate Models				Fully Adjusted Model			
	Odds Ratio	**Log Odds**	**Std. Error**	***p*-value**	**Odds Ratio**	**Log odds**	**Std. Error**	***p*-value**
Ethnicity/Nativity (U.S.-born White = ref)								
US-born Latino	0.62	−0.48	0.50	0.334	0.61	−0.50	0.52	0.339
US-born Black	0.36	−1.01	0.52	0.052	0.42	−0.87	0.57	0.126
US-born non-Latino Other	0.43	−0.85	0.53	0.108	0.36	−1.01	0.55	0.069
Foreign-born Latino	2.20	0.79	0.82	0.334	2.86	1.05	0.88	0.235
Foreign-born non-Latino	0.64	−0.44	0.87	0.611	0.70	−0.35	0.92	0.707
Target parent age	0.98	−0.02	0.02	0.292	1.00	0.00	0.02	0.938
Target parent sex (ref=male)	1.57	0.45	0.69	0.517	1.63	0.49	0.77	0.520
Household income ≥$30,000 (ref = < $30,000)	1.35	0.3	0.35	0.382	1.52	0.42	0.4	0.303
High school graduate or higher (ref = less than HS)	1.45	0.37	0.33	0.265	1.92	0.65	0.38	0.086
Target child age *	0.60	−0.51	0.17	**0.003**	0.54	−0.61	0.2	**0.003**
Number of baths	0.81	−0.21	0.25	0.395	0.77	−0.26	0.29	0.367
Number of children in home	0.90	−0.10	0.14	0.476	0.94	−0.06	0.15	0.677
Number of smokers in home	0.78	−0.25	0.19	0.190	0.74	−0.30	0.22	0.177

Notes:

* Variable was log-transformed

p-values < 0.05 (two-tailed test) are shown in **bold**

Table 4.

Linear Regressions Predicting Mean Daily Particle Smoke Events (PEs)

	Model 1 (Main Effects)			Model 2 (Interaction)		
	Coefficient (β)	**Std. Error**	***p*-value**	**Coefficient (β)**	**Std. Error**	***p*-value**
Full home Smoking Ban (ref = less than full ban)	−0.86	0.12	**<0.001**	−1.27	0.26	**<0.001**
Ethnicity/Nativity (ref = U.S.-born White)						
US-born Latino	−0.35	0.12	**<0.001**	−1.02	0.31	**0.001**
US-born Black	−0.01	0.14	0.950	−0.36	0.31	0.256
US-born non-Latino Other	0.00	0.14	0.980	−0.15	0.32	0.635
Foreign-born Latino	−0.51	0.16	**<0.001**	−1.24	0.53	**0.021**
Foreign-born non-Latino	−0.17	0.23	0.440	−0.72	0.54	0.182
Target parent age	0.00	0.01	0.840	0.00	0.01	0.818
Target parent sex (ref=male)	0.03	0.20	0.880	0.04	0.20	0.837
Household income ≥$30,000 (ref = < $30,000)	−0.22	0.09	**0.020**	−0.23	0.09	**0.017**
High school graduate or higher (ref = less than HS)	−0.08	0.09	0.430	−0.06	0.10	0.508
Target child age *	0.04	0.04	0.320	0.04	0.04	0.370
Number of baths	−0.28	0.07	**<0.001**	−0.27	0.07	**<0.001**
Number of children in home	0.02	0.04	0.600	0.01	0.04	0.711
Number of smokers in home	0.06	0.05	0.280	0.05	0.05	0.358
Interaction (ethnicity x ban)						
US-born Latino x full ban	-	-	-	0.79	0.33	**0.018**
US-born Black x full ban	-	-	-	0.40	0.35	0.255
US-born Others x full ban	-	-	-	0.14	0.36	0.688
Foreign-born Latino x full ban	-	-	-	0.82	0.55	0.141
Foreign-born non-Latino x full ban	-	-	-	0.63	0.59	0.288

Notes:

HS = High School

Dependent variable was log-transformed

* Variable was log-transformed

p-values < 0.05 (two-tailed test) are shown in **bold**