

# Perceived social and environmental correlates of smoking in the home in households with children

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## Background

- During 2007-2008, 18.2% of children 3-11 years and 17.1% of children 12-19 years lived with someone who smoked inside the home. (CDC, 2010)
- Children who live in households with at least one in-home smoker have significantly higher serum cotinine levels than those who do not. (CDC, 2010; Marano et al., 2009)
- Socioeconomic disparities in in-home smoking for families with children include: (Marano et al., 2009)
  - Education:** 24.9% (95% CI: 18.9, 32.2) for <12 years vs. 11.8% (95% CI: 9.0, 15.4) for >12 years
  - Income:** 26.4% (95% CI: 20.2, 33.7) for <\$20,000 annual household income vs. 15.5% (95% CI: 13.0, 18.5) for higher income
- Non-Hispanic white and black children have significantly higher rates of exposure to in-home smoking than Hispanic children. (Marano et al., 2009; Singh et al., 2010)
- To date, studies have focused on individual and household predictors of in-home smoking.

## Theoretical framework

The **social ecological model** considers multiple levels of factors (e.g., individual, interpersonal, community, policy) which influence behavior change. (Glanz et al., 2010)

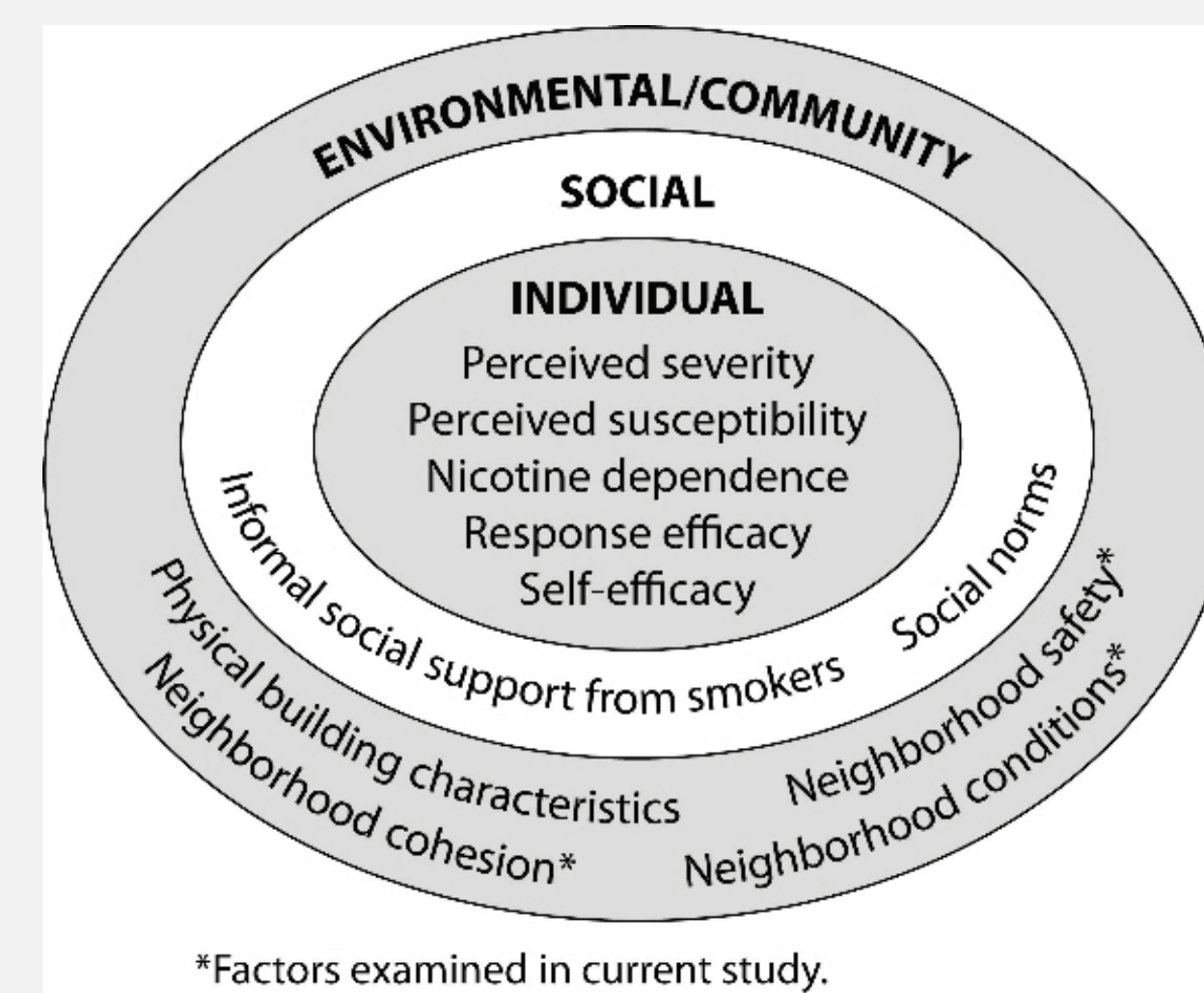


Figure 1. Social ecological model for in-home smoking

## Methods

**Research question:** *To what extent are social and environmental factors associated with in-home smoking among households with smokers after controlling for individual and household demographics?*

**Data source:** 2007 National Survey of Children's Health (NSCH), a random-digit dialed survey of households with non-institutionalized children less than 18 years of age (CAHMI, 2007). National-level response rate was 46.7%.

**Sample:** Children living in households where anyone smoked tobacco and a mother was present (n=20,328).

Table 1. Description of measures used in analysis.

<b>Smoking behaviors</b>	Does anyone living in your household use cigarettes, cigars, or pipe tobacco? Does anyone smoke inside [the child's] home?
<b>Neighborhood safety</b>	Low = Respondent felt the child is never or sometimes safe in their community or neighborhood High = Respondent felt the child is usually or always safe
<b>Neighborhood conditions</b>	Poor = Respondent reported one or more detracting elements (litter or garbage; poorly kept or rundown housing; or vandalism) in the neighborhood Good = Respondent reported no detracting elements
<b>Neighborhood cohesion</b>	Low = Respondent disagreed with at least one of four statements about neighbors helping each other High = Respondent agreed with all of these statements
<b>Individual &amp; household</b>	Mother's education, health status; single mom status; child's age, race/ethnicity, health; parental aggravation; poverty level

**Analysis:** Proportions and logistic regression in STATA 10.1, using survey commands for complex survey design and weights (Blumberg et al., 2007). Single imputation was used for poverty level.

## Results

- Sample was racially and socioeconomically diverse (Table 2)
- Overall, 27.9% (95% CI: 26.6, 29.3) of children lived in a home where someone smoked inside

## Results, cont.

Table 2. Demographic characteristics of children living in households with at least one tobacco user (n=20,328)

	Percent (%)	95% CI
Child's race Hispanic	17.4	(15.8, 19.0)
Child's race Black, non-Hisp	13.9	(12.8, 14.9)
Single mother	25.2	(23.8, 26.6)
Mother's education <HS	17.0	(15.6, 18.4)
<200% FPL	53.0	(51.4, 54.7)

- Higher poverty level, non-Hispanic race, older child age, mother's education less than high school, single motherhood, and poor mother's health were significantly associated with higher odds of in-home smoking (data not shown)

Table 3. Prevalence of social/environmental factors by in-home smoking status and predictors of in-home smoking

Factors	% with each factor		OR	AOR <sup>a</sup>
	No in-home smoking	In-home smoking		
Low neighborhood safety	14.0%	20.1%	<b>1.54 (1.28, 1.86)</b>	1.01 (0.82, 1.25)
Poor neighborhood conditions	32.0%	43.5%	<b>1.63 (1.42, 1.88)</b>	<b>1.30 (1.11, 1.51)</b>
Low neighborhood cohesion	19.0%	26.5%	<b>1.53 (1.29, 1.82)</b>	<b>1.26 (1.05, 1.52)</b>

<sup>a</sup>Adjusted for individual and household covariates as well as other social/environmental variables. OR=odds ratio; AOR=adjusted odds ratio

- All social/environmental variables were significantly associated with in-home smoking in expected directions in univariate analyses (Table 3)
- Neighborhood conditions and cohesion remained significant after controlling for covariates

## Summary

- Some social and environmental factors beyond the control of individuals may influence whether parents who smoke choose to smoke inside the home
- Educational and policy interventions to decrease in-home smoking should consider environmental factors during planning and evaluation

## Limitations

- All data were self-reported
- Individual and social factors from social ecological model were not available in dataset

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## References

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