

ORIGINAL INVESTIGATION

Beliefs Associated With Intention to Ban Smoking in Households With Smokers

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ABSTRACT

Introduction: Smoking in homes exposes family members to secondhand smoke, an exposure that is harmful to children and adults. This study identifies barriers to instituting household smoking bans and beliefs that are positively and negatively related to smoking bans in households with smokers.

Methods: A telephone survey of parents living in Philadelphia with at least 1 smoker and a child under the age of 13 years in the household was conducted in 2012. Using the reasoned action model, the survey assessed beliefs regarding attitudes, norms, and self-efficacy/control predictors of intention to ban household smoking.

Results: Forty-seven percent of households reported high intention to not allow smoking in the home. Regression analysis to identify the reasoned action predictors associated with intention to restrict smoking in the home showed that all 3 of the predictors of intention (attitude, normative pressure, and control) were significantly related to intention. Important underlying beliefs related to intention included beliefs about the health effects of secondhand smoke on children's health, norms regarding those restrictions, and barriers to enforcing such restrictions.

Conclusions: Messages that increase concern about the health effects of secondhand smoke on children, that contrast the rights of smokers with negative health effects, and that suggest alternative locations to smoke are promising strategies to motivate smokers to implement indoor smoking bans.

INTRODUCTION

Secondhand smoke (also known as "passive smoking" or "environmental tobacco smoke") is a health hazard for children and adults (Barnoya & Glantz, 2005; Brownson, Eriksen, Davis, & Warner, 1997; Eriksen, LeMaistre, & Newell, 1988; He et al., 1999; IOM, 2010; Windham, Hopkins, Fenster, & Swan, 2000). Infants and children are at risk of respiratory and other health issues when exposed to passive smoking (Moshammer et al., 2006; Wamboldt et al., 2008), and because of this, researchers have investigated methods of reducing or eliminating their exposure (Emmons et al., 2001; Hewers & Uno, 2002). We already know that community and workplace/institutional smoking restrictions have reduced adult smoking prevalence and cigarette consumption while directly reducing exposure to secondhand smoke (Brownson, Hopkins, & Wakefield, 2002; Farrelly, Evans, & Sfekas, 1999; Fichtenberg & Glantz, 2002; Fong et al., 2006; Gallus et al., 2006; Goodman, Agnew, McCaffrey, Paul, & Clancy, 2007; Thornley, Dirks, Edwards, Woodward, & Marshall, 2013). At the household level, the focus has been on the efficacy of household restrictions or bans on indoor smoking to reduce exposure to secondhand smoke (Binns, O'Neil, Benuck, & Ariza, 2009; Clark et al., 2006; Halterman et al., 2007; Hovell & Daniel,

2004; Jarvis, Mindell, Gilmore, Feyerabend, & West, 2009; Mills, White, Pierce, & Messer, 2011; Spencer, Blackburn, Bonas, Coe, & Dolan, 2005; Wipfli et al., 2008; Yousey, 2006). Such policies are often related to lower levels of household smoking as well (Gilpin, White, Farkas, & Pierce, 1999; Kegler et al., 2012).

The epidemiology of household smoking rules has been studied for more than two decades. Eighty-four percent of all households in the United States with underage children (including those with and without smokers) reported that they had a full smoking ban in 2006–2007 (Zhang, Martinez-Donate, Kuo, Jones, & Palmersheim, 2012). In U.S. households with smokers and children, studies have shown that half of households have a full smoking ban (Mills et al., 2011). Awareness that secondhand and thirdhand smoke (Pizacani et al., 2003; Winickoff et al., 2009) are harmful to one's health and the presence of a child in the home (Norman, Ribisl, Howard-Pitney, & Howard, 1999; Pizacani et al., 2003) are both associated with having household restrictions. However, African American households, households with older children, and Hispanic and White households with high smoking prevalence are less likely to have home smoking bans (Mills et al., 2011). Thus, epidemiological research indicates that home exposure to secondhand smoke is not evenly distributed across ethnic, racial, or economic groups, with greater

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secondhand smoke exposure in low-income households ([CDC, 2008](#); [Hopper & Craig, 2000](#)).

Of course, most of the epidemiological correlates of smoking bans are not mutable, so knowledge of smoking attitudes and intentions to reduce passive smoking exposure in urban areas is important ([Kraev, Adamkiewicz, Hammond, & Spengler, 2009](#); [Okah et al., 2003](#)) as this may help to design tailored message strategies to reach households with smokers who are not implementing household restrictions. This is especially important in Philadelphia, a city that has the highest prevalence of adult smoking (25%) of the 10 largest cities in the United States ([PHMC, 2010](#)). In addition, CDC's Youth Risk Behavior survey data show that in 2011, 45% of Philadelphia's high school students had tried cigarettes once and 7% had smoked at least 1 cigarette/day for 30 days (data from <http://apps.nccd.cdc.gov/youthonline/App/Default.aspx?SID=HS>, accessed on February 2, 2013). The goal of the Philadelphia Second Hand Smoke Household survey was to estimate the prevalence of smoking restrictions in Philadelphia households with at least one adult smoker and a child under the age of 13 years and to assess the knowledge, attitudes, and norms of parents in such households with regard to household smoking policies that can influence infants and children's exposure to environmental tobacco smoke. To accomplish this goal, we conducted a telephone survey of Philadelphia caregivers using a reasoned action approach ([Fishbein & Ajzen, 2010](#)) to theoretically structure the questionnaire and guide the data analysis.

Reasoned Action Approach

The "Integrative Model of Behavioral Prediction" ([Fishbein & Ajzen, 2010](#)) is a psychosocial model that is a synthesis of the Theory of Reasoned Action ([Fishbein & Ajzen, 1975](#)), Social-Cognitive Theory ([Bandura, 1986](#)), the Health Belief Model ([Becker et al., 1977](#); [Janz & Becker, 1984](#)), and the Theory of Planned Behavior ([Ajzen, 1991](#)). The focus of the model is one's "intention to perform a specific behavior" ([Kim & Hunter, 1993](#)). Reasoned action assumes that behavior is primarily determined by intention, and intention to perform a specific behavior is a function of one's favorableness toward personally performing the behavior (i.e., attitudes), perceptions about what others think and do with regards to performing the behavior (i.e., normative pressure), and beliefs about the ability to perform the behavior assuming that one wanted to do so (i.e., self-efficacy and control). Each of these constructs is influenced by a corresponding set of salient underlying beliefs. For example, attitudes are determined by one's beliefs that performing the behavior will lead to positive or negative consequences (i.e., outcome expectancies). Normative pressure is determined by "injunctive" beliefs that important people in a person's social environment think the individual should or should not perform the target behavior ([Manning, 2009](#)) and "descriptive" beliefs about whether significant others are or are not performing the target behavior ([Cialdini, Reno, & Kallgren, 1990](#); [Rivis & Sheeran, 2003](#)). A third type of belief underlies control or self-efficacy ([Armitage & Conner, 2001](#)). These measures reflect the capacity to perform the behavior and the autonomy to do so ([Yzer, 2012](#)). [Figure 1](#) shows a simplified version of the Integrative Model, see [Fishbein & Ajzen \(2010\)](#) for more details. [Ajzen \(2012\)](#) describes the historical development of the theory, and the reasoned action model has been used in thousands of research studies (see the bibliography of studies at <http://people.umass.edu/aizen/tbprefs.html>).

Here we use the reasoned action model to predict intention to not allow smoking in the caregiver's household and to identify the underlying beliefs that support or oppose household bans. We focus on the following three questions: (a) what is the prevalence of household smoking restrictions in Philadelphia households with smokers and children under 13 years of age? (b) what effect do restrictions have on respondent smoking in the home? and (c) what are the important reasoned action variables that are related to one's intention to not allow smoking in the home?

METHODS

Survey Procedures

The survey was conducted by telephone by Social Science Research Solutions (SSRS), a survey firm with experience in interviewing Philadelphia households in regard to smoking and other health behaviors. Interviews were conducted from May 15th through June 10th, 2012 among 456 parents/caregivers living in households containing at least one person who smokes and a child under the age of 13 years. SSRS estimated that this group represented about 6% of all households in Philadelphia County. "Caregiver" status was self-reported using the following two items: (a) are you a primary caregiver for the child/children in the home? and (b) if "no": May I please speak with the person who has the most responsibility for the care of the children in the home?

To cost-effectively access this population, the sample consisted of the following three components: (a) a sample randomly drawn from *InfoUSA* lists of phone numbers associated with households in Philadelphia County identified as including a child under the age of 13 years ($n = 217$, response rate 17%). *InfoUSA* collects this type of information based on consumer credit history and similar available data sources. (b) A random digit dialing (RDD) sample drawn from phone numbers with Philadelphia County that oversampled telephone exchanges from low-income census block groups (i.e., median income less than \$35,000) as determined by their six-digit exchanges and were not in the *InfoUSA* listings used in sample 1 ($n = 123$, response rate 24%). (c) A sample drawn from a pool of respondents who completed a survey of Philadelphia smokers conducted by SSRS using RDD procedures between 2010 and 2012 and who indicated the presence of a child in their household ($n = 116$, response rate 33%). The survey was approved by the institutional review board of the University of Pennsylvania.

The overall response rate for this study was 25% using the AAPOR RR3 formula ([AAPOR, 2011](#)), and the average length of the survey was 18 min. The sample was weighted to (a) adjust for bias stemming from the propensity to complete a second survey in households re-contacted based on responses to the previous smoking survey, (b) adjust for differences in the probability of selection between listed households and the regular RDD sampling frame, (c) correct for the oversampling of low-income exchanges, and (d) balance the sample to known household estimates in Philadelphia and households of smokers with children. All results presented here are weighted.

Measures

Current household rules about limiting passive smoking exposure were measured as in other studies ([McMillen, Winickoff,](#)

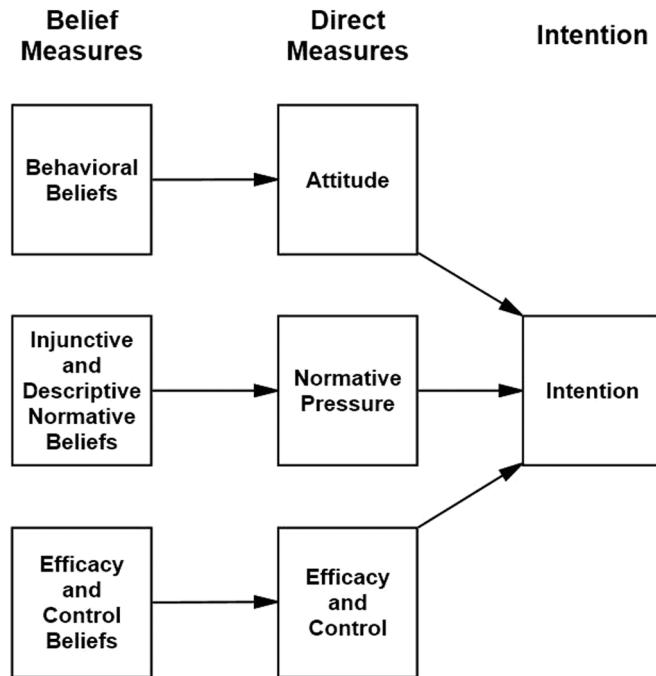


Figure 1. The integrative model of behavioral change and prediction.

Klein, & Weitzman, 2003; Spencer et al., 2005). We asked the following: which of the following best describes your household's rules about smoking? The responses were (a) smoking is allowed in all parts of the home, (b) smoking is allowed in some parts of the home, and (c) smoking is not allowed in any part of the home. A small number of respondents ($N = 6$, unweighted) answered that there were no smoking rules, and these were classified as response (a).

Respondents were asked whether they had smoked in the past 30 days, and if so, whether they had smoked at least 100 cigarettes lifetime. If they smoked, they reported how many cigarettes they smoked a day in total and in the home. They were also asked to report the number of other smokers living in the household. Finally, they were asked if they were currently trying to quit smoking.

Intention

We asked respondents "How likely is it that you will not allow smoking in your home in the next 3 months? Would you say it is ... Unlikely, Likely, or Neither?" Then, respondents were asked "How (unlikely/likely) would that be? Would you say: Extremely, Quite, or Slightly?" Response values range from 1 to 7, with 1 being "extremely unlikely" and 7 being "extremely likely." The mean intention was 5.03 (confidence interval [CI]: 4.74, 5.31) with 16% reporting "extremely unlikely" compared with 47% reporting "extremely likely." Respondents who reported to the interviewer that they were already banning smoking in the home were coded as a "7" on the intention scale.

Attitude

The direct measure of attitude was based on evaluations of the following semantic differential items (Fishbein & Raven, 1962): unpleasant/pleasant, foolish/wise, bad/good,

unnecessary/necessary, harmful/beneficial, and unhealthy/healthy. Respondents also had the option of selecting "neither" for each item. The stem for this series was as follows: would it be (semantic differential item) if you (did not allow/continue to not allow) smoking in your home in the next 3 months? The responses were averaged and then recoded to create an attitude scale ranging from 0 to 13 (polychoric alpha: 0.89, mean = 11.4, CI: 11–11.7).

Normative Pressure

The normative pressure construct was measured by two items that reflected injunctive and descriptive norms. The descriptive norm item was "Do you think most people like you would allow or would not allow smoking in their home in the next 3 months?" The response options were (-1) people like me would allow smoking in their home, (0) don't know, (+1) and people like me would not allow smoking in their home. The injunctive norm item was as follows: "Do you think most people who are important to you think you should or should not allow smoking in your home in the next 3 months?" The response options were (-1) people important to me think I should allow smoking in my home, (0) don't know, and (+1) people important to me think I should not allow smoking in my home. The two items were averaged and recoded to produce an ordinal measure of normative pressure scaled from 0 to 4 (mean = 3.24, CI: 3.1–3.4).

Control

Self-efficacy (e.g., capacity to perform the behavior) was measured using the following item: "A lot of things can get in the way not allowing smoking in your home in the next 3 months. How sure are you that YOU could not allow smoking in your home in the next 3 months?" Responses ranged from (-1) not at all sure I could keep people from smoking in my home in the next 3 months, (0) don't know, and (+1) very sure I could not

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allow smoking in my home in the next 3 months. Autonomy was measured by an item that asked: Who makes decisions about not allowing smoking in your home? The responses were (4) You (e.g., the respondent), (3) Both of you make the decision together, (2) Your spouse/partner, and (1) Someone else in the home. These two items were averaged and recoded to produce an ordinal measure of control scaled from 0 to 7 (mean = 5.02, CI: 4.9–5.2).

Underlying Beliefs

We also collected belief measures of the three reasoned action predictors (attitude, normative pressure, and self-efficacy/control discussed previously) based on input from the Philadelphia Department of Public health and also from a review of studies that compare households with and without home smoking rules (e.g., Gilpin et al., 1999; Hopper & Craig, 2000; Norman et al., 1999). Belief measures were as follows: eliminating smoking in our home in the next month would (a) reduce your child's chance of breathing problems, (b) upset smokers who visit your home, (c) increase family conflict, (d) encourage YOU to stop smoking, (e) prevent ear infections in your child, (f) reduce odor in your home, and (g) prevent trips to the emergency room for your child. The injunctive normative belief referents were as follows: (a) smokers who visit your family, (b) smokers in your family, (c) other parents you know, (d) children in your household, and (e) your spouse or partner. Descriptive normative beliefs referents were as follows: (a) other parents you know, (b)

your close friends, and (c) your family members. Self-efficacy/control beliefs identified barriers to performing the behavior of not allowing smoking in the home. The list included (a) if smokers in your household had nowhere else to go to smoke, (b) if smokers insisted on smoking anyway, (c) if not allowing smoking caused conflict, and (d) if you like to smoke at home.

Statistical Analysis

We used tabulations by sub-groups with *F* tests and polychoric correlations to determine significant differences in smoking levels between households with different rules. Then, we used regression analysis to predict intention from the set of reasoned action direct measures (Bleakley & Hennessy, 2012). Mplus (Muthén & Muthén, 2006) and Stata (StataCorp, 2011) were used to perform the analysis.

RESULTS

Respondent Characteristics

Table 1 shows selected respondent and household characteristics stratified by the three levels of home smoking rules. We also report the polychoric correlation (Holgado-Tello, Chacón-Moscoso, Barbero-García, & Vila-Abad, 2010) between smoking restrictions and the characteristic to give a measure of relative magnitude of the association. Some of our

Table 1. Respondent and Household Characteristics and Home Smoking Rules

Respondent and household characteristic	Household smoking rule			Design-corrected <i>F</i> test and polychoric correlation (ρ)
	Allowed in all parts of the home	Allowed in some parts of the home	Not allowed in any part of the home	
Race				
White	10%	27%	63%	$F(1.99, 829.58) = 8.92, p < .05, \rho = 0.35$
African American	14%	52%	34%	
Age				
18–36	12%	39%	49%	$F(3.96, 789.63) = 0.13, p = .97, \rho = -0.003$
37–51	12%	44%	44%	
52 and above	11%	41%	48%	
Education				
More than high school education	10%	34%	56%	$F(2.00, 909.98) = 3.58, p < .05, \rho = 0.21$
High school education or less	13%	48%	39%	
Income				
60K or more a year	7%	36%	56%	$F(1.98, 902.08) = 2.49, p = .08, \rho = 0.20$
Less than 60K	13%	43%	43%	
More than one smoker in the household				
Yes	13%	31%	37%	$F(2.00, 909.89) = 0.099, p = .9162, \rho = -0.02$
No	11%	42%	47%	
Child less than 5				
Yes	10%	32%	58%	$F(2.00, 908.32) = 4.54, p < .05, \rho = 0.25$
No	13%	48%	38%	
Child with asthma				
Yes	12%	34%	54%	$F(2.00, 909.85) = 1.11, p = 0.33, \rho = 0.09$
No	12%	44%	44%	
Intention to not allow smoking in next 3 months				
Extremely likely	2%	20%	78%	$F(1.85, 836.54) = 57.76, p < .05, \rho = 0.76$
Lower value	21%	58%	20%	

results are consistent with other studies of smoking bans that show White ethnicity (relative to African American), higher education, and an infant in the household positively related to smoking restrictions. "High income" is also positively related to restrictions in our sample although this is not statistically significant. We do not find the number of smokers in the household or having a child with asthma in the home are related to smoking restrictions. This latter finding is very unusual relative to the research literature. Intention to not allow smoking in the next 3 months is strongly related to smoking restrictions, the polychoric correlation between intention and restrictions is 0.76.

Smoking in the Home and Smoking Policies

About 70% of all respondents were smokers, and the average number of smokers as reported by respondents in the household was 1.8 (*CI*: 1.7–1.9). The three largest groups of caregivers were mothers (75% of whom were smokers), grandparents (60% of whom were smokers), and fathers (80% of whom were smokers). Caregiver smokers smoked an average of 9.8 cigarettes/day (*CI*: 8.8–10.7), and 57% reported that they were currently trying to quit smoking. Caregiver smokers smoked an average of 3.8 cigarettes/day in the home (*CI*: 3.1–4.5).

We compared smoking caregiver's daily cigarette consumption in the home for each restriction category (to reduce respondent bias; the smoking self-reports were collected before the information on the two types of smoking restrictions in the home). Caregivers in households with full restrictions (47% of all households) reported smoking fewer cigarettes (mean = 0.64, *CI*: −0.04 to 1.3) than those with partial restrictions (41% of all households, mean = 5.3, *CI*: 4.5–6.1) or no restrictions (12% of all households, mean = 9.1, *CI*: 7.1–11.1). The average values for households with rules were significantly less than smoking in households with no smoking restriction.

We also repeated this analysis including the caregiver's reports of cigarettes smoked in the home by other smokers (there were up to five other smokers reported by caregivers in the sample). Although these secondhand reports are probably less reliable than caregiver estimates of their own smoking, the pattern of smoking in the home was similar. Households with full restrictions reported smoking fewer total cigarettes in the home (mean = 1.8, *CI*: 0.1–3.5) than those with partial restrictions (mean = 9.5, *CI*: 7.65–11.3) or no restrictions (mean = 16.1, *CI*: 9.9–22.4). The average values for households with rules are significantly less than smoking in households with no smoking restriction. Although these averages are consistent with previous studies that show lower levels of household smoking in households with restrictions, the restrictions are not completely efficacious: 7.5% of the household with reported complete bans also reported more than zero cigarettes smoked in the home (although the average smoked was 1.8 as shown previously).

Predictors of Intention to Ban Household Smoking

To identify which of the three reasoned action determinants of intention were important, regression analysis predicted intention to not allow smoking in the next 3 months using the reasoned action direct measures. The results ($N = 451$) showed

that all of the direct measures had significant direct effects on intention: attitude slope = 0.30 (*CI*: 0.20, 0.39; standardized β = 0.35); control slope = 0.31 (*CI*: 0.11, 0.52; standardized β = 0.18); normative pressure slope = 0.29 (*CI*: 0.04, 0.55; standardized β = 0.14), and $R^2 = 0.25$. None of these unstandardized slopes are significantly different from each other, so we examined the underlying beliefs for all three of the reasoned action predictors.

Underlying Beliefs and Intention to Ban Household Smoking

To examine the differences in beliefs across the three direct measures, we compared each belief measure between caregivers who intended to not allow smoking or were already doing so (e.g., were coded as "7" on intention) versus caregivers who had no/low intention to not allow household smoking (e.g., were coded as less than "7" on intention). The beliefs that were significantly different between intenders and nonintenders are shown in Table 2. The outcome "preventing child trips the ER" showed the highest percent difference (25%) and the outcome "reduce child's chance of breathing problems" the lowest (9%). The self-efficacy beliefs that were significantly different between intenders and nonintenders are also shown. The barrier "if you like to smoke at home" showed the highest percent difference (52%), and the barrier "if not smoking caused conflict" showed the lowest percent difference (33%). All the normative pressure beliefs (injunctive and descriptive) differed between intenders and nonintenders.

DISCUSSION

In a city with high smoking rates, 52% of the respondents allowed smoking in some or all parts of their home. The average number of cigarettes smoked in the home was higher among those without smoking restrictions compared to those with at least some restriction. Our findings indicated that all three of the reasoned action proximal determinants were relevant to the prediction of intention to not allow smoking in the home. An analysis of the beliefs revealed that beliefs about (a) the consequences of secondhand smoke pertaining to children's health, (b) beliefs about potential barriers to banning home smoking, and (c) beliefs about the behavior and opinions of significant others were important in differentiating between intenders and nonintenders.

Specific behavioral beliefs underlying attitudes that should be emphasized in media messages were preventing visits to the emergency room, preventing ear infections, and reducing one's child's breathing problems. Efficacy barriers that were important in homes that intended to allow smoking were smokers who liked to smoke in their home and not having anywhere for smokers to go to smoke. Both positive outcome beliefs and negative barriers need to be considered in a successful media campaign to discourage indoor smoking. For example, media messages could focus on what is more important for the caretaker: the health of their children and other nonsmokers or the rights and comfort of smokers (especially those who like to smoke in their home). This conflict could be an explanation for many smokers' households' inability to prohibit smoking in the home. Consistent with this explanation, attitudes

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Table 2. The Significant Differences Between Underlying Beliefs by Intention Status

Underlying beliefs	Non and low intenders	High intenders and performers
Behavioral beliefs (<i>N</i> = 418)	% "Likely"	% "Likely"
Reduce child's chance of breathing problems	80 [73, 87]	89 [85, 95]
Prevent ear infections in your child	57 [48, 66]	78 [71, 86]
Prevent trips to the emergency room	52 [44, 62]	77 [70, 84]
Self-efficacy beliefs (<i>N</i> = 446)	% Definitely not allow smoking	% Definitely not allow smoking
If smokers had nowhere to go	54 [45, 63]	90 [84, 95]
If not smoking caused conflict	60 [51, 69]	92 [88, 97]
If you like to smoke at home ^a	31 [22, 41]	83 [75, 92]
Descriptive norms (<i>N</i> = 430)	How many do not allow smoking in their home (scale: 1–5)	How many do not allow smoking in their home (scale: 1–5)
Other parents you know	2.7 [2.5, 2.9]	3.3 [3.1, 3.6]
Your close friends	2.6 [2.4, 2.8]	3.5 [3.2, 3.7]
Your family members	2.8 [2.6, 3.1]	3.6 [3.4, 3.8]
Injunctive norms (<i>N</i> = 446)	% Who think you should not allow smoking	% Who think you should not allow smoking
Smokers who visit your family	52 [44, 61]	80 [72, 87]
Smokes in your family	51 [42, 59]	79 [72, 87]
Other parents you know	73 [66, 81]	88 [82, 95]
Your spouse or partner	55 [46, 63]	69 [60, 78]

Note. 95% confidence interval of proportion or mean are in brackets.

^aAsked to respondent smokers only, *n* = 283.

toward banning smoking in the home were positively related to overall control beliefs (e.g., $r = 0.18$, $p < .05$). Thus, if beliefs regarding the health benefits for children of banning household smoking could be emphasized, this might empower caretakers to take a stronger stand against smoking in the home. This is particularly important for the 30% of households in which the primary caretaker is not a smoker.

Analyses of antismoking ad messages indicate that the danger of secondhand smoke is a common theme, and many antismoking ads targeted to adults emphasize protecting children and rely on describing long-term health consequences (Beaudoin, 2002). However, messages typically do not recognize the barriers that many households may face in trying to reduce indoor smoking. Successful behavioral interventions offered by clinicians and public health agencies include strategies for managing family conflict.

One barrier to smoking in the home was not having anywhere for smokers to go smoke. Often in urban housing, there is a lack of safe and accessible space where smokers could go to smoke outside of the home. This barrier in particular could undermine behavioral attempts to implement smoking bans. Structural interventions, such as dedicated outdoor smoking areas, especially in or near housing developments, might provide a greater sense of efficacy to enable caretakers to ban indoor smoking. Alternatively, messages that raise awareness about outdoor public spaces, or encouraging the use of one's private balcony or outdoor area for smoking, may also be effective. However, an additional challenge to smokers is smoke-free policies regulating outdoor public spaces such as parks and recreation centers.

Some households in the sample reported a partial ban on indoor smoking. Household members may feel that this protects family members from secondhand smoke. However, they may not realize that a partial ban does not eliminate exposure to secondhand smoke, which can travel to other areas of a home. In this study, smokers in homes with a partial ban smoked one-half

pack of cigarettes indoors on a daily basis. It is important to encourage households to ban smoking throughout the home if residents want to reduce secondhand smoke health risks. The survey suggests that respondents have some difficulty in effectively enforcing a complete ban on smoking; the average smoking in the home for households with a complete ban was close to but not exactly equal to 0 cigarettes/day. Thus, research on the intention to limit smoking (Orbeil, Hodgkins, & Sheeran, 1997) may be useful in designing interventions that overcome barriers to implementing home smoking policies.

Limitations

Respondent self-report of the number of cigarettes smoked in the home when the respondent was not the smoker of interest is a potential limitation of this data. It is possible that the nonsmoking respondent underestimates cigarettes smoked by others because the caregiver was unaware of the household smoker's actual behavior. However, as shown in the results, the pattern of smoking by smoking restriction was similar when the respondent was the smoker. Another study limitation is the response rate. It is possible that those who were unwilling to participate were somehow different with regards to their smoking behavior than those respondents who completed the survey, but the specific purpose of the survey was not revealed until the agreement to participate had been established.

CONCLUSIONS

This study examined how social-cognitive beliefs about banning smoking are related to intention to restrict home smoking. Reasoned action theory proposes that it is the "salient underlying beliefs" that are the proximal causes of the attitude, normative pressure, and self-efficacy mediators that form intention, so effective interventions should target these underlying beliefs

(Orr, Thrush, & Plaut, 2013). When the beliefs are supportive of intentions to perform the target behavior, the theory suggests that messages that emphasize, highlight, and identify these positive beliefs will increase intentions to perform the behavior. When beliefs are unsupportive of intentions, then messages need to argue against these beliefs. Changing beliefs “in the correct direction” is the first step to inducing behavior change “in the correct direction” (Fishbein & Cappella, 2006; Marin, Marin, Perez-Stable, Otero-Sabogal, & Sabogal, 1990), as Orr et al. summarize:

Beliefs have a special status in that they are foundational in forming attitudes and perceived norms and are the only inroad to changing attitudes, perceived norms and ultimately, intention (Orr et al., 2013, p. e62490).

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DECLARATION OF INTERESTS

None.

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