

# Blowing smoke: Strategies smokers use to protect non-smokers from environmental tobacco smoke in the home

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## Introduction

The aim of this qualitative study is to investigate the following questions: What strategies do smokers use to protect non-smokers (particularly children) from exposure to tobacco smoke in their homes, and how effective do they perceive their strategies to be? In what circumstances in the home do smokers experience most keenly the desire to smoke? What hinders smokers from making their homes smoke-free? The study focuses on smokers who live in apartment-type accommodation with children or other non-smokers and who are trying to protect the non-smokers from smoke in the home. The rationale for this focus is that it is difficult for smokers – particularly parents of young children – to make their homes smoke-free if they do not have ready access to outdoor areas. For example, how does a smoking parent (either single or whose partner is not at home) in high-rise accommodation without a balcony go outside to smoke without the considerable effort involved in taking the children as well?

We first elucidate the harms associated with environmental tobacco smoke (ETS) and review the research on reducing exposure to ETS, particularly with respect to the home. We next outline the study and discuss our findings, describing the strategies participants use to limit ETS exposure in their homes, and how effective participants believe the strategies to be. We also describe participants' perceived obstacles to achieving a smoke-free home.

## Background

### ETS-related harm

Among adults, exposure to ETS is a cause of lung cancer, ischaemic heart disease, stroke, and serious respiratory illness and asthmatic attacks.<sup>1-3</sup> There are associations between ETS exposure and other health conditions such as hay fever, hearing loss, severe headache, cold/flu symptoms and chronic cough.<sup>4</sup> Children of smokers are particularly vulnerable. ETS has been

## Abstract

**Issue addressed:** Research has suggested that many smokers wish to protect the non-smokers they live with, particularly children, from exposure to their tobacco smoke. This study investigates the strategies smokers use to protect non-smokers from exposure to tobacco smoke in their homes, how effective they perceive these strategies to be, and what they perceive as obstacles to making their homes smoke-free.

**Methods:** Audio-taped, face-to-face, semi-structured interviews were conducted with 20 Australian apartment-dwelling smokers. We focused on smokers who live in apartments because the structural barriers they face in order to become smoke-free appear higher than those who live in houses. Apartments are also more likely to house socially disadvantaged people, people who research has shown are less likely to have smoke-free homes than the socially advantaged.

**Conclusions:** Participants use two main strategies (opening windows, or smoking in a separate room). Other than factors such as lack of private outdoor space and nicotine dependence, participants reported that psychosocial factors, such as preferring to smoke in comfort and wanting to honour preferences of family and friends to smoke indoors, hinder their attainment of smoke-free homes.

**Key words:** Environmental tobacco smoke, smoke-free homes, smokers' attitudes.

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## So what?

The findings suggest that parents who smoke are concerned about harmful effects of ETS on their children and would like to quit. For that reason, they might respond positively to hard-hitting information about these harms, particularly if they also could access increased support to quit.

shown to be a cause of both sudden infant death syndrome (SIDS) and low birth weight,<sup>5</sup> and other studies show positive associations between exposure to ETS and gastroesophageal reflux, colic, lower respiratory tract infections and other infant morbidities.<sup>6</sup> Parental smoking increases the risk of respiratory illness in children,<sup>7,8</sup> including asthma.<sup>9-12</sup>

There is also increasing evidence that some behavioural disorders in children and adolescents are linked to ETS exposure, particularly from maternal smoking.<sup>13,14</sup> Most ETS exposure occurs in the home, where children spend much of their time.<sup>15</sup>

### Reducing ETS exposure

A central goal of Australian governments' tobacco control strategies is to reduce exposure to ETS.<sup>16</sup> At least 80% of the population of one Australian State (Victoria) favours restrictions on smoking in public places<sup>17</sup> and there are increased bans on smoking in workplaces<sup>18</sup> and in other public places. For adults and children who live with a smoker, the home is likely to be the main site of their exposure to ETS.<sup>19-21</sup>

Recently, there has been a marked increase in householder-imposed restrictions on smoking in Victorian homes, from 27% in 1989 to 53% in 1999.<sup>22</sup> Between 1989 and 1996, the number of Victorian smokers who say they never smoke around children increased from 14% to 51%.<sup>22,23</sup> In addition, between 1995 and 1999, the number of Victorian smokers who say they always smoke outdoors increased from 20% to 43%.<sup>22,23</sup> This trend is associated with socio-economic status (SES): 33% of low-SES smokers compared with 54% of high-SES smokers reported that they always smoke outside.<sup>23</sup>

An important factor in progress towards making homes smoke-free is the presence of non-smoking adults and children in the household.<sup>22,24-26</sup> The imposition of smoking restrictions in the home is associated with reduced smoking<sup>27</sup> and reduced asthma health-care utilisation.<sup>28</sup> Other evidence indicates that many parents attempt to change their smoking behaviour for the sake of their children<sup>29</sup> and that women smokers in particular are susceptible to anti-smoking messages concerning the health of their children.<sup>30</sup> Many parents, however, do not know enough about harms caused to children by ETS exposure. A study of Nordic parents, for example, indicated that two-thirds of parents who smoked were unaware that their smoking put their children at increased risk of inner ear infection and only half of them reported being aware of the role parental smoking plays in influencing children to take up smoking.<sup>31</sup> In a study of smoking parents of hospitalised children,<sup>32</sup> 41% disagreed that their smoking had a negative effect on their child. Clearly, it is crucial to address the problem of ETS exposure in the home in order to reduce smoking-related harm. One of the aims of this paper is to explore smokers' perceptions of obstacles to achieving smoke-free homes.

## Methods

The study involved 20 audio-taped, face-to-face, semi-structured interviews with smokers living in apartments in an Australian city. We elected to focus on smokers who live in apartments because the structural barriers they face in order to become smoke-free appear higher than those of those who live in houses. Apartments are less likely to have private outdoor spaces and smokers often need to leave their buildings in order to go outside. Apartments are also more likely to be home to socially disadvantaged people, people who research has shown are less likely to have smoke-free homes than the socially advantaged.<sup>23</sup>

A qualitative approach was used to enable participants to describe, in their own words, the strategies they use to limit ETS in their homes and to explore their perceived barriers to quitting smoking. It was hoped that this approach might elicit potentially innovative strategies that people use, results that would be more difficult to obtain using other research techniques. We asked participants about the strategies they use to try to protect non-smokers from exposure to ETS in their homes, how effective they perceived the strategies to be, in what circumstances in the home they experienced most keenly the desire to smoke, and what they perceived as obstacles to their homes becoming smoke-free. We also asked respondents to rate the effectiveness and practicality of five known strategies on a scale from 0-10 (0 indicating absolute ineffectiveness and impracticality and 10, total effectiveness and practicality).

Our sample included 12 people born in Australia (two were of Aboriginal descent), and eight people born overseas including two Greek-Australians and one each of Filipino, Scottish, Lebanese, Maori, American, and Uruguayan descent. Sixteen of the 20 participants lived in public housing and were of low or very low socio-economic status, including single parents living on social security benefits. For efficiency, we restricted the sample to smokers who live with children and/or other non-smokers, who smoke indoors, and who implement strategies to protect non-smokers from tobacco smoke in the home. Of the 13 women and seven men, six were aged 21-30; eight were 31-40; four were 41-50; and two were 51 and over. Sixteen participants lived with children under the age of 18.

Participants were recruited with the assistance of maternal and child health centres, child care centres, kindergartens, neighbourhood houses, and public housing tenants associations during five months. Flyers with the following message were posted in each centre:

*Do you have some tips you could share with us? The Cancer Council Victoria would like to interview smoking parents who live in flats and who try to protect their children from tobacco smoke in the home. Because we know it isn't easy for people in flats to go outside to smoke, the Cancer Council is developing a list of strategies that could help people in this situation. If you*

*fit this description and would be happy for us to interview you, please telephone ... to arrange an interview. Thank you for your help. A small payment is available to compensate you for your time.*

Respondents contacted us by phone and interview times were arranged. The interview data were analysed thematically. Interview transcripts were systematically examined and themes around the research questions were developed. The responses to the questions about how effective they believed the known strategies to be were analysed numerically. The results from this study are not generalisable; the sample is too small and is not random. However, the goal of this type of study is to describe what a range of participants have to say about ETS exposure in their homes. It is our hope that these findings might be tested using population surveys or other more generalisable research techniques in the future.

## Results

All participants reported that they smoked inside their home. Thirteen respondents (65%) said they smoked all or most of their cigarettes inside the home; the rest said half or less. Sixteen (80%) said they would prefer to have a smoke-free home, and only two (10%) participants had partners who differed with their preferences regarding smoking in the home. Three participants said they smoked nine or fewer cigarettes daily, nine smoked 10-19 cigarettes, six smoked 20-29 cigarettes, and two participants smoked 30 or more cigarettes daily.

Sixteen participants (80%) cited smoking-related harm as the main reason why they tried to protect non-smokers from exposure to ETS in their homes. Eight participants (40%), unprompted, said they knew that ETS in the home exacerbated their children's existing illnesses or respiratory problems. Two-thirds of all participants said they thought that smoking around non-smokers outdoors rather than indoors was less harmful to the non-smokers because the smoke appears to dissipate more quickly outdoors.

### Perceived obstacles to achieving a smoke-free home

Sixteen participants (80%) reported preferring a smoke-free home but had trouble attaining this goal. Table 1 summarises all 20 participants' descriptions of factors they perceived as either hindering their achievement of, or preventing them from considering, a smoke-free home. We discuss each in turn.

#### Desire to smoke in warmth, comfort, and/or privacy

A major obstacle cited was the desire to smoke in warmth, privacy, and comfort. "I could go outside," said one interviewee, "but I don't want to lose the warmth and comfort. It's important to be comfortable when smoking, otherwise it's not 'right'. I want to smoke in *my space* – the only thing I own in the world." Another described her distaste for smoking outdoors: "The cold, just the inconvenience – it is interrupting things – it's not really

**Table 1: Perceived obstacles to achieving a smoke-free home.**

Perceived obstacle	Number of participants <sup>a</sup>
Desire to smoke in warmth, comfort, and/or privacy	10 (50%)
Nicotine dependence	9 (45%)
Desire to accord with visitors' preferences for smoking indoors	8 (40%)
Lack of outdoor space	4 (20%)
Difficulties associated with supervision of children	3 (15%)

(a) Column does not total 100%: more than one response accepted.

**Table 2: Home circumstances prompting desire to smoke.**

Home circumstance	Number of participants <sup>a</sup>
Feeling tired or stressed	11 (55%)
Relaxing after a meal, etc.	8 (40%)
Time to themselves	3 (15%)

(a) Column does not total 100%: more than one response accepted.

comfortable", and another said, "It's cold in winter ... No good to go outside ... to have a cigarette". It is worth noting that we collected the data during the colder months of the year; data collected in the warmer months might indicate less resistance to smoking outdoors. However, in trying to understand how smokers decide which strategies to use to limit ETS exposure to non-smokers, it is clear that comfort is an important consideration.

#### Nicotine dependence

Many participants reported wanting to quit smoking, either currently or eventually, and having trouble with quitting. One said: "It's hard for me to stop smoking. I'd really, really like to"; another, "I tried to give up, but I can't". Nine (45%) of the sample said their nicotine dependence got in the way of them achieving a smoke-free home. Three (15%), unprompted, said they would like to try nicotine replacement therapy but that it would cost more than they currently spent on cigarettes. Apart from experiencing physiological cravings, 11 (55%) said that they reached for cigarettes to comfort them in stressful situations involving family, financial, or other difficulties. Said one interviewee:

*I don't really stress out much with the kids, but I stress out with other things – financial things. If there weren't so many things on my mind ... it'd probably be a lot easier for me to stop ... I wish I'd never met tobacco ... If there's problems involved, the cigarette's there – it's always a relief".*

Another said, "If I'm having a really good day ... I cut down a lot more ... If you get really upset it's the first thing you go for".

#### Desire to accord with visitors' preferences for smoking indoors

Another major obstacle reported was the desire to honour the preference of visiting relatives or friends to smoke indoors. Some

participants relied on their parents or siblings to baby-sit and so forth, and said they were anxious to avoid potential tension by asking them to smoke outdoors. To the question, "What kinds of things get in the way of making your home smoke-free?" one participant, whose mother is a heavy smoker, said simply: "My mother". Another said: "All my friends smoke ... it's easier to smoke inside", and another, "I enjoy it, the convenience of it ... My partner smokes, fifty per cent of my friends smoke." One 25-year-old mother, whose friends, older partner, and both sets of relatives smoke, said: "I haven't got full control of everyone coming into the house."

### Lack of outdoor space

Of the 20 participants, four reported having no interest in achieving a smoke-free home and preferring to smoke indoors because it was warmer and more comfortable, and/or because they had friends and relatives who, similarly, preferred to smoke indoors. Of the 16 who said they would prefer a smoke-free home, six had the option of smoking on a balcony or landing outside their flat, yet smoked some or most of their cigarettes indoors. The finding suggests that obstacles other than lack of outdoor space exist for these smokers. In addition, three of them rated the effectiveness of their protective strategy relatively highly (7 or 8 on a scale of 0-10), suggesting that they believe their strategy is nearly as effective as smoking outdoors. If they believe their strategy works, perhaps they are less motivated to make their home smoke-free.

We know that low-SES smokers, compared with higher-SES smokers, are less likely to report that they always smoke outdoors.<sup>23</sup> Clearly, persons dwelling in high-to-medium-rise public housing, compared with those in private accommodation, have less access to private outdoor space. Sixteen participants (80%) live in public housing and are of low or very low socio-economic status. Ten of these participants had no access to private outdoor space and four of the 10 reported it as a major obstacle to achieving a smoke-free home. Asked, "What kinds of things get in the way of making your home smoke-free?" one said: "Having no balcony, no outside access from my immediate area." The other six with no such access emphasised that it was often too cold or uncomfortable to smoke outdoors. In addition, they said they wanted to avoid offending friends or relatives who preferred to smoke indoors by asking them to smoke outdoors. The six participants who had access to private outdoor space but preferred to smoke indoors cited similar reasons.

### Difficulties associated with supervision of children

One participant who had access to private outdoor space, in addition to two who did not, reported that supervision of their toddlers and young children sometimes precluded their smoking outdoors. This finding is worth noting. We know that young children are at particular risk of illness from exposure to ETS,<sup>15</sup>

but having young children may, in itself, make it more difficult to go outside to smoke.

### Reasons for smoking

Participants were asked what circumstances in the home led them to feel most keenly the desire to smoke. The purpose for this question was to try to understand what some of the barriers to quitting were for these smokers. Table 2 summarises all 20 participants' reports. Most said that it was when they felt tired, stressed, upset, had trouble managing their children's behaviour, or when relaxing after meals, coffee or alcohol. This mirrors other findings that smokers report smoking improves their mood and helps them to relax and to cope.<sup>(33 Author???)</sup>

The tired or stressed category includes people saying they were upset and had trouble managing their children's behaviour. These reasons for smoking point to how entrenched the habit is in smokers' lives and how difficult it is to give up, quite apart from the issue of nicotine addiction.

### Estimated efficacy and practicality of protective strategies

Table 3 summarises all 20 participants' reports of favoured strategies to protect non-smokers from ETS and estimates of the effectiveness and practicality of five strategies mentioned. Fifteen participants (75%) favoured the strategy of opening windows and/or doors. Four (20%) favoured smoking in a closed room away from non-smokers. Only one participant had a different favoured strategy – turning on the kitchen exhaust fan. Table 3 both lists all strategies used by participants and notes which ones they favour. Thus, although one or more participants mentioned the strategy 'Holding cigarette outside window' or the strategy 'In bathroom, exhaust fan on', neither was a favoured strategy. The mean rating of effectiveness is the result of averaging effectiveness scores given by all 20 participants.

On a scale from 0-10, effectiveness ratings were between 5 and 6 for all strategies (apart from one interviewee who rated her strategy at 10). This suggests that participants believe their strategies to be somewhat effective at protecting non-smokers from their smoke. If persons believe their strategies work, perhaps they will be less likely to seek new strategies or quit smoking. Ratings of practicality and/or convenience of use of the strategies were between 5 and 7.4. Those strategies rated highest are also the easiest to implement and corresponded to those most favoured by participants.

### Discussion

#### Use and perceived efficacy of protective strategies

The two most favoured strategies were opening windows and/or doors and smoking away from non-smokers in a separate room with the door shut. Because of supervision considerations,

**Table 3: Participants' estimates of the effectiveness and practicality of protective strategies.**

Protective strategy	Favoured strategy	Mean rating of effectiveness of favoured strategy <sup>a</sup>	Mean rating of effectiveness of strategies <sup>a</sup>	Mean rating of practicality of strategies <sup>a</sup>
Opening windows &/or doors	15 <sup>b</sup> (75%)	6.0	5.6	7.4
In separate room, door shut	4 (20%)	5.5	5.5	6.7
In kitchen, exhaust fan on	1 (5%)	10.0	5.0	5.6
Holding cigarette out window	0	–	5.6	5.7
In bathroom, exhaust fan on	0	–	5.6	5.1

(a) 0-10 scale.  
(b) Number of participants.

smokers with very young children were less likely to smoke in a room away from the children, and those who lived in high-rise flats with young children said they sometimes smoked in the enclosed corridor outside their flat, but that supervising their children often precluded this. Since young children are particularly vulnerable to the effects of ETS, it is especially important to identify effective strategies for smokers with young children to employ.

On average, participants' estimates of the effectiveness of the protective strategies they employ were in the middle of the range. This suggests that participants believe their strategies have some effect but are not completely effective. That our participants spontaneously said that they knew their smoking exacerbated their children's illnesses suggests that, unlike those in some previous studies,<sup>31,32</sup> our participants have gotten the message that ETS is harmful to children. This supports Lund et al.'s<sup>29</sup> finding that many parents do try to change their smoking behaviour for their children's sake. Research to establish the relative effectiveness of the strategies could be useful. It is notable that all participants reported believing it was better to do something, rather than nothing, to try to protect non-smokers from ETS. The data in Table 3 indicate that participants chose to use strategies that they also saw as relatively practical to implement.

### Perceived obstacles to achieving a smoke-free home

Unprompted, most participants expressed some degree of regret about their smoking, both for their own health and the health of non-smokers in their households, but said that quitting was difficult. This is not surprising as most smokers would like to quit but most also fail when they attempt it.<sup>34</sup> Half of all participants said that smoking outdoors was either impractical or detracted too much from what they got out of smoking, that is, a sense of comfort and well-being.<sup>33</sup> Although some smokers smoke only outdoors in order to keep their homes smoke free, the present findings suggest that the comfort factor is a major reason smokers provide to explain their preference for smoking indoors. For those who smoke inside, going outdoors just to smoke (in relative discomfort) detracts from their sense of

smoking-related relaxation and consolation. At present, at least, reported desire to have a smoke-free home, in the same way as reported desire to quit, does not outweigh what some smokers perceive they get out of smoking indoors – a sense of relative comfort and well-being. The findings suggest the importance of helping smokers identify effective replacements for the comfort role of smoking in their lives – this also is likely to help them to quit. This is unlikely to be the whole story, however, because the recent increase in prevalence of home-based smoking bans shows that some smokers do put up with the loss of comfort. It could be that the more disadvantaged smokers studied here perceive that smoking outdoors would impose more discomforts for them than for some other smokers.

The findings suggest that lack of outdoor space might not be a major expressed factor in smokers' decisions about a smoke-free home. Of the 16 participants who said they would prefer a smoke-free home, six often did not use their readily available private outdoor space to smoke. Of these six, three were of low socio-economic status. The availability of pleasant outdoor places to smoke might make a difference for many low-SES smokers, but the findings also suggest that some middle-SES smokers who have ready access to private outdoor space still prefer to smoke indoors.

### Conclusion

Solving the smoking problem will require a realistic understanding of the role of comfort, pleasure, and social factors and the need to provide social support for people who rely on smoking to get through lives often beset with difficulties. According to the literature, most smokers say they want to quit. Affluent smokers are more likely to have smoke-free homes than less affluent smokers.<sup>23</sup> We need to do more to provide disadvantaged smokers with strategies that will make quitting viable.

The results of this study suggest that many parents who smoke are concerned about harmful effects of ETS on their children. These parents might respond positively to direct and hard-hitting information about these harms, particularly if they also could

access increased support to quit, for example, through subsidies for NRT for low-SES smokers. Finally, perhaps some of the strategies the participants employ do limit ETS exposure. Research into the effectiveness of the different strategies could enable public health practitioners to recommend the more effective ones to smokers.

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