



Support by New Zealand smokers for new types of smokefree areas: national survey data

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Abstract

Aims To describe smoker support for new smokefree laws covering cars and outdoor settings, in a national sample of New Zealand (NZ) smokers.

Methods The NZ arm of the International Tobacco Control Policy Evaluation Survey (ITC Project) uses as its sampling frame the NZ Health Survey (a nationally-representative sample interviewed face-to-face). From this sample we surveyed by telephone adult smokers (n=1376). Along with adjustment for the complex sample design, there was weighting of the results to attempt to adjust for the non-response at various points (i.e. there was an overall response rate of 33%).

Results A majority of this national sample of smokers supported three new smokefree areas (albeit with some potential for response bias not adequately addressed by the weighting process). That is, only a minority agreed that smoking should be *allowed*: in cars with pre-school children (3%), anywhere in outdoor eating areas (22%), and at council-owned playgrounds (32%) (with a more equivocal minority for “within 5 metres of the entrance to public buildings” (48%)). These attitudes were generally compatible with the findings that most of these smokers (87%) reported trying to minimise the amount that non-smokers were exposed to their cigarette smoke, and reported never smoking in a car with non-smokers (73%). Nevertheless, there were still domains where most smokers thought smoking should be allowed—e.g. on lifeguard-patrolled beaches (55%) and in at least some of the outdoor seating areas of restaurants/cafés (51%) and pubs (83%).

Conclusions There was majority support by these New Zealand smokers for three new types of smokefree areas not covered by current smokefree legislation (including in cars and some outdoor areas). These findings suggest it is a reasonable option for central government and local government authorities to further study and consider new smokefree laws.

In 1990, New Zealand passed a smokefree law that focused mainly on indoor workplaces and partial restrictions in restaurants.¹ Amended legislation in 2003 extended smokefree areas to all restaurants, bars, and other indoor workplaces. It also prohibited smoking in schools and early childhood centres, casinos, and in gaming machine venues. The available evidence indicates that the 2003 law has reduced exposure to secondhand smoke (SHS) in various settings^{2,3} along with other pro-health changes in smoking behaviour.^{4,5}

The evidence also strongly indicates majority public support for and compliance with this 2003 law.^{4,6} There was also an increase in support among *smokers* for the right to work in a smokefree environment, from 83% in 2003, to 92% in 2006.⁶

New Zealand has also been expanding outdoor smokefree areas. The 2003 legislation prohibited smoking in the grounds of all schools. The grounds of some hospitals, some stadiums, and the campuses of various tertiary educational institutions have also been made smokefree. The Wellington City Council has made one semi-enclosed street smokefree.

“Educative” smokefree parks policies that use social pressure have been adopted by a quarter (20/73) of the city and district councils as at the end of 2008.⁷ These are policies which rely on signage, media coverage and public pressure to limit smoking, rather than having a legal status.

However, New Zealand smokefree policies that restrict smoking near entranceways appear to be rare (some airports and tertiary education institutions) and there are no smokefree beaches or unenclosed streets. New Zealand has not restricted smoking in the outdoor areas of cafes and pubs, as has occurred in other jurisdictions such as Queensland.⁸

There is still fairly limited evidence around public support for such outdoor smokefree areas in New Zealand. One local survey found that 83% of adult park users (73% for smokers) supported the “smokefree parks policy”.⁹ A national survey found that a majority of respondents reported that smoking was “not at all acceptable” in outdoor children’s playgrounds (76%), in outdoor sports fields or courts (51%), town or city squares (38%), and on beaches (33%).¹⁰

Attitudes to smokefree cars have also been studied in New Zealand. In 1988 a tobacco industry-funded survey found that 47% of adults in a national sample wanted no smoking in private cars (though for smokers the figure was only 18%).¹¹ Three subsequent national surveys by a research company for the Health Sponsorship Council found variable levels of support for smokefree private cars (ranging from 23% to 41%¹²).

But when survey questions mentioned non-smokers in the car, the results indicated higher levels of support for smokefree cars. For example, a Wellington area survey in 1997 found that 94% of respondents agreed that cars with children in them should be smokefree (and 86% of smokers agreed).¹³ There was also majority support in a 2004 New Zealand-wide survey, where 76% of respondents *disagreed* that it is “okay” to smoke around non-smokers inside cars even when there are windows down.¹⁴

Given that smokefree areas are one of the major tobacco control interventions used in New Zealand¹⁵ and internationally,¹⁶ there is potential for considering this issue further. Here we explore New Zealand smokers’ attitudes in 2007 and early 2008, towards additional settings being smokefree.

Methods

The ITC Project—The International Tobacco Control Policy Evaluation Survey (the ITC Project) is a multi-country study on tobacco use epidemiology and tobacco control policy evaluation. A full description of the ITC Project conceptual framework and methods have been published elsewhere.^{17,18} The New Zealand arm of the ITC Project survey differs somewhat from the other ITC Project countries in that the smokers involved are from the sample frame of New Zealand Health Survey (NZHS) participants (with this survey being conducted in 2006/2007).

Methods of the NZHS are detailed more fully in the report on the key results¹⁹ and a detailed methods report.²⁰ Respondents were selected by a complex sample design, which included systematic boosted-

sampling of the Māori, Pacific, and Asian populations. Interviews were conducted face-to-face in respondents' homes by trained interviewers (on contract to the Ministry of Health) and resulted in a total of 11,924 interviews with respondents aged 18 and over. The overall response rate was 67.9%. Other issues around the NZHS response rate as it relates to the ITC project are detailed in an online *Methods Report*.²¹

Participants—From the NZHS sample we had an additional sampling frame of adult smokers who were 18 years or older and who were willing to participate in further research when asked this at the end of the NZHS interview (this was 85.2% of the adult smokers in the NZHS). Out of 2438 potential respondents who met these criteria, a total of 1376 completed the NZ ITC Project Wave 1 questionnaire giving a response rate of 56.4%. But, if this response rate is considered in terms of the NZHS and willingness to further participate, then the overall response rate is reduced further to 32.6% (see an online *Methods Report*²¹ for more detail).

Procedures and measures—Surveying of these participants was carried out using a computer-assisted telephone survey (sub-contracted to Roy Morgan Research). The first wave of participants were all interviewed between March 2007 and February 2008, usually 3-4 months after their NZHS interview. The study protocol was cleared by the Multi-Region Ethics Committee in New Zealand (MEC/06/07/071) and by the Office of Research Ethics, University of Waterloo, Waterloo, Canada (ORE #13547).

The questions on attitudes to new smokefree areas are detailed in Table 1. Other questions explored behaviours relating to protecting others from SHS exposure (last three rows of Table 1).

Weighting and statistical analyses—Weighting of the results was necessary given the sampling design (e.g. boosted sampling of three ethnic groups in the NZHS) and non-response for the NZHS and ITC Project survey. A full description of the weighting process is detailed in an online report.²² All analyses were conducted in Stata software (version 10, Stata-Corp, TX) and (as well as being weighted) were adjusted for the complex sample design of the NZHS to make the results reflect the demographic and geographic distribution (including for age, gender, ethnicity and district health board area) of the national population of New Zealand smokers.

Results

Sample characteristics—All the results presented below have been weighted to reflect the national population of smokers in New Zealand. This process attempted to adjust for the fact that our final sample of interviewed smokers was somewhat dominated by women smokers (61.6%) and older smokers (64.7% of the sample were aged 35 years and over), and that the booster sampling used in the NZHS resulted in our final sample having disproportionately higher percentages of Māori (44.1%), Pacific (6.5%) and Asian (4.3%) respondents (with the rest being “European/Other” at 45.1%).

In the several months since participating in the NZHS, 12% of the sample had reported quitting smoking. They were still included in the sample where appropriate (e.g. but not in the smoking behaviours section of Table 1) in line with standard ITC Project procedures.

Overall attitudes to new smokefree areas—There was fairly clear majority support for restrictions on smoking in three domains. Only a minority agreed that smoking should be *allowed*: in cars with pre-school children (3%), anywhere in outdoor eating areas (22%), and at council-owned playgrounds (32%) (with a more equivocal minority for “within five metres of the entrance to public buildings” (48%)) (Table 1 and Figure 1).

Table 1. Smoker attitudes to new smokefree areas and behaviours around secondhand smoke exposure to others

Variables / Questions	Responses (%)	95% CIs
Attitudes to new smokefree areas (n=1376) “Do you think smoking should be allowed...”		
<i>Cars</i> : “... in cars with pre-school children in them?”	3.0 (yes)*	1.9–4.0
<i>Playgrounds</i> : “... at council-owned playgrounds?”	31.9 (yes)*	28.6–35.2
<i>Entranceways</i> : “... within 5 metres of the entrance to public buildings?”	48.2 (yes)	44.6–51.7
<i>Beaches</i> : “... on lifeguard-patrolled beaches?”	54.8 (yes)	51.2–58.3
<i>Outdoors at pubs</i> : “... in some of the outdoor seating areas of pubs?”	82.6 (yes)	79.8–85.3
<i>Outdoor eating areas</i> : “And now thinking about the outdoor eating areas of restaurants and cafes. Do you think that smoking should be allowed in ALL outdoor eating areas, in some outdoor eating areas, or not allowed in outdoor eating areas at all?”	22.3 (yes-all) 51.3 (yes-some) 25.4 (no)	19.4–25.2 47.8–54.9 22.4–28.3
Behaviours around protecting others from SHS (n=1236)**		
<i>Reducing SHS exposure</i> : “How much, if at all, do you try to minimise the amount that non-smokers are exposed to your cigarette smoke?” 1= a lot; 2=somewhat; 3 = not at all	61.0 (a lot) 26.1 (somewhat) 12.3 (not at all)	57.3–64.8 22.7–29.5 9.8–14.9
<i>Home</i> : “Which of the following best describes smoking inside your home: ‘Smoking is allowed anywhere in your home’; ‘Smoking is never allowed anywhere in your home’; ‘Something in between’?”	12.6 (anywhere) 61.6 (never) 25.7 (in between)	10.2–14.9 58.2–65.1 22.6–28.9
<i>Cars</i> : “When you are in a car or other private vehicle with non-smokers, do you...smoke as you normally smoke; never smoke; something in between?”	4.6 (normally) 73.1 (never) 22.1 (in between)	2.9–6.3 69.7–76.5 18.9–25.3

Table notes:

All results weighted and adjusted for complex sample design so as to reflect the demographic and geographic distribution of the national population of New Zealand smokers.

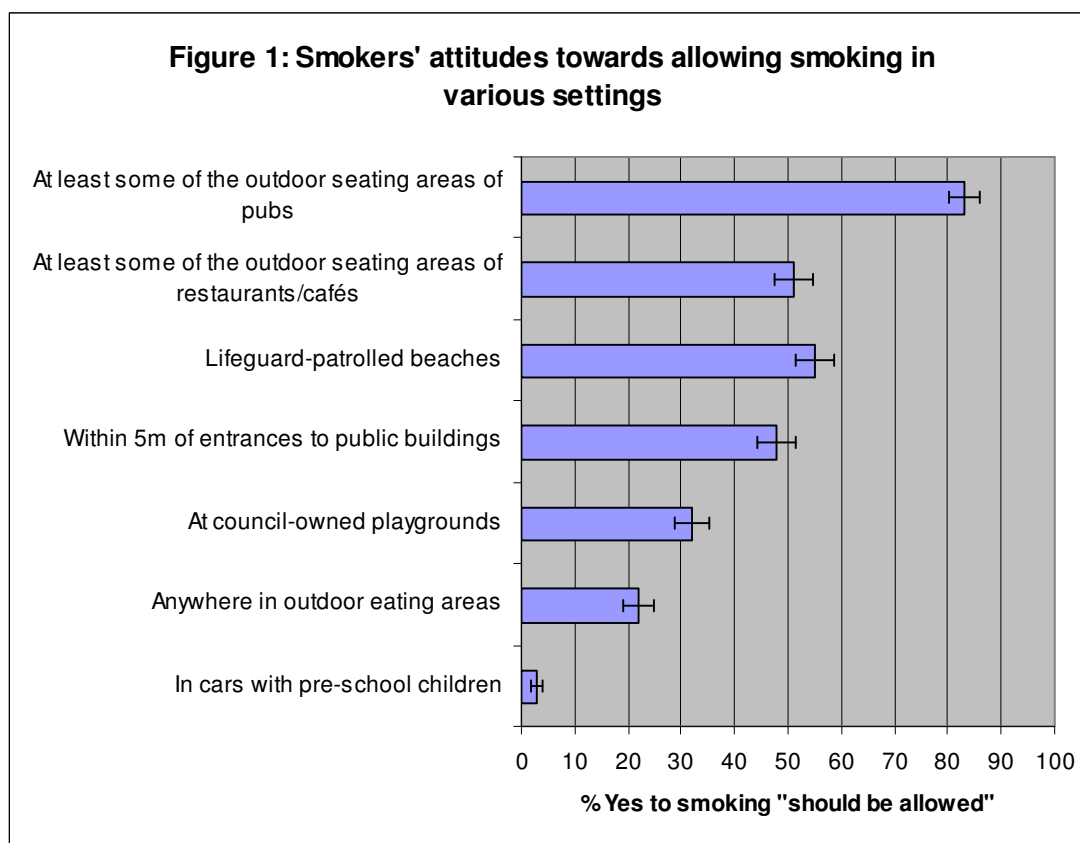
* These single results for smokefree cars and playgrounds have been reported previously.^{23 24}

** Excludes those who had recently quit (in the months since the NZ Health Survey).

In contrast, there was majority support for allowing smoking on lifeguard-patrolled beaches (55%), and in at least some of the outdoor seating areas of restaurants/café (51%) and pubs (83%). When considering all these six areas collectively, 59% supported at least three new completely smokefree areas and only 2% of respondents favoured smoking being allowed in all these settings.

SHS-related behaviours—Most smokers (87%) reported trying to minimise the amount that non-smokers were exposed to their cigarette smoke (Table 1). More specifically a majority (73%) reported never smoking in a car with non-smokers, and a majority (62%) stated that smoking is never allowed anywhere in their home.

Figure 1. Smokers' attitudes towards allowing smoking in various settings



Discussion

Main findings and interpretation—The main finding from this study is that a clear majority of this sample of smokers supported new smokefree areas in three domains (i.e. cars with preschool children, at least part of outdoor eating areas, at council-owned playgrounds), with approximately half supporting banning smoking within five metres of the entrance to public buildings. Indeed, a majority of the smokers (59%) supported at least three of the six smokefree areas described.

This level of support, along with the evidence that New Zealand smokers are complying at high levels with the recent law against smoking in pubs and restaurants,^{3,4,6} suggests high levels of compliance by smokers is possible for these three new smoking restrictions.

The stated attitudes of smokers towards new smokefree areas appears to be fairly compatible with their self-reported behaviour concerning minimising SHS exposed to others in general, in the home environment, and in cars (Table 1). Furthermore, the majority support for smokefree restrictions found in this study is consistent with evidence of growing public and smoker support for smokefree car laws in a range of jurisdictions internationally.²⁵ It is also consistent with majority support by smokers for smokefree playgrounds in other jurisdictions.²⁶

This support in New Zealand may reflect smoker responses to societal-wide shifts in smoking and SHS denormalisation that have followed the 2003 smokefree legislation, and responses to the media campaigns that preceded and followed its introduction.

Many smokers will also have become aware of the outdoor smoking restrictions and policies that have already been introduced in stadiums, around hospitals and in a rapidly expanding number of council-owned parks.

Limitations of this study— New Zealand smokers might display some social desirability bias in their responses to surveys, and hence the results may exaggerate the true level of support for smokefree areas among smokers. This is because smoking is probably becoming increasingly denormalised in this society, as suggested by reductions in socially-cued smoking with the recent expansion of smokefree environment laws.⁴

Potential selection bias among survey participants, towards smokers who are more positively inclined to tobacco control measures, is also a potential limitation, especially in light of the 33% response rate compared to those eligible for inclusion in the parent Health Survey from which the ITC study was selected. That is, smokers who support smokefree policies may be more likely to take part in the NZHS and then in the ITC survey. However, such selection bias would have to be reasonably large to overturn the majority support found in this study.

For example, there was an observed 31.9% support for smoking in playgrounds (Table 1) among the estimated third of all smokers first approached for interview in the NZHS that actually participated in the ITC study (i.e. $\text{third} \approx 32.6\% = 67.9\% [\text{NZHS response rate}] \times 85.2\% [\text{NZHS consent to ITC follow up}] \times 56.4\% [\text{successful ITC Project survey re-contact rate}]$). This would have to be offset by an unobserved 58.8% support for smoking in playgrounds among the two-thirds of eligible NZHS survey smokers not included in the ITC Project study for the “true” support to be 50%.

Whilst not impossible, it seems unlikely that this unobserved support might be 58.8% among non-participants compared to 31.9% among participants. By extension, it seems even more unlikely that the observed very low support for smoking in cars (3.0%) could be consistent with 50% support for smoking in this setting among all eligible smokers.

Research and policy implications—We are currently undertaking more research on the socio-demographic and smoking-related variables associated with smoker support for new smokefree areas. Even so, other New Zealand research would help clarify various issues around smokefree areas in particular settings. For example, we have suggested elsewhere that the adult modelling of smoking in front of children is an argument for certain outdoor smoking bans.²⁷ It would be desirable to know the extent to which role modelling from public smoking influences smoking-related behaviours of children, and also the degree to which this issue is given credence by the public and policymakers in New Zealand.

Further research could expand on preliminary New Zealand work,²⁸ to clarify the health hazard posed by the drift of SHS from outdoor smoking areas into adjacent indoor areas (particularly during summer), and to hospitality workers who service open or semi-enclosed outdoor areas (as undertaken in the USA²⁹).

From a policy perspective, one option would be for central government to pass a smokefree law to cover all cars with children. This action would be supported by the evidence of highly hazardous air quality in cars where smoking is occurring,^{30 31} and would be in line with similar measures in other jurisdictions.³²

Expanding outdoor smokefree areas may require more detailed considerations of the benefits and costs but could potentially focus initially on covering:

- Those settings where children are commonly present (such as playgrounds);
- Where significant levels of SHS drift from outside to inside;
- Where SHS in crowded settings can be a significant nuisance or health hazard (such as stadiums and outdoor eating areas); and
- Where workers are regularly exposed to SHS in outdoor areas.

The experience of other jurisdictions with the feasibility of defining such areas, and with enforcement, could be considered by policymakers who wish to explore these options.

However, central government's processes can be slow and unpredictable, and some New Zealand politicians can be susceptible to misleading tobacco industry funded or disseminated versions of research on SHS.³³ Also a central government response to these issues may have an opportunity cost, if it distracts official efforts away from more fundamental solutions to the tobacco problem such as restructuring the tobacco market to meet public health objectives (e.g. as proposed by others^{34,35}). Therefore an alternative approach is that local councils do not wait for central government, and that they decide to continue their efforts to expand smokefree parks and other smokefree areas.

This approach may ensure more immediate progress for some areas, and may enhance the evidence-base around compliance and public acceptability. The example of the use of available local government powers to progress council-required alcohol-free zones could potentially be followed for smokefree outdoor hospitality settings within council jurisdictions.

To facilitate all such progress towards smokefree areas, government at all levels could also intensify mass media campaigns that deal with SHS hazards. Central government could also mandate additional graphic warnings on tobacco packaging that cover SHS hazards and the danger of smokers' example to children (see Figure 2 for a Canadian Government example). Such additional graphic pack warnings might be considered by some to have the advantage of coming at no cost to tax-payers.

Figure 2. Canadian cigarette pack health warning that focuses on adult modelling of smoking³⁶



Competing interests: Some of the authors (NW, TB, GT, RE) have previously undertaken work for agencies working on tobacco control.

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