“Should We Take This Outside?”

Is banning smoking in outdoor areas the next step towards a Smokefree New Zealand?

Jacky Chan, Tristan Burnett, Ranui Baillie, Sophia Blomfield, Peter Cameron-Cristie, James Dickson, William Fleishl, Swetaa Ghandi, Katherine Gordon, Jaewon Heo, Agata Kesy, Alex Yu Kao, Christopher Kenny and Amy Knight.
Abstract

Background. Tobacco is a leading cause of preventable death which kills over 5000 New Zealanders annually (1). Smoking behaviour appears to be influenced by alcohol and social pressures, which increase susceptibility to smoking (5). Aim. To observe the prevalence of smoking outside bars/cafés in Wellington CBD, gain insight into public opinions on smoking in these areas and provide smokefree policy options. Methods. A three-pronged approach measured smoking prevalence (observational), explored public opinion (survey) and investigated policy options (interviews). Results. Observations showed 16% smoking prevalence in outdoor areas. Evening prevalence (0.28) was greater than noon (0.16) (p<0.05) and when the area was deemed pleasant (0.37) (p<0.05). Most never and ex-smokers surveyed (54% and 57% respectively) felt ‘negatively’ about smoking in these areas, current/social smokers felt ‘indifferent’ or ‘positively’ (60% and 35% respectively) (p<0.05). 29% of never, 71% of ex and 69% of current/social smokers reported an increased likelihood of smoking when around smoke. Current/social smokers (86%) reported smoking more when drinking alcohol. Never smokers and ex-smokers (68% and 71%) were supportive of smokefree outdoor area (SFOA) policy, while current/social smokers had mixed views (23% supported, 23% indifferent, 48% opposed). Discussion. To achieve the Smokefree 2025 goal, more legislation is required. Given the prevalence of smoking we observed in outdoor areas of bars/cafés, a majority of public and interviewee support for SFOA policy, we recommend a legislative policy led by central government.

Introduction

Tobacco is one of the leading causes of preventable smoking-related deaths, responsible for over 5000 deaths in New Zealand (NZ) annually (1). In the 2012 NZ health survey, 18% of Kiwis identified themselves as smokers. Rates of smoking were particularly high for certain demographics: women aged 18-24 (30%), men aged 25-34 (30%), Maori (41%) and Pacific (26%) (2). Meta-analysis has shown that smokefree area policies decrease smoking rates through reducing smoking opportunities and denormalising smoking (3).

Smoking is a behaviour that appears to be strongly influenced by social environments, such as bars and restaurants. In this milieu, alcohol consumption affects cognition and decision-making (4), which, alongside various ‘social pressures’, increases people’s susceptibility to smoke (5). Social pressures have a significant influence on smoking, with Australian research indicating around 25% of relapse crises occur in social settings such as bars and restaurants (5). Shiffman et al. explain that social smoking is caused by being exposed to other smokers, as well as the influence of alcohol weakening resistance to smoking (6). Also, cigarette smokers in the USA have been shown to drink alcohol more heavily than never smokers (7) and greater alcohol use is associated with decreased odds of smoking cessation (8). Kahler et al. found that even moderate alcohol consumption played a role in smoking relapse, with over 40% of relapses (in patients undergoing cessation treatment) involving alcohol (9). Moderate drinking was associated with almost four times the risk of smoking relapse than non-drinking, with heavy drinking further doubling the risk (9).

Denormalisation of smoking refers to the general perception that smoking is no longer regarded as normal behaviour. There are two markers of denormalisation with regards to smoking – social disapproval of smoking and concerns about second-hand smoke. In Europe, the latter is a driving
force behind tighter smoking control measures and ought to be a central focus in developing smokefree policies in NZ (10).

The government has set aimed for NZ to be smokefree by 2025 (11). The 2003 Smokefree Environments Amendment Act requires school grounds, early childhood centres as well as all indoor public areas and workplaces in NZ to be smokefree (12). A number of local authorities, including parts of Wellington, have already introduced smokefree policies for outdoor areas, parks and playgrounds (13).

Further legislation is needed to reduce smoking, enable successful quitting and denormalise smoking within society. In 2012, a national survey indicated that 65% of smokers would support stronger government involvement to achieve the Smokefree 2025 goal (15). Numerous other countries (including some US cities, US states and Canadian provinces) have smokefree policies outside bars and cafés (16, 17, 18). In Mosman, Sydney, outdoor areas including alfresco dining areas on council land, are now smokefree (19).

Could these smokefree policies be applied to Wellington and perhaps the whole of NZ? To provide evidence and ideas to help answer this question, this study aims to; i) assess the prevalence of smoking outside bars within the Wellington Central Business District (CBD) ii) gain an insight into public opinion regarding smoking outside bars, and iii) provide policy options regarding future smokefree legislation.

Methods

Our study design had a three-pronged approach (observational, survey and interview) to explore multiple aspects of smoking in outdoor bars/cafés in the Wellington CBD. The observational part of the study was designed to determine the prevalence of smoking in the leased pavement areas of bars/cafés. Different observational times were used as a proxy for alcohol consumption. In addition, surveys were conducted to explore public opinion of smoking in these areas. Interviews with various policy-makers and smoking authorities were conducted to gauge expert opinion on smoking normalisation and future policy options.

1. Observational Study

Our observational study design was based on one of the methods trialled in a previous study (20). This method was modified to increase accuracy of data obtained, measuring prevalence at each time interval, rather than alternating between the number of smokers and the total number of patrons (20).

Observation time and dates

Data was collected over a 15-minute period twice a day (12-1pm and 7-8pm). Observations were conducted on Wednesdays and Fridays over two consecutive weeks in April 2013 for a total of eight observation periods.

Selection of observation sites

A list of 50 premises with licenced pavement leases was obtained from the Wellington City Council. Sites were included if they were within the CBD (see Appendix 1) and had a pavement lease serviced area in use between the hours of 11am and 11pm. Nineteen sites met the inclusion
criteria, of which 14 were randomly selected (using a random number generator) and assigned to pairs of researchers.

Data collection

Pairs of researchers recorded the number of patrons and number of lit cigarettes at five minute intervals, using 30-second scans. A total of four measurements were recorded over 15 minutes. Sites were observed from an unobtrusive place or by walking past the area. We recorded data using smartphones with note-taking applications such as “Note” and “S Memo” (see Appendix 2). This was done to minimise the intrusiveness upon the bar/café environment. Data was then entered into a template for data analysis (see Appendix 3).

Alongside the smoking prevalence data, information was collected on six binary questions (yes/no):

1. Private outdoor serviced areas in addition to the pavement lease
2. Ashtrays present
3. Signage about smoking
4. Children present
5. Pleasant outdoor environment (see Appendix 3)
6. Foot traffic (see Appendix 3)

2. Survey study

Surveys were conducted from 12pm to 9pm between Wednesday 24th and Sunday 28th April 2013 to gauge public opinion on smoking outside bars and cafés. Questions included:

1. Age, gender, current smoking status
2. Opinions about smoking in these areas
3. Opinion about possible changes to smokefree policy in these areas
4. Whether drinking alcohol or being around smokers affected people’s own likelihood to smoke
5. Whether smokefree policy would reduce rates of smoking in NZ

Researchers approached people who appeared to be 18 or over in the immediate vicinity of bars/cafés. We conducted brief face-to-face surveys, taking an average of 3 minutes, and transcribed the results onto a standardised paper template (see Appendix 4). To ensure researcher safety, large groups or those who appeared intoxicated were not approached.

3. Interviews

Five people involved in smokefree policy development, or who would be affected by policy changes, were interviewed by phone for approximately 15 minutes. These included members of the Wellington City Council (policy advisor and Councillor), Smokefree Coalition, Cancer Society, and the Restaurant Association CEO. Questions explored issues about smoking outside bars/cafés and future policy change (see Appendix 5).
Data analysis

Observational data:

The overall prevalence of smoking was calculated by dividing the sum of the total cigarettes lit by the total number of patrons. If no patrons were present during a data collection period, this was considered missing data, so as not to underestimate the results. We used the Mann-Whitney U test in Microsoft Excel to assess differences in prevalence of smoking between noon and evening and between Wednesday and Friday, as well as the overall association between prevalence and the six binary questions.

Survey data:

Contingency tables were tested with Fisher’s Exact Test and Exact Binomial Test to extrapolate significant results in the survey.

Safety and ethical issues

Ethics approval for this research was obtained from the University of Otago Human Ethics Committee (see Appendix 6).

Results

Observation data

During the two-week observational period, 2600 patrons were counted and 412 cigarettes were seen to be lit in the 14 bars/cafés, giving an overall smoking point prevalence of 16%.

Table 1: The effect that time of day, day of week, foot traffic, outdoor environment, children, private outdoor areas and ashtrays had on the prevalence of smoking in the pavement leased areas outside licenced bars/cafés. * = statistically significant (p < 0.05)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Prevalence</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Time of day</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12-1 pm</td>
<td>0.160</td>
<td></td>
</tr>
<tr>
<td>7-8 pm</td>
<td>0.278</td>
<td>0.013*</td>
</tr>
<tr>
<td><strong>Day of Week</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wednesday</td>
<td>0.243</td>
<td>0.12</td>
</tr>
<tr>
<td>Friday</td>
<td>0.212</td>
<td></td>
</tr>
<tr>
<td><strong>Foot traffic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light</td>
<td>0.249</td>
<td>0.62</td>
</tr>
<tr>
<td>Heavy</td>
<td>0.214</td>
<td></td>
</tr>
<tr>
<td><strong>Outdoor environment</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pleasant</td>
<td>0.371</td>
<td></td>
</tr>
<tr>
<td>Unpleasant</td>
<td>0.195</td>
<td>0.025*</td>
</tr>
<tr>
<td><strong>Children</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Present</td>
<td>0.240</td>
<td>0.10</td>
</tr>
<tr>
<td>Not present</td>
<td>0.059</td>
<td></td>
</tr>
<tr>
<td><strong>Private outdoor area</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>0.200</td>
<td>0.80</td>
</tr>
<tr>
<td>No</td>
<td>0.250</td>
<td></td>
</tr>
<tr>
<td><strong>Ashtrays</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>0.278</td>
<td>0.84</td>
</tr>
<tr>
<td>No</td>
<td>0.215</td>
<td></td>
</tr>
</tbody>
</table>

Table 1 displays the point prevalence for each category. The point prevalence of smoking in the pavement lease areas was significantly higher between 7-8pm than between 12-1pm (p=0.013) and
when the outdoor environment was pleasant (p=0.025). There was no significant difference between the prevalence on Wednesdays versus Fridays, the presence of a private outdoor serviced area, ashtrays or children and heaviness of foot traffic outside licenced bars/cafés in Wellington CBD.

Survey data

The demographics of the survey participants (n=126) were assessed. The sample included 72 never-smokers (57%), 14 ex-smokers (11%) and 40 current/social smokers (32%). There were 61 males (48%) and 65 females (52%) which could be further separated into age groups: <30 years old (57% (M) and 55% (F)) or >30 years old (43% (M) and 45% (F)) (see Appendix 7).

Fresh air, sunshine or a break from inside noise were given as reasons for moving outdoors by 73% of participants. Being able to smoke, spending time with smokers and no space inside were also important factors (15%, 12% and 6% respectively). Other reasons included people watching, extra space and atmosphere (Table 2). Three participants reported that they did not like these areas.

Table 2: Participants response to reasons for using the outdoor spaces (N.B: total percentage is >100% as multiple answers were permitted.

<table>
<thead>
<tr>
<th>Fresh air/Sun/Noise break</th>
<th>Being able to smoke</th>
<th>Spending time with friends who smoke</th>
<th>No space inside</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of responses</td>
<td>92 (73%)</td>
<td>19 (15%)</td>
<td>15 (12%)</td>
<td>7 (6%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>11 (9%)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 1 shows the responses by participants to smoking in these areas as either ‘positive’, ‘indifferent’ or ‘negative’. The answer chosen was open to the interpretation by the researcher. None of the ex-smokers felt ‘positive’ with regard to smoking in these outdoor areas, responding ‘negative’ or ‘indifferent’ (57% and 43% respectively). Most never-smokers were ‘negative’ or ‘indifferent’ (54% and 31% respectively) while 15% were ‘positive’. Current/social smokers primarily felt ‘indifferent’ or ‘positive’ (60% and 35% respectively). Opinions were statistically significant between the groups (p<0.05).

Figure 1: Response to the question, ‘How do you feel regarding smoking in these areas?’ grouped by smoking status (never, ex, current/social) (n=126).
Of the 37 current/social smokers, 86% reported smoking more when drinking alcohol (confidence interval, 71%-96%). The remaining 14% reported that drinking alcohol does not affect how much they smoke (Figure 2).

**Figure 2:** Current/social smokers response to the question, ‘When drinking do you drink more, less or no difference?’ (n=37)

When asked ‘Does smoking around you make you more likely to smoke?’ 51 never-smokers, 7 ex-smokers and 1 current/social smoker either did not answer or felt that the question was not applicable. Current/social and ex-smokers who answered the question felt that smoke around them made them more likely to smoke (69% and 71% respectively). Of the never-smokers who responded, 67% felt that smoke around them did not make them more likely to smoke. Interestingly, 29% felt that despite reporting as never-smokers, smoking became more appealing when surrounded by smokers. The difference in opinions was statistically significant across the groups (p<0.05) (Figure 3).

**Figure 3:** Response to the question, ‘Does smoking around you make you more likely to smoke?’ grouped by smoking status (never/ex/current or social) (n=67).
Figure 4 highlights differences in opinion across the groups with regard to policy change (p<0.001). Never-smokers and ex-smokers were most supportive of future smokefree policy (68% and 71% respectively), while current/social smokers had mixed views (support 23%, indifferent 23%, oppose 48%).

![Figure 4: Response to the question, ‘How do you feel about these areas becoming smokefree?’ grouped by smoking status (never/ex/current or social) (n=126).](image)

Opinion on policy varied according to age. Despite the lack of statistical significance between age groups (p>0.05), the majority of those 30 years or over supported the policy (67%) compared to 48% of those 30 years or under, irrespective of smoking status (see Appendix 8). Despite general support for a smokefree policy in outdoor areas of bars/cafés, only 51% of the participants believed that it would decrease the smoking rates in NZ (see Appendix 9).

**Interviews**

Interviews provided opinions on the potential for smokefree outdoor area (SFOA) policy. Interviews explored the following topics: public opinion, the role of the hospitality industry, the role of central government with respect to ‘Smokefree 2025’ and the concepts of alcohol and normalisation as a trigger for smoking (see Appendix 10). Overall, interviewees thought that central government support (including financial) of smokefree policies was crucial.

The Cancer Society, Smokefree Coalition, and City Councillor agreed that promoting smoking denormalisation was an important driver behind policy change. However, the City Councillor disagreed that alcohol was a trigger. The member from the Restaurant Association disagreed that either alcohol or normalisation were triggers for smoking.

**Discussion**

One objective of this study was to determine the point prevalence of smoking in bar/cafē outdoor areas of the Wellington CBD. The average point prevalence of smoking in this study (16%) cannot be compared to the overall smoking prevalence in NZ (18%) (2). The visibility of smoking in public spaces increases the perception of prevalence, and therefore the normalisation of smoking. Future smokefree policy should attempt to reduce this visibility and thus denormalise smoking.
This study is one of the first in NZ to measure both the point prevalence and public opinion of smoking in licenced outdoor areas. Despite the demographics of the survey showing an equal representation between gender and age, there was an overrepresentation of smokers (32%), which may reduce the generalisability of the opinions to the national population.

**Correlation between alcohol and tobacco; impact on health outcomes**

Observational data showed the smoking prevalence was greater in the evening compared to noon. Assuming time is a proxy for alcohol consumption, this study attempted to highlight a potential correlation between smoking prevalence and drinking. Current/social smokers were found to smoke more when drinking, which tentatively supports evidence showing an intrinsic relationship between alcohol and smoking (7). In the USA, alcohol and tobacco co-use has been found to result in a greater risk of throat cancer than simply the addition of the independent relative risks (21).

**Attraction to the outside areas**

For 72% of survey respondents, fresh air was the primary appeal for using the area. However, evidence from NZ (22, 23) and the USA show that there are still significant health risks from second-hand smoke in the outside areas of bars/cafés. Sitting outside within half a metre of two cigarettes smoked in an hour, exposes patrons to the equivalent particulate levels as indoor smoking areas over the same period (24). Therefore, even well ventilated outdoor areas pose a health risk (25).

**Opinion on smoking in outdoor areas and SFOA by smoking status**

Public support for smokefree policies has been increasing (26, 27). Reasons include: awareness of health outcomes (28), decreasing smoking prevalence (2), greater presence of anti-smoking policies (26) and efforts to denormalise smoking (19).

Support for smoke-free policies differed by smoking status (Figure 4). Ex-smokers were most supportive of smokefree policy, followed by never-smokers, while current/social smokers were least supportive, in agreement with the findings of Bywer et al. (27). Ex-smokers responded most ‘negatively’ to smoking in outdoor areas and most positively to policy introduction compared to the other groups. This could reflect their desire to avoid smoking relapse and supports research showing that exposure to smoke and alcohol weakens resolve to abstain (5). In this study both ex-smokers and current/social smokers reported they were more likely to smoke in the presence of other smokers, highlighting that social pressures influence smoking behaviour.

Never-smokers and ex-smokers shared similar opinions about smoking and future SFOA policy. However, a minority of never-smokers reported feeling ‘positive’ towards smoking in outdoor areas, indicating a degree of empathy for smokers: “Where else are they supposed to go?” The majority of smokers responded ‘positively’ or ‘indifferently’ to smoking in outdoor areas. This may be because outdoor areas are one of the last public spaces in which smokers feel comfortable, amongst a growing social unacceptability of smoking (27). The high prevalence of smoking in outdoor areas may reinforce smoking behaviours by creating a sense of community. Current/social smokers were most likely to be opposed to SFOA policy. Reasons for this include: the direct effect on smokers behaviour, fear more restrictive future policy (29) and cognitive dissonance about the harms of smoking (27, 30).
**Survey conclusions**

Our study supports existing evidence of increasing public support for smokefree policy and suggests that legislation could extend to the outdoor areas of bars/cafés (26). Smokefree policy thus far has been driven by reducing health risks, with smoking being restricted to outdoor areas (12). This may have inadvertently influenced the normalisation of smoking by increasing public visibility. In addition to addressing the health risks of smoking an important aim of future legislation should be the removal of smoking from public view.

**Interview conclusions**

Most interviewees felt uninformed about public opinion on potential SFOA policy. With the exception of the Smokefree Coalition representative, every interviewee expressed a desire for “more survey/opinion-based research”. This reinforces the need for further research and dissemination of study findings to those involved in smokefree policy.

Four of the five interviewees identified business support and initiative as important for future policy change. In contrast, the Restaurant Association CEO minimised the role of business, suggesting that the onus ought to be on central government. With regard to the implementation of smokefree policy, most interviewees agreed that central government should be involved. However, both the policy advisor and the City Councillor, stated that local government must also play a role. This suggests that policy may be best implemented at the local government level with central government financial support.

**Strengths**

This study collected both qualitative (interviews and surveys) and quantitative (observational) data which provided a spectrum of information on which to base both further academic and policy recommendations. The methods for our observations and surveys were practical, given the pilot-nature of this study. Despite collecting observation and survey data over a range of weather conditions, the methods produced statistically significant results and allowed the observation of 2600 people, and the surveying of 126 people. The narrow criteria and random number generator used for the selection of bars increased the internal validity and reduced selection bias.

**Limitations**

Data collection was limited by the short collection period of two weeks. Time was used as a proxy for alcohol consumption, despite a lack of evidence in the current literature. The nature of observational study meant that it was not possible to determine age and ethnicity. Generalisability may have been reduced due to the narrow selection criteria for observation sites and the relatively high socio-economic status (who have lower smoking rates) of bar/café patrons (34).

Despite these limitations, this study provides insight into the prevalence of smoking in outdoor licenced areas and public opinion about smoking in these areas. Further studies could address these limitations through the following: assessing the relationship between alcohol consumption and time of day, establishing a causal relationship between the consumption of alcohol and smoking
prevalence, collecting more comprehensive ethnicity and age data, and researching areas outside of the Wellington CBD.

Policy

This study raises the issues of whether smokefree legislation in outdoor areas would be feasible to implement and whether such policy would reduce smoking prevalence in NZ. The 2003 Smokefree Environments Amendments Act provides a precedence of how policy change can create smokefree areas and influence the normalisation of smoking. Despite notable resistance to this policy at the time of implementation, it has since become generally accepted by both the hospitality industry and the public. (35, 36)

There are many similarities between the 2003 Act and future SFOA policy including: health issues, implementation issues and public resistance (23, 24, 25). Therefore it seems likely that new SFOA policy would follow a similar trajectory. Furthermore, the social aspects of smoking highlighted by this study mean that future SFOA policy should emphasise denormalisation.

Level of government

Policy can be legislative or non-legislative. SFOA policy could be legislative, in which a breach would incur a fine. However legislative policy is less favoured by councillors for political, financial and legal reasons.

Non-legislative policy would involve smokefree signage in SFOAs, similar to the Lower Hutt smokefree outdoor space policy (31), which are be self-policing and effective (37).

Policy can be central or local government led. A major theme of the interviews was the need for central government involvement and financial support, given the national Smokefree 2025 aim. Other reasons given for central government involvement were the council’s reluctance to use ratepayers’ money to fund by-laws and the need for consistency in policy across NZ.

Business opinion

There was a shared sentiment across the interviewees (excluding the Restaurant Association CEO) that the hospitality industry should take a leading role in SFOA policy. However, using a ‘champion’ business as a case study to pilot SFOA policy is unlikely, given the perceived competitive disadvantage this could create (33). Therefore implementation of future smokefree policy should be initiated by government rather than by business. Given the increasing denormalisation of smoking, it is worth considering the potential competitive advantage of SFOAs as a point of difference.

Public opinion

The results of our survey showed strong public support for both smokefree policy implementation. The majority also thought that such a policy would be effective in reducing smoking rates in NZ as has been shown in previous research (32). One interviewee emphasised that to gain support from local city councillors, smoking in outdoor areas “needs to be a positive and visible issue” with minimal controversy. Another reported that councils are more conservative, as they “underestimate
what people are ready for”. Furthermore, a previous study found that “Wellington councillors appeared unaware of NZ surveys of public attitudes”(16), highlighting the need for improved dissemination of research findings to policy makers, as well as business and the general public.

To achieve New Zealand’s Smokefree 2025 goal, more legislation is required. Given the prevalence of smoking we observed in outdoor bars/cafés, a majority of public and interviewee support for SFOA policy, we recommend a legislative policy led by central government.

**Acknowledgements**


**References**


9. Kahler CW, Spillane NS, Metrik J. Alcohol use and initial smoking lapses among heavy drinkers in smoking cessation treatment. *Nicotine Tob Res* 2010; 12(7): 781–785.


Appendices

Appendix 1

Figure 1: The study area in downtown Wellington

Figure 2: Premises with food, alcohol and pavement leases in the Wellington central business district
Appendix 2: Example of data recording using smartphone application
Appendix 3: Template for observational data


DATA COLLECTORS:

1. 

2. 

VENUE:

DATE: / /2013

START TIME: : pm

END TIME: : pm

Foot traffic: HEAVY/LIGHT

Private outdoor serviced area at venue: YES/NO

Ashtrays Provided: YES/NO

Signage about smoking in the area: YES/NO

Children present at any point during observation period: YES/NO

Pleasant to sit in outside serviced area: YES/NO

<table>
<thead>
<tr>
<th>Time</th>
<th>Total number of patrons</th>
<th>Number of people with lit tobacco products</th>
<th>Prevalence (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average/min</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intensity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(cigarettes/person/15 mins)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Comments

Data collectors used their discretion to determine if the area was ‘pleasant’ or not, based on features such as shelter, wind-blocks, heating and the weather. Foot traffic was defined as “heavy” when more than 10 passers-by in the first two minutes of observation, or “light” when there were less than 10.
Appendix 4: Standardized template for survey data

Smoking outside Bars/Cafés Survey

For an Otago University study, we would like to ask you 8 short questions about using the outside areas of bars and cafés. This will take about 1-2 minutes.

Age: Under 30 Over 30
Gender: Male Female

1. What do you like/dislike about the outside areas of bars and cafes?
   a. Fresh air/sun/ break from noise
   b. Being able to smoke
   c. Spending time with friends who smoke
   d. No space to sit inside/elsewhere
   e. Other

2. How do you feel about smokers in areas outside bars and cafes?
   Positive Indifferent Negative

3. How would you feel if the public spaces outside bars and cafes were made smokefree?
   Support Indifferent Oppose

4. If this policy was introduced, would it be effective in decreasing smoking rates in NZ – (“out of sight out of mind”)?
   Yes No Unsure

5. Are you:
   a. Non-smoker
   b. Ex-smoker
   c. Current smoker?
   d. Social/occasional smoker?

6. When drinking do you:
   Smoke more Smoke less No difference N/A

7. Does smoke around you make you more likely to smoke?
   Yes No Unsure

Do you have any other comments?
Appendix 5: Standardized template for interviews

Interview Questions

1) i) Do you think outdoor areas of bars and cafes normalise/encourage smoking from a) smokers? b) ex-smokers? c) non-smokers?
ii) Do you think alcohol plays a part in this?

2) Do you think smoking outside bars and cafes normalises smoking to young people?

3) Do you think there are issues around second hand smoke for employees and non-smokers?

4) What do you see at the main opposition to smoke free areas outside bars and cafes?

5) In your opinion is there public support for a ban?

6) Do you think there other options for policy to reduce the harms/normalisation of smoking? Policies which could be stand alone or used in conjunction with a smokefree outdoors?

7) What information is needed to convince councillors that smoke-free areas outside bars and cafes are important?

8) Would you be more inclined to introduce smoke-free changes if other councils had already done so?

9) Do you think education and social pressure would sufficiently enforce a ban?

10) Is smokefree areas outside bars and cafes the role of local government only or should it involve central government?

11) Do you see a role for this type of policy as part of the smokefree 2025 goal?
Appendix 6: Ethics approval

ETHICAL APPROVAL AT DEPARTMENTAL LEVEL OF A PROPOSAL INVOLVING HUMAN PARTICIPANTS (CATEGORY B)

PLEASE read the important notes appended to this form before completing the sections below

NAME OF DEPARTMENT: Department of Public Health, University of Otago

TITLE OF PROJECT: Smoking outside bars and cafes (Project for Fourth Year Medical Students)
PROJECTED START DATE OF PROJECT: April 8th, 2013

STAFF MEMBER RESPONSIBLE FOR PROJECT: George Thomson

NAMES OF OTHER INVESTIGATORS OR INSTRUCTORS: Richard Jaine, Hera Cook

BRIEF DESCRIPTION OF THE PROJECT:
To inform policy development, it is useful for officials, planners and policy makers to know how many smokers are present in particular types of outdoor public places. This helps them determine the options and solutions for denormalising smoking in cities, and for reducing the associated health hazards, litter and pollution from secondhand smoke and discarded butts. In particular, smoking outside bars and restaurants appears to be important for hindering successful quitting and for normalising smoking for young people.

Over the last five years, observational methods have been developed by University of Otago, Wellington researchers to establish the incidence and prevalence of smoking in particular outdoor areas (Parry et al. 2011; Patel et al. 2012; Thomson et al. 2012). A number of similar observation projects by 4th year students have been very successful (Martin et al. 2006; Quedley et al. 2008; Thomson et al. 2008; Parry et al. 2011).

In this project we will observe and map the number and location of smokers on pavements outside a selection of bars and cafés in downtown Wellington. Context for policy options will be developed, partly from documentary material, and from a small survey of bar and café patrons. Recommendations will be made for the options for progress with smokefree policies by local governments.

Our specific aims are:
• To better understand the association of smoking and alcohol in public social settings, and the policy context.
• In particular, to:
  o Pilot the observation of areas with smokers (standing, walking and seated) on pavements outside premises licensed to sell alcohol in downtown Wellington.
  o Develop policy options for smokefree pavement areas.

Methods:
This study will use observational methods that are fairly similar to previous studies one of the supervisors has been involved in around the systematic observation of smoking in public outdoor
places (Parry et al. 2011; Patel et al. 2012; Thomson et al. 2012). The observation data collection will be non-obtrusive and involve no identifying features of individuals or of the premises involved. Data collection will be on non-obtrusive devices that are commonly used in public places eg, smart phones (rather than using paper and clipboards).

The survey of bar patrons will be conducted by pairs of students. It will use a short structured protocol to explore patron’s opinions on smoking outside bars and possible policy options. The survey will be of patrons (of non-observed bars) after they have left the bar; and will be anonymous.

**Results:** None of the results from this study will contain any identifying features of observed individuals.

**DETAILS OF ETHICAL ISSUES INVOLVED:**
Potential ethical issues and the ways that we will deal with these are:

1. **Researcher safety:** Observations will only be made in circumstances where the in-field researchers are completely comfortable with the surroundings and activities. The observers and surveyors will work in pairs. The researchers will be making the observations at times when the locations are fairly busy (around lunchtime or early evening), rather than when very few people are around. No observations or surveys will be done after 10pm.

2. **Identification:** The in-field researchers will carry (but not display) University of Otago identification, and a letter from the lead supervisor describing and validating their activity.

3. **Observations:** The in-field researchers will take care not to be noticed by engaging in unusual behaviour. All the researchers will be made fully cognisant of the ethical issues involved in this type of observational research by the lead researcher (Petticrew et al. 2007).

4. **Survey:** We will conduct short face-to-face interviews with bar patrons after they have left bars.

**ACTION TAKEN**

- Approved by Head of Department
- Approved by Departmental Committee
- Referred to University of Otago Human Ethics Committee
- Referred to another Ethics Committee

Please specify:

**DATE OF CONSIDERATION:** .................................

**Signed (Head of Department):** .................................

Please attach copies of any Information Sheet and/or Consent Form
Notes concerning Category B Reporting Sheets

1. This form should only be used for proposals which are Category B as defined in the policy document "Policy on ethical practices in research and teaching involving human participants", and which may therefore be properly considered and approved at departmental level;

2. A proposal can only be classified as Category B if NONE of the following is involved:-
   - Personal information - any information about an individual who may be identifiable from the data once it has been recorded in some lasting and usable format, or from any completed research;
   (Note: this does not include information such as names, addresses, telephone numbers, or other contact details needed for a limited time for practical purposes but which is unlinked to research data and destroyed once the details are no longer needed)
   - The taking or handling of any form of tissue or fluid sample from humans or cadavers;
   - Any form of physical or psychological stress;
   - Situations which might place the safety of participants or researchers at any risk;
   - The administration or restriction of food, fluid or a drug to a participant;
   - A potential conflict between the applicant’s activities as a researcher, clinician or teacher and their interests as a professional or private individual;
   - The participation of minors or other vulnerable individuals;
   - Any form of deception which might threaten an individual's emotional or psychological well-being.

   If any of the above is involved, then the proposal is Category A, and must be submitted in full to the University of Otago Human Ethics Committee using the standard Category A application form, and before the teaching or research commences;

3. A separate form should be completed for each teaching or research proposal which involves human participants and for which ethical approval has been considered or given at Departmental level;

4. The completed form, together with copies of any Information Sheet or Consent Form, should be returned to the Manager Academic Committees or the Academic Committees Assistant, Registry, as soon as the proposal has been considered at departmental level;

5. The Information Sheet and Consent Form should NOT include the statement “This proposal has been reviewed and approved by the University of Otago Human Ethics Committee” as this is inappropriate for Category B proposals. A statement such as statement “This proposal has been reviewed and approved by the Department of ......, University of Otago” may however be used;

6. Please ensure the Consent Form and the Information Sheet have been carefully proofread; the institution as a whole is likely to be judged by them;
7. A Category B proposal may commence as soon as departmental approval has been obtained. No correspondence will be received back from the University of Otago Human Ethics Committee concerning this Reporting Sheet unless the Committee has concerns;

8. This form is available electronically at the following web address:
   http://telperion.otago.ac.nz/acadcomm/categoryb.html

References (for this proposal)


Patel, V., Thomson, G., Wilson, N. 2012. Smoking increases air pollution levels in city streets: Observational and fine particulate data. Health & Place 18, 1202-1205.


Appendix 7: Demographic of survey participants

<table>
<thead>
<tr>
<th></th>
<th>Non-smoker</th>
<th>Ex-smoker</th>
<th>Current/Social Smoker</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. People</td>
<td>72</td>
<td>14</td>
<td>40</td>
</tr>
</tbody>
</table>

Table 1: Demographic of survey participants grouped by smoking status.

<table>
<thead>
<tr>
<th></th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 30</td>
<td>35</td>
<td>36</td>
</tr>
<tr>
<td>&gt; 30</td>
<td>26</td>
<td>29</td>
</tr>
</tbody>
</table>

Table 2: Demographic of survey participants grouped by gender and age.
Figure 1: Survey response to the question, ‘How do you feel about these areas becoming smokefree?’ grouped by age (greater or less than 30 years old).
Figure 1: Survey response to the question, ‘If this policy was introduced, would it be effective in decreasing smoking rates in NZ – (out of sight out of mind)?’ grouped by smoking status.

<table>
<thead>
<tr>
<th></th>
<th>Ex-smoker</th>
<th>Non-smoker</th>
<th>Current/Social Smoker</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>No</strong></td>
<td>3</td>
<td>22</td>
<td>14</td>
<td>39 (31%)</td>
</tr>
<tr>
<td><strong>Unsure</strong></td>
<td>1</td>
<td>12</td>
<td>8</td>
<td>21 (17%)</td>
</tr>
<tr>
<td><strong>Yes</strong></td>
<td>10</td>
<td>38</td>
<td>18</td>
<td>66 (52%)</td>
</tr>
</tbody>
</table>
Appendix 10

Interview Questions

1) Do you think outdoor areas of bars and cafes normalise/encourage smoking from
   a) smokers? b) ex smokers? c) non smokers?
   ii) Do you think alcohol plays a part in this?
2) Do you think there are issues around second hand smoke for employees and non-smokers?
3) What do you see at the main opposition to smoke free areas outside bars and cafes?
4) In your opinion is there public support for a ban?
5) Do you think there other options for policy to reduce the harms/normalisation of smoking?
   Policies which could be stand alone or used in conjunction with a smokefree outdoors?
6) What information is needed to convince councillors that smoke-free areas outside bars and
   cafes are important?
7) Would you be more inclined to introduce smoke-free changes if other councils had already
done so?
8) Do you think education and social pressure would sufficiently enforce a ban?
9) Is smokefree areas outside bars and cafes the role of local government only or should it
   involve central government?
10) Do you see a role for this type of policy as part of the smokefree 2025 goal?