



HHS Public Access

Author manuscript

Aust N Z J Public Health. Author manuscript; available in PMC 2015 June 15.

Published in final edited form as:

Aust N Z J Public Health. 2010 August ; 34(4): 379–385. doi:10.1111/j.1753-6405.2010.00570.x.

Compliance and support for bans on smoking in licensed venues in Australia: findings from the International Tobacco Control Four-Country Survey

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Abstract

Objective—To examine attitudes towards and compliance with the recent Australian bans on smoking in licensed venues, and to explore effects on smoking behaviour.

Methods—Three Australian states (Queensland, Tasmania and Western Australia) implemented a total ban on smoking in all enclosed licensed premises in 2006, and two others (Victoria and New South Wales) did so in mid-2007. We used data from smokers residing in these states for each of the six waves of the ITC-4 country survey (2002–2007; average n=1,694).

Results—Consistent with the majority of international findings, observed compliance was reported by more than 90% of smokers from a pre-ban situation of indoor smoking being the norm. Attitudes became more positive in the year before the ban, but more than doubled in the year the bans were implemented. The associations found for the leading states were replicated by the lagging states a year later. We found no evidence for any increase in permitting smoking inside the home after the bans took effect. Further, we were unable to find any evidence of reductions in daily cigarette consumption or any increase in quitting activity due to the bans.

Implications—These results add to a growing body of international research that suggests that smokers are readily able to comply with, and increasingly support, smoke-free bars, though the bans may have limited effect on their smoking habits.

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Ethics

This research was approved by the Human Research Ethics Committee at the Cancer Council Victoria.

Keywords

Licensed venues; smoke-free policy; tobacco use; policy compliance; smoking restrictions in the home

Australian workplaces began implementing bans on indoor smoking following government reports in 1986 that highlighted the public health threat posed by passive smoking.^{1,2} Though these restrictions were generally well accepted,^{3,4} there was strong industry opposition to extending the bans to recreational venues, especially licensed and some gambling venues. It was claimed that smokers would cease visiting these venues, resulting in financial ruin for small businesses and displacing passive smoking to homes. The Australian Hotels Association also tried to perpetuate the stereotype that having a smoke and a drink was part of our cultural heritage and banning it would be socially unacceptable and difficult to enforce.⁵ However, research has demonstrated that these concerns were unwarranted. A review of 21 quality international studies found that smoke-free laws, mainly involving restaurants, had no effects or positive effects on hospitality revenues.⁶ Opposition remained strongest towards restrictions in licensed and gaming venues, partly because there was less evidence to allay concerns over the consequences, but also perhaps due to more frequent patronage of pubs, clubs and gaming venues among smokers than non-smokers.⁷ Partly due to this, Australian policy-makers adopted an incremental approach to the introduction of smoking bans, first implementing them in restaurants, cafes and a range of other venues, before phasing them into pubs and clubs.

Australian research on workplace^{3,4} and restaurant^{8,9} bans indicates that smokers are both compliant and supportive of restrictions following implementation of smoke-free laws. Since Ireland introduced the first comprehensive smoke-free laws in 2004, research has found high levels of compliance and that a significant minority, if not majority, of smokers also support total restrictions in licensed venues in jurisdictions where they have been implemented.¹⁰⁻¹³ Studies have also found evidence that smoking bans in licensed venues leads to an increase in home smoking bans,^{11,14,15} contrary to arguments that they would lead to increased smoking in the home.

The evidence that bans affect smoking behaviour is less clear. Workplace bans typically lead to reductions in consumption, but an association with quitting remains controversial.¹⁶⁻¹⁸ Prior to the bans in Australian licensed venues, almost three-quarters of frequent, mostly young, bar and nightclub patrons reported smoking more at these venues (socially-cued smoking), with one quarter reporting that smoking bans would motivate them to quit.¹⁹ However, there is limited research on the actual impact of bans in recreational venues on patrons' smoking behaviour following their implementation. One large US study concluded that bans encourage quit attempts among smokers already motivated to quit, but may have little to no impact on cessation rates among those who attempt.²⁰ Findings from the International Tobacco Control (ITC) project have been mixed. There was an increase in reported quit attempts among Irish smokers following implementation of their smoke-free law,¹¹ while an evaluation of the impact of Scotland's¹² smoke-free law found no evidence of an increase in quit attempts or sustained abstinence. Both findings were relative to the UK

where smoking in public places was not restricted at the time. An evaluation of New Zealand's smoke-free law reported inconclusive evidence of an impact on smoking prevalence and consumption.¹³

All Australian states and the Australian Capital Territory (ACT) have now implemented comprehensive bans on smoking in licensed venues, beginning in 2006 with Tasmania on the 1 January, followed by Queensland on the 1 July and Western Australia (WA) on the 31 July (called the leading states). In 2007, Victoria and New South Wales (NSW) went smoke-free on 1 and 2 July, respectively (called the lagging states). The ACT went smoke-free on the 1 December 2006, and South Australia (SA) implemented the ban on the 1 November 2007, but we were unable to include them in this study. The Northern Territory (NT) remains the only Australian jurisdiction that allows smoking in fully enclosed licensed venues. With this exception, Australia has almost honored its commitment to the Framework Convention on Tobacco Control²¹ that requires ratifying members to protect people from exposure to tobacco smoke in indoor workplaces, public transport and indoor public places.

This study examines the impact of the introduction of bans on smoking in bars and clubs among a sample of smokers in the leading and lagging states, described above. Based on the growing body of literature, we expect that both compliance and support for the bans in licensed venues to be high following implementation, and no evidence of declines in patronage. We also expect the prevalence of home bans, to be either unchanged or increased following the bans. Finally, we explore the effects of the bans on smoking behaviour, specifically cigarette consumption and quitting activity, and whether any such effects on behaviour vary as a function of levels of tobacco dependence.

Methods

Participants

Participants are respondents from the Australian cohort in the six waves of the International Tobacco Control Four Country (ITC-4) survey. Respondents were current smokers (a minimum of one cigarette in the past month) in at least one wave and resided in the leading states (average n=603), or in the lagging states (average n=1,091). Respondents from other parts of Australia were excluded. This gave an average sample size of 1,694 smokers per wave. To look at quitting activity, we also included a small subset of ex-smokers who reported recently quitting at either the pre- or post-ban waves (n = 96).

Procedure

The ITC-4 began in 2002 as an annual cohort survey. Parallel surveys are also conducted in the UK, US and Canada. Details of survey dates in Australia are in Table 1. The leading states banned smoking in all areas of licensed venues between waves 4 and 5, followed by the lagging states between waves 5 and 6. The difference in implementation dates provides a natural experiment to evaluate the effects, with the lagging states serving as a control for the leading states. The longitudinal design allows the study of change at the individual level.²²

Those lost to follow-up (approximately 25% per wave) are replenished to maintain a fixed cross-sectional sample of approximately 2,000 participants per country. At the time of

recruitment, participants were required to be 18 years or older, have smoked more than 100 cigarettes in their lifetime and have smoked at least once in the past 30 days. A detailed description of the ITC methodology is available elsewhere.²³

Survey measures

Patronage of licensed venues was assessed by “In the past six months have you visited a drinking establishment, bar, or pub where you live?” From wave 3 onwards patrons were also asked “Would that be at least weekly, or less often?” A measure of frequency of patronage was derived with ‘regular patrons’ defined as those reporting visiting at least weekly, and ‘non-regular patrons’ those reporting visiting less often or not at all.

From wave 4 onwards, patrons were asked, “The last time you visited, were people smoking inside the pub or bar?” and, if a current smoker, “Did you go outside for a smoke?”

Awareness of restrictions was assessed by “Which of the following best describes the rules about smoking in drinking establishments, bars, and pubs where you live?” 1) Smoking is not allowed in any indoor area; 2) Smoking is allowed only in some indoor areas; 3) No rules or restrictions, with the latter two responses combined to form a dichotomous variable; 1) Smoking is not allowed, and 2) Smoking is allowed.

Support was assessed with “For indoor areas of drinking establishments, bars or pubs, do you think smoking should be allowed in all indoor areas, in some indoor areas, or not allowed indoors at all?” with responses dichotomised 1) Smoking should not be allowed, and 2) Smoking should be allowed.

Home smoking restrictions were assessed by “Which of the following best describes smoking inside your home?” 1) Smoking is allowed anywhere, 2) Smoking is never allowed anywhere, or 3) Something in between, dichotomised into 1) Smoking not allowed, and 2) Smoking allowed. At wave 6, respondents who reported that smoking was allowed were also asked “Compared to one year ago, do you now smoke more, the same amount, or less inside?”

To assess quitting activity, we asked about the timing of recent quit attempts and formed a dichotomous measure of quit attempts: made an attempt in the past six months (including those still quit) vs. no such quit attempt. Cigarette consumption was estimated by reported daily consumption (or weekly consumption for non-daily smokers). At wave 6 smokers in the lagging states were also asked, “Has the smoke-free law made you more likely to quit smoking?” and “Has the smoke-free law made you cut down on the number of cigarettes you smoke?” Ex-smokers were asked, “Was the smoke-free law a reason for your quitting smoking?” Nicotine dependence was measured using the Heaviness of Smoking Index (HSI; range 0 – 6), a composite measure of consumption and time to first cigarette, recoded into three categories of dependence Low: 0 to 1, Moderate: 2 to 3, and High: 4 to 6.

Demographics used were age (18 to 39, and 40+), gender, household income (low <\$30,000, moderate from \$30,001 to \$59,999, and high >\$60,000), and education (Primary or some high school, completed High School, Technical or TAFE, or at least some University).

Analyses

Chi-square tests were used to examine independent bivariate associations, and for the wave-to-wave changes in categorical variables we used McNemar's chi-square test. Trends were evaluated by fitting a linear trendline to the pre-ban data, and comparing the expected post-ban proportions with the 95% confidence intervals around the actual obtained values. Multivariate analyses using logistic regression were performed to examine predictors of a) adopting a home ban on smoking, and b) making a quit attempt, in the post-ban wave. Multivariate logistic regression was also used to examine any attrition bias, by comparing responses from the replenishment sample with those in the continuing cohort on main outcome measures. We did not find any significant results. For multivariate analyses, we controlled for all sociodemographic variables and nicotine dependence. For some analyses the leading and lagging states were combined to form a pre-ban and a post-ban condition to increase the power to detect a statistically significant effect. Where this has occurred, we first checked that the data trend was in the same direction within both state groups. All analyses were carried out using SPSS v.14.0. Statistical significance was set at $p < 0.05$.

Results

Table 1 describes the characteristics of respondents who were current smokers at the time of each survey, with waves 1 to 3 combined for comparison with waves 4, 5 and 6. There was no clear evidence that demographic trends across the survey waves changed differently for the leading states compared to the lagging states. The sample did get somewhat older, but in equivalent ways across waves. There were some systematic differences between the two sets of states, with the lagging states sample being better educated, with higher incomes, less over-representative of females, and less nicotine dependent (see Table 1).

Trends in visiting licensed venues

Among current smokers, reported patronage was in decline before implementation of the bans. There was an average decline of 2% per wave in the leading states, going from 77.1% ($\pm 3.1\%$) to 71.1% ($\pm 3.9\%$) between waves 1 and 4. The lagging states fell from 78.9% ($\pm 2.2\%$) to 75.5% ($\pm 2.7\%$), an average of 0.85%, between waves 1 and 5. Fitting a linear trendline to the pre-ban data in the leading states revealed that the actual post-ban proportions were non-significantly higher, at 71.6% ($\pm 3.6\%$) compared to the expected value of 69.9% for wave 5, and 70.6% ($\pm 3.6\%$) compared to the expected value of 67.9% for wave 6. In the lagging states, the actual proportion at wave 6 (74.4%, $\pm 2.8\%$) was non-significantly lower than the predicted value of 76.0%.

There was also no significant change in regular patronage (at least weekly); leading states: 15.9% (± 3.2) at wave 4, followed by 16.9% (± 3.0) at wave 5, and 17.7% (± 3.0) at wave 6; lagging states: 24.9% (± 2.7) at wave 4, 24.8% (± 2.7) at wave 5, and 25.0% (± 2.7) at wave 6.

Reactions to the ban

Figure 1 shows that following implementation, there was a massive increase in reporting total bans among patrons. In the leading states it rose from 18.3% to 85.2% (wave 4 to wave

5), and in the lagging states from 19.5% to 88.9% (wave 5 to wave 6). Among smokers who participated in the two waves preceding the ban there was also a significant, but much smaller, increase in reporting total bans the year before they were introduced (from 8.8% to 14.6% in the leading states, $p=0.001$; and from 12.3% to 18.4% in the lagging states, $p<0.001$).

Compliance was high, with observed smoking falling below 10% after implementation of the bans (see Figure 2). In both the leading and lagging states, the 18 to 39 year olds were significantly more likely than those older to report that others were smoking inside pre-ban (leading states: 83.7% vs. 72.8%, $p=0.012$; lagging states: 80.5% vs. 67.4%, $p<0.001$). The difference was no longer significant in the post-ban wave (leading states: 8.6% vs. 7.7%, $p=0.381$; lagging states: 9.0% vs. 7.2%, $p=0.744$). However, at wave 6 in the leading states 6.9% of 18 to 39 year olds reported observed smoking compared to 1.2% of older respondents ($p=0.002$).

Many more smokers reported going outside to smoke following implementation (see Figure 3), particularly the more dependent. Combining state groups showed that 92.1% of the highest dependence tertile went outside to smoke compared to 79.4% of the lowest ($p<0.001$).

Support for the ban among patrons (see Figure 4) increased modestly in the year before implementation. Among patrons present at the two waves preceding the ban it rose from 14.0% to 19.7% 4 ($p=0.041$) in the leading states, and from 16.7% to 24.9% ($p=0.001$) in the lagging states. However, support increased much more in the wave immediately following the ban, rising by about 30% for both groups of states. There was a further increase by 13.3% in the leading states between waves 5 and 6, two waves after implementation.

Combined across state groups, the highly dependent smokers were the least likely to support the ban, at both pre-ban (High: 19.9% vs. Low: 31.5%, $p=0.002$) and post-ban (High: 44.2% vs. Low: 59.2%, $p<0.001$). Patrons who reported observing smoking were less likely to support the bans than those who did not, both at pre-ban (19.4% vs. 47.5%, $p<0.001$) and at post-ban (41.3% vs. 54.0%, $p=0.02$). Prior to implementation, reported going outside to smoke was associated with greater support (34.1% vs. 20.9%, $p<0.001$), but an opposite trend was found post-ban (52.0% vs. 59.2%, $p=0.109$). Before the bans were implemented, non-regular patrons were significantly more likely to support the ban than regular patrons (31.6% vs. 18.8%, $p<0.001$). However, the difference was not significant in the post-ban wave (53.6% vs. 52.4%, $p=0.700$).

Effects on restrictions on smoking at home

In the leading states, the average wave-to-wave increase in home smoking bans at pre-ban was 2.7%, rising from 39.0% ($\pm 4.1\%$) at wave 1 to 47% ($\pm 5.1\%$) at wave 4. Based on a linear trendline fitted to the pre-ban data, the expected proportion of home bans at waves 5 and 6 was 49.1% and 51.1% respectively, which was non-significantly higher than the actual values of 46.2% ($\pm 4.8\%$), and 50.2% ($\pm 4.7\%$). In the lagging states, the average wave-to-wave increase at pre-ban was 2.9%, rising from 34.3% ($\pm 2.9\%$) at wave 1 to 45.8% (\pm

3.5%) at wave 5. A further increase to 48.5% (\pm 3.7%) at wave 6 was non-significantly less than the expected proportion of 49.3%.

There was a non-significant increase in reported total home bans for both regular and non-regular (post-ban) patrons (see Table 2). We repeated the analysis excluding respondents who smoked less than five cigarettes per day at pre-ban, with no notable difference in the result. Finally, a logistic regression was conducted to predict the odds of adopting a home ban on smoking at the post-ban wave compared to smokers who did not change their rules at home. Controlling for all covariates and state group, there was a positive but non-significant association between frequenting at least weekly post-ban and adopting a home ban (OR = 1.45, $p=0.151$).

At wave 6, 34.7% of smokers in the lagging states reported smoking less inside their home compared to one year ago, 59.7% said the same, and only 5.6% said more. With the bans implemented for more than one year in the leading states, responses were similar with 30.9% reporting smoking less inside, 62.5% the same and 6.6% more. Responses did not differ significantly as a function of frequency of patronage ($p=0.500$ for the leading states, $p=0.745$ for the lagging states). We redid the analyses to see if reporting living with non-smokers affected the outcomes and it did not, but we note that this variable was only measured at recruitment so it is likely subject to increasing error relative to time in the sample.

Effects on smoking

Of current smokers, 42.3% reported the laws had helped them to cut down (54.8% of regular patrons vs. 37.7% who went nonregularly, $p<0.001$). To explore effects on cigarette consumption more closely, we compared mean daily consumption between the pre- and post-ban waves (see Table 3). Inconsistent with respondents' own assessments, we found a significant reduction in consumption for those who visited non-regularly, but not among regular patrons. Re-running the analysis including only those who smoked more than five cigarettes per day at the pre-ban wave yielded essentially the same result. In the two waves leading up to the ban a decrease of 0.42 per day among those who visited non-regularly was approaching significance ($p=0.06$), while an increase of 0.38 per day among regular patrons was not significant ($p=0.531$).

Next we examined whether the bans led to an increase in quit attempts. In the lagging states only, 23.5% reported that the new laws made (or had made) them more likely to quit (29.1% of regular patrons vs. 21.5% of non-regular patrons, $p=0.041$). We then examined this more closely by comparing the level of quitting activity at the post-ban wave with the pre-ban level among respondents who participated in both the pre- and post-ban waves. Respondents were grouped according to post-ban reported patronage. Table 4 shows an increase in quitting activity for both regular and non-regular patrons. These results were essentially replicated when smokers of five or less cigarettes per day at the pre-ban wave were removed from the sample. Controlling for covariates, logistic regression supported the observation that post-ban, regular patrons were as likely as non-regular patrons to make a quit attempt in the six months preceding the post-ban survey (OR = 1.02. $p=0.878$). We tested this further by separating the non-regular group into those who had been at least once in the past six

months and those who had not been at all, but we found no differences. These results indicate that there is no additional increase in quit attempts due to bans, again inconsistent with respondents' own assessments.

Discussion

Consistent with the bulk of international research on smoking bans in licensed venues,^{10–13} observed compliance was extremely high, with indoor smoking almost eliminated after the introduction of the bans. Furthermore, the number of smokers supporting the restrictions more than doubled following implementation. A further increase in support in the second year after implementation in the leading states suggests that bans become even more acceptable as smokers experience them. It is notable that support increased most among smokers who visited at least weekly. This is evidence that experiencing smoke-free environments fosters positive attitudes and acceptance, as is typically found.²⁴ This is opposite to what is postulated by most expectancy value theories that predict that attitude change precedes behaviour change.²⁵ It is, however, consistent with social cognitive theories that posit reciprocal influences between attitudes and behaviour.²⁶ Where the adverse effects are felt more strongly (i.e. among more dependent smokers), there were less favourable attitudes towards the bans, presumably because of a greater perceived inconvenience.

Our findings are consistent with existing literature that found no detrimental effect of smoking restrictions on patronage of hospitality venues.⁶ However, we acknowledge that our measure of patronage lacks precision. Our measure of change in patronage relies on self-report but given our use of a broadly representative sample it should be an unbiased estimate of smoking by venue type weighted according to patronage.

There was an increase in home smoking restrictions from pre to post-ban, but this was consistent with the trend in preceding waves. A previous study using ITC data that found living in an area with smoke-free licensed venues predicts adoption of home bans,¹⁵ but as the trend we found was not significant we cannot confirm it. It could be that having bans in bars reflects the reduced normativeness of smoking, and thus it is more an indicator of the increasing social trend towards smoke free homes. However, like other studies, our results strengthen the evidence that a ban in licensed venues does not increase smoking in the home. Consistent with other studies,^{12,13} our findings suggest that in the short-term at least, the bans have had no impact on the levels of consumption and quitting activity of bar and club patrons. This failure of bans to affect smoking may be partly because most smokers now go outside to smoke when attending licensed venues. The overall increase in quitting activity at the post-ban survey may have been associated with increased media coverage of the harmful effects of passive smoking, which has been found to coincide with higher rates of cessation in the US.²⁷ Empirical research demonstrates that smoking restrictions in public places inform people about current social norms towards smoking,²⁸ and that greater perceived social unacceptability is associated with reduced cigarette consumption.²⁹ Therefore, smoking restrictions may yet lead to a reduction in consumption and prevalence in the long-term by lessening the normative influence of smoking.

A major strength of this study is the pre/ post quasi-experimental design, allowing changes at the individual level to be examined, and the capacity to exploit the different timing of implementation across states. The focus on smokers is both a strength, in that they are the group most directly affected, and a weakness in that it underestimates overall community support. Studies have found that non-smokers are much more supportive of bans on smoking in public places.^{30,31}

The behavioural data is based on self-report and is subject to recall bias and social-desirability. Therefore, the results should not be used as accurate prevalence estimates. However, the likely equivalent measurement error across the two groups of states means we can be reasonably confident about our conclusions with respect to changes in espoused attitudes and compliance, if not patronage, quitting behaviour and home bans. Response bias is likely when asking respondents to give instances of their own behaviour, particularly when assessing unpopular or banned behaviours. To the extent that we asked about observed smoking this was minimised, though it might affect reports of smoke-free homes. The most likely bias is an underestimate of prevalent but non-salient events, and increased sensitivity to rare but more salient events. This would have the effect of inflating the estimates of observed smoking in the post-ban wave relative to pre-ban, reducing the observed effects. For effects on smoking, we show that we can control for self-assessment of causation bias by demonstrating that while smokers thought the bans had affected their smoking, we were unable to show it with our more objective measures.

Our sample was drawn from a cohort study and there are biases in attrition (e.g. ‘time in sample’ effects), but insofar as it was possible, we attempted to control for any such effects and found none of any magnitude that could have accounted for the outcomes reported. The statistical significance of small effect sizes in bivariate analyses should always be accepted with caution. The magnitude of our findings on support and compliance are large enough to make it implausible that they are the result of demographic factors or response biases that we have not controlled for. Failure to find effects on other aspects of smoking behaviour may be because of a lack of power or lack of control, but it does suggest that if there are any effects, they are small.

Conclusions and implications

Thus far, Australian smoke-free policy is largely achieving its intended effect of banishing smoking from inside licensed venues, thereby protecting non-smoking patrons and employees, and we identified no significant downside. The smooth transition to smoke-free licensed venues is arguably, in part, attributable to smokers’ readiness to adapt to, and increasingly support, smoking restrictions. The only note of concern was the reappearance of an age effect on reported smoking one to two years after the ban. This might indicate a low level of systematic violation in youth oriented venues. We found no evidence for a change in consumption and quitting, perhaps because most smokers now go outside to smoke. This adds to a growing body of evidence that smoke-free policies are not going to have the positive (i.e. downward) effect on smoking prevalence that many hoped it would. Finally, our findings appear to be robust as they were replicated across both groups of states.

Acknowledgements

This research was primarily funded by a grant from the National Health and Medical Research Council of Australia (265903 and 450110), with supplementary funding from the Roswell Park Transdisciplinary Tobacco Use Research Center (P50 CA111236), National Cancer Institute of the United States (R01 CA 100362), Robert Wood Johnson Foundation (045734), Canadian Institutes of Health Research (57897 and 79551), Cancer Research UK (C312/A3726), and Canadian Tobacco Control Research Initiative (014578), the Centre for Behavioural Research and Program Evaluation, and the National Cancer Institute of Canada/ Canadian Cancer Society.

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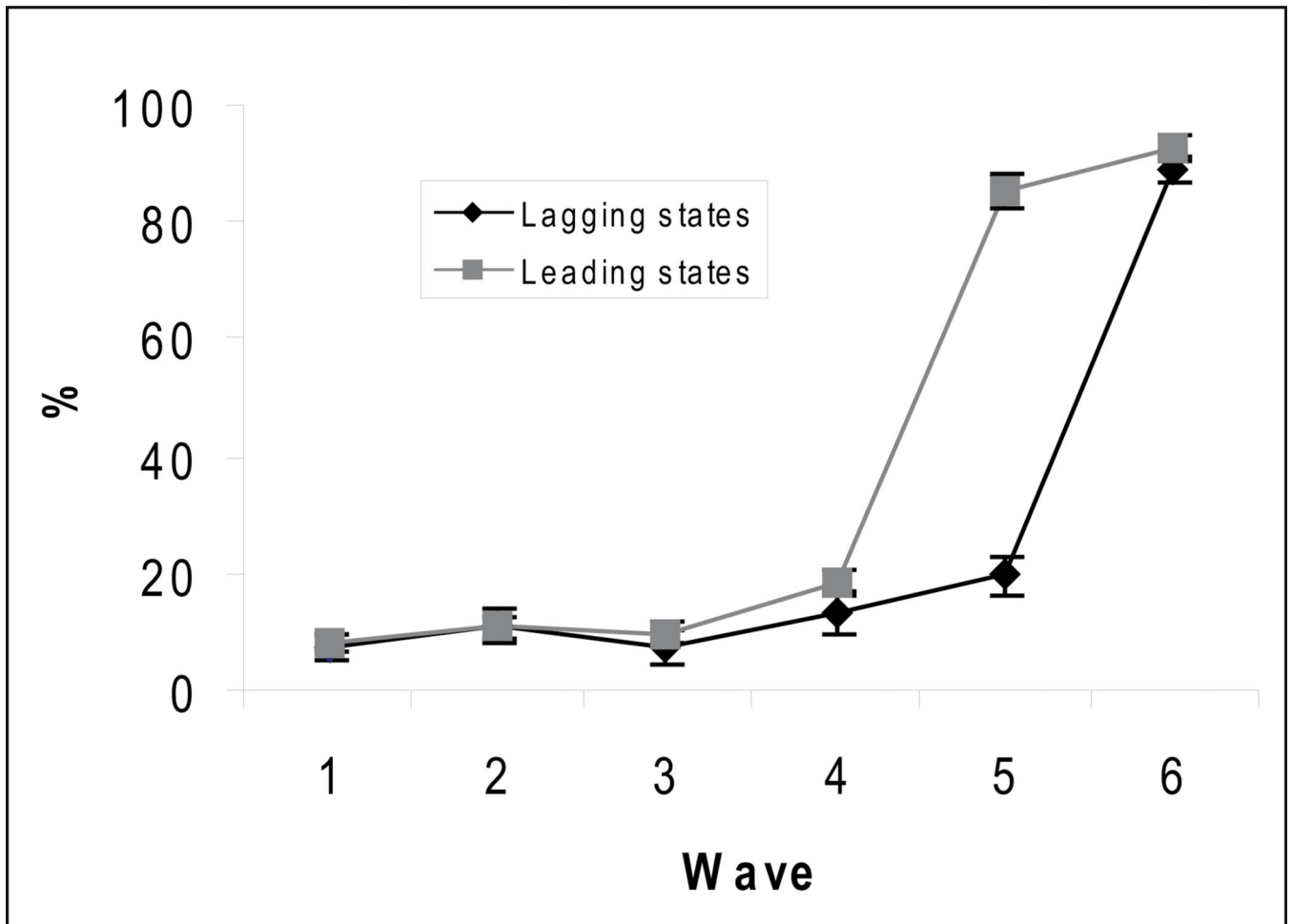


Figure 1. Percentage of smokers who visited a licensed venue in the past six months that reported smoking is not allowed inside (with 95% confidence intervals).

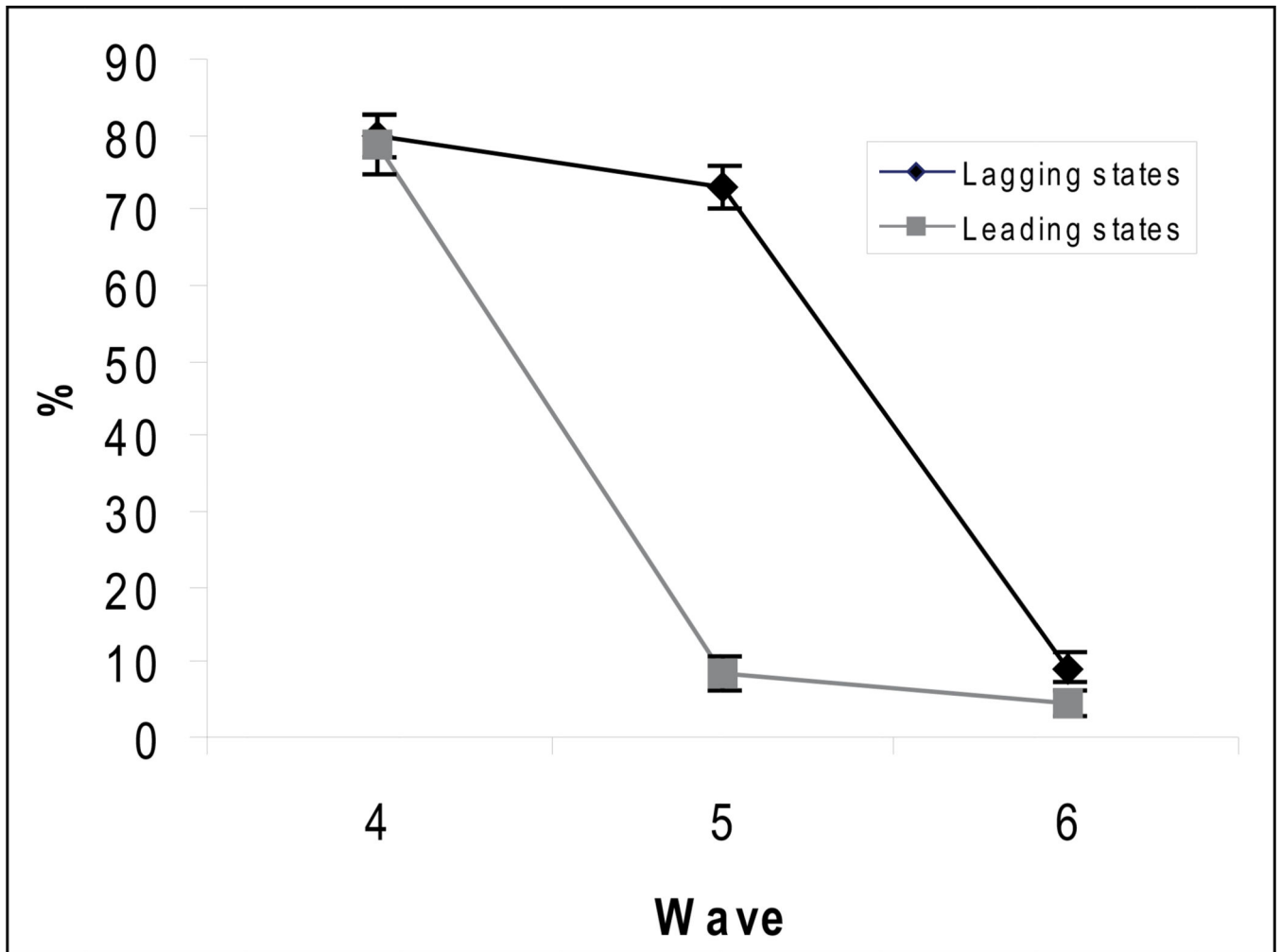


Figure 2. Percentage of smokers who visited a licensed venue in the past six months that reported observed smoking (with 95% confidence intervals).

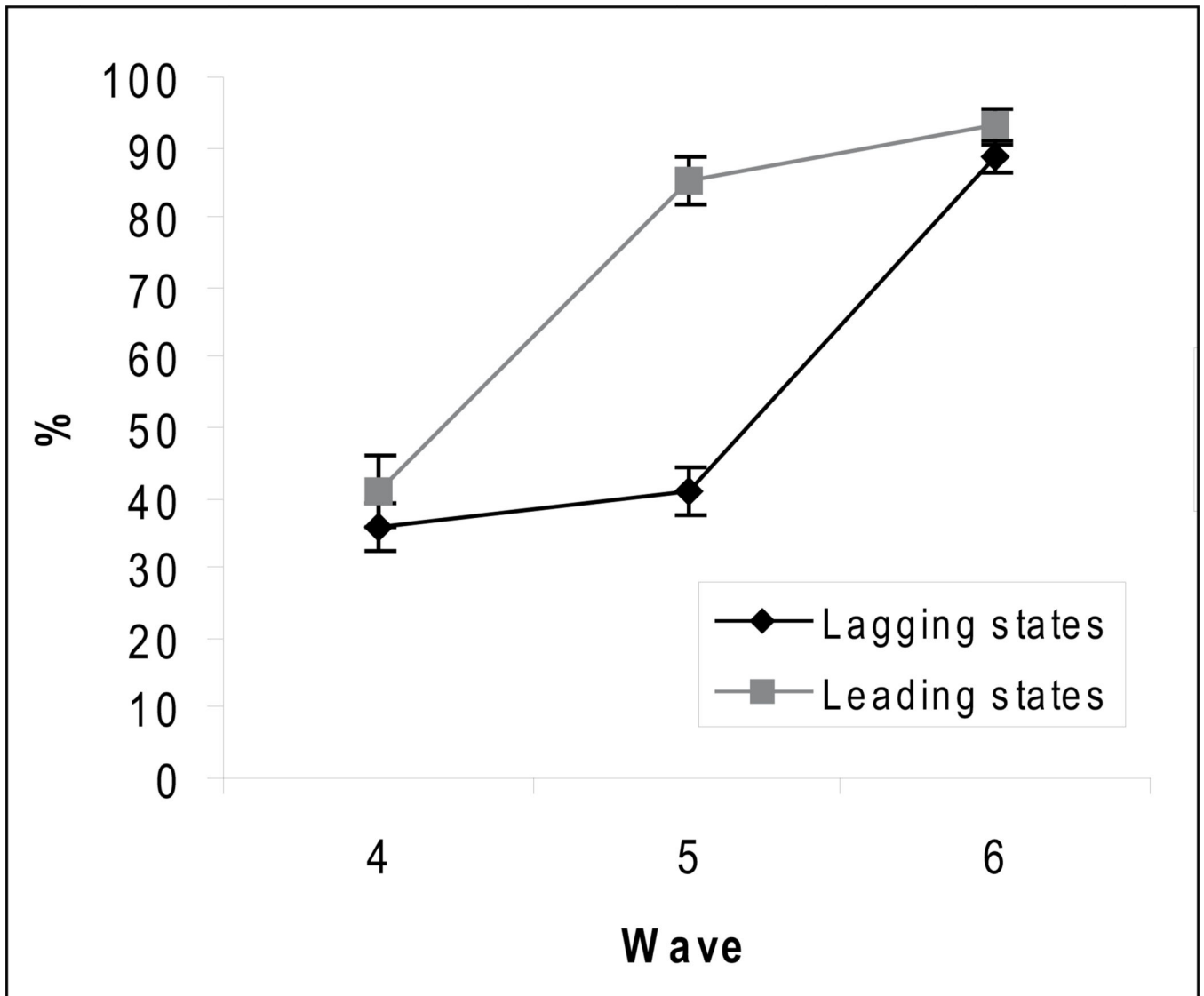


Figure 3. Percentage of smokers who visited a licensed venue in the past six months that reported going outside for a smoke (with 95% confidence interval).

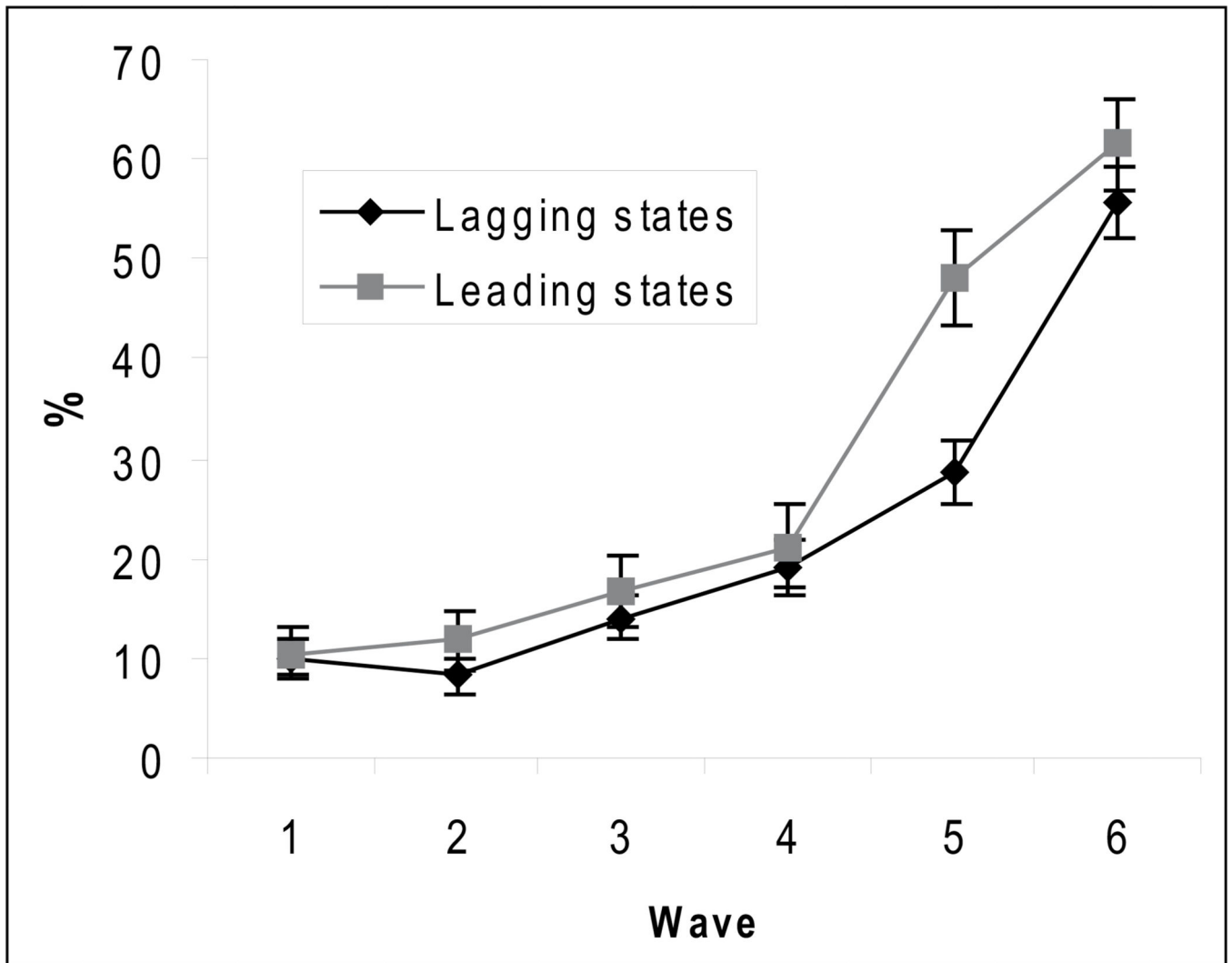


Figure 4. Percentage of smokers who visited a bar in the past six months that agree smoking should not be allowed in indoor areas of licensed venues (with 95% confidence interval).

Table 1

The sample characteristics of current smokers within each state group at each wave (%).

	Wave 1–3 ^a 2002–2004		Wave 4 Oct–Dec 2005		Wave 5 Oct 2006–Feb 2007		Wave 6 Sept 2007–Feb 2008	
	Leading states n=632	Lagging states n=1,198	Leading states n=517	Lagging states n=992	Leading states n=587	Lagging states n=1,007	Leading states n=615	Lagging states n=957
Age								
18–39	50.7	49.8	45.6	44.3	42.2	41	39.5	39
40+	49.3	50.2	54.4	55.7	57.8	59	60.5	61
Gender								
Female	54.1	52.9	55.9	54.9	59.6	54.1 ^b	56.9	55.1
Male	45.9	47.1	44.1	45.1	40.4	45.9	43.1	44.9
Household income								
Low	30.4	26.4 ^c	31.1	27.6	30.5	27.9	26.5	27.4
Moderate	36.8	31.6	34.8	32.4	31.5	30.9	32.4	30.4
High	27.3	35.3	29.2	34.3	31.2	34.5	35.3	35.7
Refused	5.4	6.6	4.8	5.7	6.8	6.8	5.9	6.5
Education								
Primary/some high	44.5	37.7 ^c	43.7	35.6 ^c	40.9	33.0 ^c	38.2	31.6 ^b
Finish High School	24.8	25.5	24.4	26.1	25.9	26.9	26.8	26.5
Trade qualification	16.2	16.6	15.5	17.7	17.2	19.5	18.0	21.4
University	14.6	20.1	16.4	20.6	16.0	20.6	16.9	20.5
Nicotine dependence								
Low	25.3	29.8	27.7	28.0 ^c	24.1	24.8	22.8	25.3
Moderate	40.9	40.3	35.7	42.8	41.7	42.3	43.1	42.6
High	33.7	29.9	36.5	29.3	34.1	32.9	34.1	32.1
Leading states								
Queensland	61.4		58.6		61.2		58.2	
Western Australia	29.8		26.7		28.8		30.6	
Tasmania	8.8		14.7		10.1		11.2	

	Wave 1-3 ^a 2002-2004		Wave 4 Oct-Dec 2005		Wave 5 Oct 2006-Feb 2007		Wave 6 Sept 2007-Feb 2008	
	Leading states n=632	Lagging states n=1,198	Leading states n=517	Lagging states n=992	Leading states n=587	Lagging states n=1,007	Leading states n=615	Lagging states n=957
Lagging states								
New South Wales		58.2		53.9		57.1		55.9
Victoria		41.8		46.1		42.9		44.1

Notes:

^aThe average number of observations at each wave. Survey dates for Wave 1: October to December 2002; Wave 2: May to August 2003; Wave 3: June to November 2004.

χ^2 ;

b) = p < 0.05

c) = p < 0.01

NB: Results in wave 1 – 3 are shown as significant if significance was reached in at least two of the three waves.

Table 2

Reporting that smoking is never allowed inside the home at the pre- and post-ban waves, by post-ban reported patronage.

Post-ban reported patronage	Regular n = 228	Non-regular n= 759
Pre-ban	42.5%	44.9%
Post-ban	47.8%	46.4%
McNemar's χ^2	$p=0.081$	$p=0.294$

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Table 3

Mean daily cigarette consumption, at the pre- and post-ban waves, by post-ban patronage.

Post-ban reported patronage	Regular n=228	Non-regular n=756
Pre-ban CPD	17.94	18.52
Post-ban CPD	17.64	17.49
Paired samples t-test	$p=0.505$	$p<0.001$

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Table 4

Quitting activity at the pre- and post-ban waves, by post-ban patronage.

Post-ban reported patronage	Regular n = 239	Non-regular n = 841
Pre-ban	27.6%	29.3%
Post-ban	33.5%	34.4%
McNemar χ^2	$p=0.109$	$p=0.008$

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