Original Article

Public support for anti-smoking legislation varies with smoking status

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Abstract

Objective: Rural Australians have higher rates of smoking than their urban counterparts, contributing to poorer health outcomes. In 2004, the Queensland Government introduced legislation to reduce the impact of environmental tobacco smoke on the community. The aims of the study were to describe smoking behaviours and associations between smoking behaviour and agreement with current anti-smoking laws.

Participants: A total of 1208 people over the age of 18 years and living in rural, remote and very remote central Queensland participated in this telephone survey.

Results: About 22% (n = 130) of female and 21% of male (n = 125) participants identified themselves as smokers. No difference existed between the mean age of smokers (47.3 years) and non-smokers (47.1 years). While there is high level of support for smoking restrictions in public places (75%), attitudes vary with smoking status. Smokers were less likely than non-smokers to agree that the legislation would create a healthier environment, reduce exposure to passive smoking or agree that ‘it is right to ban smoking in public places’. Smokers were significantly more likely to agree that the legislation had gone too far.

Conclusion: The gradual implementation of the anti-smoking legislation is changing social beliefs on what are acceptable smoking practices. It is likely that the legislation within Queensland and the subsequent forced changes in social conditions for smokers will continue to reduce the number of people smoking and reduce exposure to environmental tobacco smoke.

KEY WORDS: Australia, legislation, population study, smoking.

Introduction

Over the next 50 years, tobacco smoking is projected to result in 450 million deaths worldwide. Tobacco control strategies are known to discourage the uptake of smoking, encourage cessation and protect the public from environmental exposure to passive smoke. Since the mid-1980s, smoking in Australia has been increasingly restricted in a number of indoor public spaces. In 2004, the Queensland Government legislated to introduce stringent tobacco laws restricting smoking in public places. Public opinion supporting tobacco control legislation in Australia has grown over the years with a 20% shift in the level of support for a complete ban in public bars between 1992 and 2002.

The health of Australians living in rural, regional and remote locations is consistently reported to be lower than other Australians. The finding that mortality of Australians due to ischaemic heart disease increases with remoteness is typical of this phenomenon. Therefore, it is essential to explore health beliefs of rural Australians to determine factors that might contribute to a poorer health status. This study examines associations between smoking behaviour and agreement with current anti-smoking laws of central Queenslanders.

Methods

A cross-sectional descriptive study was conducted using an omnibus survey format administered via telephone interview by the Population Research Laboratory within the Centre for Social Science Research at the Central Queensland University, Australia. The Survey received approval by the Central Queensland University Human Research Ethics Committee.
Sampling

The study population was randomly selected from central Queensland residents 18 years of age or older. Participants were contacted by a direct-dialled, land-based telephone service. Central Queensland was defined geographically as running from Mackay in the north to Bundaberg in the south and from the coast to the Queensland state boarder. Prior to making the phone call, each household was randomly pre-selected as either a male or female household. One eligible person was selected from each household as the respondent to participate in a 20-min telephone interview. From October to November 2005, 3090 phone calls were made and 1208 individuals interviewed (62.33% response rate). The survey was administered through a 10-station computer-assisted telephone interviewing system.

The questionnaire was pilot-tested \((n = 181)\) by trained interviewers. The final survey consisted of three sections: (i) standardised introduction; (ii) specific research questions; and (iii) demographic questions. Ten specific research questions elicited respondents’ beliefs about smoking with respondents asked to select a response from a 5-point Likert-style rating scale ranging from strongly disagree to strongly agree.

The sample

Men (602) and women (606) were equally represented in the sample (Table 1). The mean age of participants was 47 years and the majority married. The sample was considered to be representative of the central Queensland population (95% confidence interval (CI) 0.028). The index of dissimilarity \(^5\) for the sample was 13.64, indicating a slight over-sampling from the 35- to 64-year age category and a slight under-sampling in the under 34-year age categories as well as the over 65-year age category.

What is already known on this subject:
- Rural Australians have higher rates of smoking than those in urban areas.
- Public support for tobacco control legislation is growing and such strategies are known to discourage the uptake of smoking, encourage cessation and protect the public from environmental exposure. However, until now the associations between smoking behaviour of rural Australians and agreement with the legislation is not known.

What this study adds:
- While rural Australians support the anti-smoking legislation, support is strongly determined by smoking status.
- In this rural population, there was an increased number of women and older age groups of smokers, suggesting that the anti-smoking message is not reaching these groups.

Statistical analysis

Data were analysed using SPSS, version 11 (SPSS, IL, USA). A series of \(\chi^2\) analyses were conducted to assess whether there was an association between smoking behaviour, smoking beliefs and sociodemographic variables. Predictors yielding significant \(\chi^2\) were further assessed for their influence in the presence of other variables using a binomial logistical regression analysis. Prior to conducting the binary logistic regression, the 5-point Likert Scale responses were collapsed into two discrete categories: agree (agree/strongly agree); or fail to agree (neutral, disagree, strongly agree).

Results

Smoking behaviour

Of the participants, 21% classified themselves as smokers. There was no significant difference between the percentage of male and female smokers \((P = 0.76)\) with 22% of women and 21% of men smokers. There was no significant difference \((t(1195) = -0.15, P > 0.88)\) between the mean age of smokers (47.1 years) and non-smokers (47.3 years).

Beliefs about legislation

Overall, the majority of participants agreed that the introduction of the legislation to ban smoking in public places was likely to create a healthier environment for all (79.5%), reduce exposure to passive smoking (71%) and encourage smokers to consider their smoking practices (73%). Almost half (46%) of the participants agreed that the legislation was likely to decrease the number of smokers in Queensland, whereas 42% believed that the new legislation will not force smokers to reduce the number of cigarettes smoked. There was a strong agreement that everyone has the right to smoke if they wish (84%) and that it is right to ban smoking in public places (75%). Having noted this, almost
one-third (27%) of the sample believed that the anti-smoking legislation had gone too far.

While there was overall support for the legislation, comparison of smokers’ and non-smokers’ beliefs identified significant differences between the two groups (Table 2). Smokers were less likely than non-smokers to agree that the introduction of the legislation would create a healthier environment or that there would be a reduction in the exposure to passive smoking. Similarly, smokers were less likely than non-smokers to agree with the statement: ‘it is right to ban smoking in public places’. When asked to comment on whether the legislation in Queensland had gone too far, smokers were significantly more likely to agree with the statement (CI 2.54–5.17). Similarly, a stronger level of agreement was held by smokers for the statement that everyone should have the right to smoke if they wish.

There was no significant difference in beliefs about the impact of the legislation on smoking practices of Queenslanders between the smoking and non-smoking groups. Almost half of the smokers and non-smokers agreed that the legislation not only forces smokers to reduce the number of cigarettes smoked, but is also likely to decrease the number of smokers in Queensland. Over two-thirds of both smokers and non-smokers agreed that the current legislation was likely to create a healthier environment for all.

Discussion

There were a number of significant differences between the demographics of the smokers from this study when compared with Australian and Queensland statistics. The prevalence of smoking (21.0%) in central Queensland in the current study was marginally higher than recent data from Queensland (19.8%) and Australian (17.4%) surveys. Although the percentage of smokers in this study was higher than the Queensland and Australian average, when compared with smokers from similar Australian geographical areas, the prevalence of smoking was lower. In comparison, the percentage of Australian smokers from similar geographical areas was inner regional 22.1%, outer regional 22.9%, and remote and very remote 20.2%.

This study showed that in central Queensland, 21% of men and 21.7% of women smoke (non-significant). However, the percentage of female smokers in this sample was higher than both Australian and Queensland data. Across Australia, 18.6% of men and 16.3% of women smoke, while at a state level 21.5% of men and 18.1% of women smoke.

Australian and Queensland findings demonstrate that the 20- to 29-year age group was most likely to smoke with 23.5% of Australians and 30% of Queenslanders...
in this age bracket being daily smokers.6,7 In contrast, within central Queensland, the percentage of smokers increases chronologically with age. It appears that for this group of smokers, the older age groups have not made the decision to quit or have not been successful at stopping smoking. These findings suggest that anti-smoking campaigns in regional and rural settings should target both women and the older age groups.

At the time of this study, the final stage of the Queensland Tobacco Laws had yet to be implemented. Smoking was still permitted in parts of licensed liquor premises and in some recreational areas. The link between exposure to environmental tobacco smoke (ETS) and acute and chronic health problems is well established.6,9 Consistent with previous research, this study demonstrates community awareness of the effects of ETS and the contribution of the legislation to a healthier environment.10 Indeed, a 2004 survey showed that 43% of Australians will deliberately avoid places where they know they are going to be exposed to tobacco smoke.6 This current study concurred with previous international11 and Australian studies6-10 in that there was a high level of support for smoking restrictions in public places (75%) to protect non-smokers from ETS. However, support for the Queensland anti-smoking laws varied with smoking status. This is consistent with the findings from previous Australian studies.12 In addition, there were significant differences between smokers’ and non-smokers’ beliefs on the contribution of the anti-smoking laws to a healthier environment and exposure to passive smoking. Smokers were significantly less likely to agree that the legislation would reduce their exposure to passive smoking or create a healthier environment. However, these differences might be a component of cognitive dissonance reduction strategies that smokers employ to justify their continued smoking. Despite intense publicity and overwhelming evidence on the negative effects of smoking on both the smoker’s own health and those around them, smokers continue to smoke. Australian smokers appear to have a number of self-exempting beliefs relating to smoking in order to

### Table 2: Associations between smoking behaviour and agreement with smoking belief statements

<table>
<thead>
<tr>
<th>Legislation opinion question</th>
<th>% Agree</th>
<th>Adjusted† OR</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>The current anti-smoking legislation in Queensland goes too far (n = 1194)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-smoker</td>
<td>20.2</td>
<td>1.00</td>
<td>Reference</td>
</tr>
<tr>
<td>Smoker</td>
<td>50.4</td>
<td>3.62</td>
<td>2.54–5.17</td>
</tr>
<tr>
<td>The current legislation is likely to decrease the number of smokers in Queensland (n = 1176)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-smoker</td>
<td>46.4</td>
<td>1.00</td>
<td>Reference</td>
</tr>
<tr>
<td>Smoker</td>
<td>38.5</td>
<td>0.75</td>
<td>0.53–1.05</td>
</tr>
<tr>
<td>The current legislation is likely to create a healthier environment for all Queenslanders (n = 1194)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-smoker</td>
<td>81.7</td>
<td>1.00</td>
<td>Reference</td>
</tr>
<tr>
<td>Smoker</td>
<td>66.9</td>
<td>0.51</td>
<td>0.35–0.75</td>
</tr>
<tr>
<td>The introduction of the recent anti-smoking legislation will encourage smokers to consider their smoking practices (n = 1194)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-smoker</td>
<td>72.4</td>
<td>1.00</td>
<td>Reference</td>
</tr>
<tr>
<td>Smoker</td>
<td>69.6</td>
<td>0.94</td>
<td>0.65–1.37</td>
</tr>
<tr>
<td>The introduction of the recent anti-smoking legislation has forced smokers to reduce the number of cigarettes they smoke (n = 1151)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-smoker</td>
<td>40.4</td>
<td>1.00</td>
<td>Reference</td>
</tr>
<tr>
<td>Smoker</td>
<td>39.2</td>
<td>0.86</td>
<td>0.61–1.21</td>
</tr>
<tr>
<td>The introduction of the recent anti-smoking legislation has reduced my exposure to passive smoking (n = 1184)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-smoker</td>
<td>72.9</td>
<td>1.00</td>
<td>Reference</td>
</tr>
<tr>
<td>Smoker</td>
<td>58.8</td>
<td>0.51</td>
<td>0.36–0.73</td>
</tr>
<tr>
<td>It is right to ban smoking in public places (n = 1198)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-smoker</td>
<td>78.7</td>
<td>1.00</td>
<td>Reference</td>
</tr>
<tr>
<td>Smoker</td>
<td>59.2</td>
<td>0.43</td>
<td>0.30–0.61</td>
</tr>
<tr>
<td>Every one has the right to smoke if they wish (n = 1204)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-smoker</td>
<td>80.6</td>
<td>1.00</td>
<td>Reference</td>
</tr>
<tr>
<td>Smoker</td>
<td>94.6</td>
<td>4.29</td>
<td>2.18–8.45</td>
</tr>
</tbody>
</table>

Bold notes P < 0.05. Note numbers change as all participants did not answer all questions. †Odds ratios adjusted by age, gender, education and household income. CI, confidence interval; OR, odds ratio.
cope with the knowledge that smoking is deleterious to their own and others' health.\textsuperscript{13,14} While smokers are aware of and understand the information on smoking and its unhealthy consequences, it is suggested that they develop a set of erroneous beliefs excluding themselves from these potential effects. If smokers have strong invalid beliefs about the consequences of smoking, it is understandable why in this study smokers were less likely to agree that smoking bans will create a healthier environment.

Public support for smoking bans is important for successful policy implementation and sustainability. Not only do smoking bans contribute to a healthier environment with a decrease in ETS, they are also likely to lead to decreased smoking generally. Findings in social psychology suggest that changing behaviour is often followed by changes in attitudes and beliefs consistent with the behaviour change.\textsuperscript{15} Therefore, as smokers change their smoking practices by not smoking in banned areas, their erroneous beliefs about smoking might also change. This is important given that 95\% of smokers in this study believe that it is their right to smoke and that the legislation will not force them to give up smoking. The finding that smokers were significantly more likely to agree that everyone should have the right to smoke if they wish and that the legislation goes too far was similar to a US study that reported that 42\% of smokers believed that their state's legislation had 'gone too far'.\textsuperscript{16} In addition, public venues, such as licensed premises, are often associated with cues for smoking. With the removal of these cues, decreased smoking is encouraged.\textsuperscript{15} Despite these strong pro-smoking beliefs held by the smokers in this study, it was pleasing to note that the majority (70\%) of smokers agree that the new laws would encourage them to consider their smoking practices.

The data relied on self-reported smoking behaviours and this might have resulted in under-reporting of smoking because of growing social unacceptability of tobacco use. Ultimately, there might have been a potential bias and underestimation of the true smoking behaviours of centralQueenslanders. The anonymity of responses and previously identified reliability of self-reporting smoking status should minimise this potential bias.\textsuperscript{17–19}

In conclusion, this study demonstrates general support for the anti-smoking legislation in Queensland. However, support is strongly determined by current smoking status, independent of age, gender, education and household income. Smokers are less likely to agree with the contribution of the legislation to reduced exposure to ETS and ultimately a healthier environment for all. Smokers believed that the legislation encouraged them to consider their smoking practices. Gradual implementation of the anti-smoking legislation in Queensland is changing social beliefs of what is seen to be acceptable smoking practice. It is likely that the legislation within Queensland and the subsequent forced changes in social conditions will continue to reduce the number of people smoking and decrease exposure to ETS.

Acknowledgements

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References

13 Walsh R, Bowman J, Tzzelepis F, Lecathelinais C. Regulation of environmental tobacco smoke by Australian drug...


15 Fong GT, Hylinand A, Borland R et al. Reductions in tobacco smoke pollution and increases in support for smoke-free public places following the implementation of comprehensive smoke-free workplace legislation in the Republic of Ireland: findings from the ITC Ireland/UK Survey. Tobacco Control 2006; 15: iii51–iii58.


18 Rebagliato M. Validation of self reported smoking: use of cotinine as a biomarker for exposure to smoking. Journal of Epidemiology Community Health 2002; 56: 163–164.