Title: Before and after study of bar workers' perceptions of the impact of smoke-free workplace legislation in the Republic of Ireland

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Author's response to reviews: see over
Reviewer's report

Title: Before and after study of bar workers' perceptions of the impact of smoke-free workplace legislation in the Republic of Ireland

Version: 2
Date: 5 October 2006
Reviewer: Phillippa Howden-Chapman

Reviewer's report:

General:
This is an interesting article, one of a small number to look at the impact of important environmental tobacco policy changes. It provides further evidence that behaviour change precedes attitude change. This is a psychological truism, but one that has valuable implications for public health and health promotion. The evidence is growing internationally that bar workers, in smoking jurisdictions have anti-smoking attitudes and may therefore help to support the culture change to non-smoking environments. Interestingly, this is consistently true both for smokers and non-smokers, although clearly non-smokers are less ambivalent. The use of documentary analysis to shape the attitude questions is a nice methodological point. The article is enhanced by the economic data, which shows a short-term drop in pub business, but a medium-term up-swing in business. In California and New Zealand, business in pubs has improved after a ban on smoking in public places. The post-ban evidence on the prevalence of smoking in homes is also consistent. However, the authors do not detail any major anti-smoking campaigns or taxation changes during the period of the study, but these could have had an impact on behaviour and attitudes.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
The punctuation is somewhat erratic, e.g. double commas in title, full-stops after question marks and absent hyphens in compound words.

We hope we have now attended to all of these

Discretionary Revisions (which the author can choose to ignore).
The dichotomising of the five-point scale is somewhat problematic, as there is no stated justification for combining the ‘undecided’ category into the ‘not agree’ category. I would have liked a sensitivity analysis included that compared the explicit agree and disagree categories and excluded the undecided category. This appears to have been done when looking at the effect of the negative economic perceptions of health benefits after the ban. It is not made clear why two different definitions are used.

We included the undecided category with the reference group to take a conservative approach. We have now undertaken a sensitivity analysis that compares with and without the undecided category. With exception of the statement about smokers smoking more at home after the ban, this did not change the distribution of percentages for statements. The difference for this one statement was due to an increase in the number of undecides for this statement at follow-up. Given the general lack of difference between the 2 approaches we thought it best to maintain the more conservative approach. The undecided category was similarly included with the reference group when presenting the negative perceptions.
Reviewer's report
Title: Before and after study of bar workers' perceptions of the impact of smoke-free workplace legislation in the Republic of Ireland
Version: 2
Date: 10 September 2006
Reviewer: George Thomson

General
A generally well designed study and well written article, of considerable and value interest to health policymakers. The question posed (what is the support for and perceptions of bar workers before and after smokefree bar legislation) is relatively new, and results outside of New Zealand do not appear to have published. I cannot generally comment on the statistical issues.

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Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

1) A clearer picture of the recruitment process is needed. In providing a minimal description of the recruitment process, and relying on reference to Allwright et al 2005 (Allwright), the article risks leaving unanswered questions.

In particular:
(i) it is not clear from Allwright whether all family-owned pubs were selected in Galway electoral districts with populations of less than 1500, how workers were selected within those pubs, and what the response rate was,

It is hoped that the additional text (Methods 1st para and appendix 1) now clarifies the selection process for Galway

(ii) how and why ‘family-owned’ was defined

‘Family-run pub’ was respondent defined in response to a question asking participants if the pub they owned or worked in was a family run pub. Many of the pubs (particularly in rural areas) in the RoI are family-run. One of the issues that was raised in the media and other sources consulted for development of the statements used in this study (see Methods 3rd para) was that rural, family-run pubs would be especially hard hit economically by the impacts of ban.

‘Family-run pub’ has now been defined in the text (Methods, para 4 last sentence)

‘Family-run pub’ was incorrectly termed ‘family owned’ in one or two places in the text of the manuscript; this has now been corrected. 49% of the Dublin sample, 94% of the Galway sample and 61% of the Cork sample said they worked in family-run pubs.

(iii) what proportion of the survey the Cork workers were (relevant, because the randomness of their selection is used to argue for the validity of the whole study),

and

At baseline the Cork sample formed 45% of the total sample (Dublin 32% and Galway 24%)
For the sample followed up the Cork sample formed 41% of the total sample (Dublin 37% and Galway 22%)

(iv) how the Cork workers were selected within each pub, and what the response rate was (including the number of pubs where one worker and two workers were recruited). The figures for workers at
the start of the project ‘207 from 140 pubs and 81 from Mandate’ are rather buried in Figure 1 of Allwright, and it would help to have them in the methods section of the new article.

It is hoped that the text (Methods 1st para and appendix 1) now clarifies the selection process for Cork.

2) A statement of the non-random nature of most of the survey participants is needed in the abstract and the methods sections, as well as in the discussion. This would make the standard of the data much more transparent and useful for readers of the article, rather than readers finding this out right at the article’s end.

We accept that the non-random nature of most of the sample needed to be made clearer. We hope the expanded wording in Abstract, Methods and Discussion has made this more explicit.

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**Minor Essential Revisions**

(such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

3) Abstract: To make it easier for readers, the second paragraph needs to be clearer - eg. 3/4 ‘agreed to three positive statements about the legislation, with increases to....’ (this also applies to the first line of Results - Perceived impacts.)

We agree that this wording was cumbersome and have changed it in both places.

4) Background (3rd para) and discussion (comparison): If the statements ‘few studies’ and ‘no studies’ is going to be made, then some recognition of the Milne and Guenole study of bar managers, pre and post the New Zealand ban, could be made. Data from the study was used in ‘Thomson G, Wilson N. One year of smoke-free bars and restaurants in New Zealand: Impacts and responses. BMC Public Health 2006, 6:64.’ And the Milne study has been available at: http://www.hsc.org.nz/pdfs/BMS-Report-to-MOH-May.pdf since May 2006.

The wording has been modified in the Background and Discussion and reference made to the NZ studies. Thank you for alerting us to these.

5) Discussion: Comparison with other studies - It would help if reference 13 (Tang et al) was mentioned here once, as the first mention gives the impression that Tang did not focus on bar workers.

We accept this is confusing and have restructured this section in order to clarify it.

6) There is not a clear section for the policy implications of the study, and no clear policy discussion anywhere. At least a minimal discussion is essential. For instance, is there a greater need to provide the hospitality sector with more intensive factual information, to avoid misconceptions? (Because the sector is such a crucial one in the process of gaining and implementing smokefree bar legislation).

Point taken. We have now added a policy implications paragraph to the Discussion.

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**Discretionary Revisions**

(which the author can choose to ignore)

7) Abstract: The last sentence is too long and complicated, and would be better split in two.

This has now been revised.

8) Background: First para, first sentence - I assume that the authors mean ‘In response to factors including the evidence on ...’
Wording has been amended as suggested.

9) Second para, first sentence - the para appears to be about impacts within customers and the public, as well as within bar owners and staff.
This sentence has been changed to be consistent with the content of the rest of the paragraph.

A reference to Cremieux has now been added to the Background 2nd para 2nd sentence

11) It would also help to summarise briefly the pre-ban perceptions - eg, fear of financial loss.
A sentence has been added to the Background 1st para

12) Results or discussion: Some statistically inclined readers may be interested in any possible cluster effect of having more than one worker per pub.
There were relatively few instances in which more than 1 bar worker per pub (38 out of 139) pubs) appeared in the sample and no pubs where there were more than 2 bar workers. In view of this, the consequence of clustering at the pub level was found to be negligible and no substantive differences in terms of our conclusions were noticed.

13) Discussion In the first para, the point of the results could be added to by a sentence pointing out that the increased overall support is despite an increased perception of some negative aspects.
This paragraph has now been reworded

14) In the two paragraphs on negative perceptions, it would help if there was a little discussion on what the contextual information means - ie - does this indicate that the sample group had misperceptions?
These 2 paragraphs have now been expanded to provide more context.
Reviewer's report

Title: Before and after study of bar workers' perceptions of the impact of smoke-free workplace legislation in the Republic of Ireland

Version: 2

Date: 20 October 2006

Reviewer: Stanton Glantz

General

This paper reports the results of a small (n=288) survey of bar workers in Ireland after a smokefree law went into effect. It shows generally strong (and growing) support for the law. It also shows growing perception that the law led to negative economic effects, but that this perception did not undermine support for the idea of protecting bar workers from secondhand smoke.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

The discussion of economic effects of the law needs substantial additional work. The fact that the authors found PERCEPTIONS of negative economic effects is not surprising, given the massive propaganda effort that the tobacco industry has run for years on this point (see, for example, Tobacco Control 2002;11:94-104). Objective assessment of the actual effects of these laws has not confirmed this perception (Tobacco Control 2003;12:13-20). Given the centrality of this economic argument and the widespread misconception of the effects of these laws on bar economics, the fact that the authors did not carefully address the actual effects is a severe limitation of the paper and one that will greatly increase the chance that it will be represented as having DEMONSTRATED an adverse economic effect. The authors touch on the issue of actual effects when they cite two sets of statistics (refs 20 and 21), but these are raw data sources, not analyses. It is also hard to imagine that the smokefree law (which went into effect in March 2004) would account for declines beginning in 2002. The authors also report an increase in business in 2005. This entire presentation is superficial and confusing.

The authors have the data (and the statistical capability) to present a proper analysis of the actual economic effects to demonstrate whether or not the perceptions were supported by reality or a reflection of underlying secular trends (as they imply). They need to do the necessary analysis. The paper cited by Scollo et al outlines the criteria for doing such an analysis properly.

We are aware of the paper by Scollo et al. We were advised that data is not available in the RoI.

While we understand and share the reviewer’s concerns that tobacco propagandists may misappropriate the outcomes of our study to suggest actual negative economic impacts of the legislation, the stated aim of this study is the examination of bar workers’ PERCEPTIONS of the impacts of the smoke-free law in the RoI. As it was NOT the aim of this study to look at the actual economic impacts of the legislation, we did not collect data appropriate to conducting an economic impact analysis of the legislation in the RoI. The national data on economic trends cited in our article are derived from the Central Statistics Office (RoI). The intention behind citing these data was to illustrate that despite the continuing negative economic perceptions our study had recorded for the year following the ban, in fact after about a year, there was evidence of the beginnings of a general economic upturn within the bar industry.

We cited the downturn starting in 2002 to emphasise that the short term decline after the ban was merely a continuation of a pre-existing trend away from pubs to off license purchasing and as such unlikely to be due to the ban. We hope we have now clarified this and strengthened the
text to ensure that actual and perceived impacts cannot be confused. We are grateful to the reviewer for highlighting the potential confusion and hope that the amended text is sharper and clearer. We have also pointed out that the follow-up survey took place just before the trend reversed upwards.

It may not be possible, from data available in the RoI to separate out the effects that the smoke-free legislation may have had on this trend from several other factors that may have impacted on it. Furthermore, our study targeted only bar workers, whereas a study of economic trends would require additionally targeting of a large nationwide sample of existing and potential bar customers pre- and post-ban. We agree with the reviewer that it is important that an evaluation of the economic impacts of the ban should be published as soon as possible and we have been given to understand that a PhD student will shortly be undertaking a thorough examination of the economic impacts of the ban.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct) None.

Discretionary Revisions (which the author can choose to ignore)
In summarizing the health benefits of smoke-free policies, the authors should cite the recent report in JAMA that smoke-free bars were associated with improvements in respiratory function in bar workers in Scotland (JAMA. 2006; 296:1742-1748). There are also papers indicating a reduction in heart attacks associated with these laws in Helena Montana (British Medical Journal 2004; 328: 977 - 980), Pueblo Colorado (Circulation 2006; 114: 1490 – 1496) and Italy (Eur. Heart J., 2006; 27: 2468 – 2472)
These papers are now referred to in the Discussion under Policy Implications. (Please note that none of these articles had been published when we submitted our paper in August!)

There are a lot of places where the authors used double negatives, which makes the paper hard to follow. For example, on page 5, "those who did not agree that the ban would have a negative effect on business...". I suggest getting rid of all the double negative statements. Unable to decide on acceptance or rejection until the authors have responded to the major What next?: compulsory revisions

We take the reviewer’s point that double negatives are hard to follow and have tried to remove these wherever we could do so without sacrificing accuracy.