

Attitudes towards second hand smoke amongst a highly exposed workforce: survey of London casino workers

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ABSTRACT

Study objective To examine knowledge, attitudes and experiences of London casino workers regarding exposure to second hand smoke (SHS) in the workplace.

Design Postal survey of 1568 London casino workers in 25 casinos who were members of the TGWU or GMB Trade Unions.

Main results Of the workers, 559 responded to the survey (36% response), 22% of whom were current smokers. Of the respondents, 71% report being nearly always exposed to heavy levels of SHS at work, and most (65%) want all working areas in their casino to be smoke-free. The majority (78%) are bothered by SHS at work, while 91% have wanted to move away from where they are working because of it. Fifty-seven per cent believe their health has suffered as a result of SHS. Of the workers who smoke at work, 59% believe that they would try to quit smoking if no one was allowed to smoke in the casino.

Conclusions The majority of responders are bothered by SHS, and many are concerned about the health impacts. Most want all working areas in their casino to be smoke-free. Despite difficulties in generalizing from this limited sample, these findings add weight to the argument that the legislation on smoking in public places in England should encompass all workplaces, without exemption.

Keywords second hand smoke, attitudes, workers

Introduction

Following successful sub-national initiatives in places such as California and New York, a number of countries, including New Zealand, Ireland, Norway and Italy, have recently introduced nationwide smoke-free policies in enclosed public places.^{1–6} Such policies have been framed as health and safety measures driven by the right of workers to be protected from the deleterious health impacts of second hand smoke (SHS).^{7,8} The public health benefits of such policies are far broader—in addition to protecting workers from SHS,^{9–11} smoke-free policies help smokers quit and reduce consumption amongst continuing smokers.¹² Despite evidence that partial restrictions are less effective than comprehensive smoke-free policies,¹² the UK Government recently announced that pubs that do not serve food, and private members' clubs, would be excluded from proposed smoke-free legislation in England.¹³ There are fears that this policy will leave those most exposed to SHS at greatest risk of continued exposure. Indeed, the policy has been criticized by the UK Health Select Committee as being 'unfair, unjust, inefficient and unworkable'.¹⁴

Surprisingly, despite current Government emphasis on the importance of public opinion in the debate on smoking, no studies investigating knowledge and attitudes amongst those most exposed to SHS at work appear to have been conducted in the UK. Studies on London bar workers quantified exposure to SHS via cotinine sampling but did not address workers' views on workplace smoking.^{15,16} Similarly, studies on knowledge and attitudes in other countries have not focused on those most heavily exposed to SHS at work (see *Discussion*).

This study therefore aimed to assess knowledge, attitudes and experiences amongst a working population in the UK that is exposed to high levels of SHS. Casino workers are frequently exposed to a high intensity of SHS at work, as

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smoking is a common activity amongst customers. They also work long shifts, in environments that often have little or no natural or artificial ventilation. And as casinos are private members clubs, it is possible that they will be excluded from the proposed smoke-free legislation in England outlined in the Health Bill.¹³

Methods

Study design

We used a quantitative approach (postal questionnaire survey) to investigate knowledge, attitudes and experiences of casino workers regarding exposure to SHS in the workplace, to allow us to gather views from a potentially large number of workers.

Selection of participants

Initial efforts to recruit participants were made via the four major national casino companies, but all declined to participate. We therefore made contact with the two unions that represent casino workers, the Transport and General Workers' Union (TGWU) and GMB Trade Union. Trade unions have a responsibility to help protect the health and safety of workers, and both agreed to provide access to all their members. We focused on casino workers in London for two reasons. First, while union representation amongst casino workers outside the capital is minimal, London casino workers are highly unionized (1568 workers, around 50% of the total London casino workforce, were members of one of the two unions in February 2005). Second, it is estimated that around one quarter of all casino workers in the UK work in London. Ethics approval was obtained from the University of the West of England Ethics Committee in October 2004.

Design of questionnaire

The questionnaire was developed over a period of twelve months. Nineteen of the forty-four questions used in the questionnaire were obtained from existing surveys, with the majority taken from the national UK Government Smoking-related Behaviour and Attitudes survey.¹⁷ All questions, including those created especially for the survey, were piloted with 20 casino workers and 9 academic colleagues to ensure content and face validity. This followed a process of pre-testing with casino workers involved with the trade unions. Where necessary, changes to question wording, order and layout were made following the pilot stage.

Distribution of questionnaires

Questionnaires were distributed in February 2005 by post from the London offices of the TGWU and GMB Trade

Unions to all their registered casino workers (across 25 London casinos). Due to concerns about confidentiality among the unions the questionnaires were completely anonymous. To try to maximize the response we arranged for reminder posters to be posted on union notice boards in each casino, worked with health and safety representatives via the trade unions to encourage people to respond and sent a second questionnaire with reminder letter to all workers in May 2005.

Analysis of questionnaires

Questionnaires were entered into SPSS. Data were cleaned, and potential multiple responders identified and excluded. We conducted descriptive analysis, including cross-tabulations of responses by smoking status, age and sex. Chi-square analysis was used to assess differences in attitudes by smoking status.

Findings

Characteristics of respondents

Of the 1568 casino workers targeted, 559 responded to the survey after two mailings (response of 36%). Just over half of respondents were male (298, 54%), which compares with a 60% male union membership. Mean length of employment in casinos was 17 years, with an average of 38 hours worked per week. The majority of respondents worked on the gaming floor (470, 84%), while other areas of work included the reception (22, 4%) and restaurant areas (16, 3%). Of the respondents, 22% ($n = 125$) were current cigarette smokers, while 39% ($n = 218$) had never smoked. Of the respondents, 12% ($n = 64$) had degree level qualifications, while the highest level of qualification obtained by the majority was GCSE A-C equivalent (160, 29%). The majority of workers were aged between 24 and 54.

Current smoking policies

Smoking appears to be widespread in casinos, as 94% ($n = 520$) of respondents indicate that customers can smoke in most or all areas of their casino (i.e. staff working areas). In comparison, most workers reveal that they can only smoke in designated smoking rooms or areas (531, 96%). Ninety-two per cent ($n = 513$) report that there are separate smoking and non-smoking staff rest areas in their casino, although 5% ($n = 29$) say that all staff rest areas are smoking at all times.

Frequency and intensity of exposure to second hand smoke

Casino workers were asked to estimate the frequency (never exposed/sometimes exposed/often exposed/nearly always exposed) and intensity (nil/light/moderate/heavy) of their

exposure to SHS whilst at work. The majority grade their exposure in the highest category on both measures. Thus 83% ($n = 459$) say they are 'nearly always exposed' to SHS at work, while 75% ($n = 414$) rate their intensity exposure as 'heavy'. 71% ($n = 393$) of responders classify themselves as being nearly always exposed to heavy levels of SHS.

Knowledge of health effects of second hand smoke

The vast majority of respondents agree or strongly agree that exposure to other people's tobacco smoke is harmful to health (545, 98%). A clear majority also think that exposure to other people's tobacco smoke increases the risk of lung cancer (536, 98%), heart disease (461, 92%), bronchitis (469, 93%) and coughs and colds (404, 83%). Non-smokers are marginally more likely than smokers to think this.

Desired smoking restrictions

The majority of workers want to see a ban on smoking in all customer/working areas (361, 65%), with 31% of workers

preferring to have a mixture of smoking and non-smoking customer areas. Non-smokers are more likely to want to see a total ban in customer areas, with smokers tending to favour a mixture of smoking and non-smoking customer areas (Table 1). Significantly, only 1% of all respondents want smoking to be allowed in all customer areas (the current policy in most casinos).

The majority of respondents want to maintain separate smoking and non-smoking staff rest areas (349, 63%). However 34% do want smoking banned in all staff rest areas. Again, there are differences in attitudes by smoking status, with non-smokers more supportive of making all rest areas smoke-free (Table 1).

Attitudes towards exposure to second hand smoke

Of the respondents, 78% ($n = 435$) say that they mind if people smoke near them at work, while an additional 10% say that it depends (usually on whether customers deliberately blow smoke on their face). Only 12% say they don't mind. Non-smokers are more likely to mind, but more than

Table 1 Attitudes towards Second Hand Smoke exposure in the workplace, by smoking status

Question and responses	Smokers ^a n (%)	Non-smokers ^a n (%)	All respondents n (%)	Chi-square	df	P-value
What smoking policy would you like to see in customer (working) areas of the casino?						
Ban smoking in all areas	49 (40)	312 (72)	361 (65)	44.7(a)	3	<0.001
Have smoking and non-smoking areas	65 (53)	106 (25)	171 (31)			
Allow smoking in all areas	5 (4)	2 (1)	7 (1)			
Other response	4 (3)	11 (3)	15 (3)			
Total	123 (100)	431 (101)	554 (100)			
What smoking policy would you like to see in staff rest areas?						
Ban smoking in all areas	22 (18)	167 (39)	189 (34)	19.2(a)	4	<0.001
Have separate smoking and non-smoking areas	97 (78)	252 (59)	349 (63)			
Allow smoking in all areas	0 (0)	3 (1)	3 (1)			
Other response	5 (4)	7 (2)	12 (2)			
Total	124 (100)	429 (101)	553 (100)			
Do you mind in general if other people smoke near you at work?						
Yes	65 (53)	370 (86)	435 (78)	67.9	2	<0.001
No	37 (30)	27 (6)	64 (12)			
It depends	21 (17)	35 (8)	56 (10)			
Total	123 (100)	432 (100)	555 (100)			
Have you ever wanted to move away from where you are working because of other people's tobacco smoke?						
Yes	95 (76)	411 (95)	506 (91)	42.7	1	<0.001
No	30 (24)	21 (5)	51 (9)			
Total	125 (100)	432 (100)	557 (100)			

Note: Not all percentages equal 100, because of rounding errors. (a) Chi-square compares smokers with non-smokers, and computed by combining all responses that wanted to allow smoking in at least part of the customer or staff rest areas ('allow', 'separate areas' or 'other') to remove counts less than 5.

^aSmokers are those who currently smoke cigarettes. Non-smokers are never smokers and ex-smokers combined.

half of current smokers said that they mind people smoking near them at work (Table 1).

The most popular reasons given for why casino workers mind people smoking near them at work is because it is bad for their health (432, 88%), makes their clothes smell (417, 86%), has an unpleasant smell (412, 84%), gets into their eyes (402, 82%), makes them cough (322, 66%) and affects their breathing (261, 53%). Respondents were able to select any number of reasons.

The negative view held towards exposure to other people's tobacco smoke is again highlighted in that 91% ($n = 506$) of workers have at some time wanted to move away from where they are working because of exposure to other people's tobacco smoke. Smokers were less likely to be bothered than non-smokers (Table 1).

Action taken regarding exposure to second hand smoke

A significant proportion of workers have taken action regarding tobacco smoke. Of the workers, 54% ($n = 273$) have raised the issue of exposure to other people's tobacco smoke with their manager, 42% ($n = 183$) with their health and safety representative and 40% ($n = 175$) with their trade union representative.

It is concerning that only 10% of respondents ($n = 57$) can definitely say that their employer has conducted a health and safety risk assessment on them. And of those, only 25% ($n = 14$) can remember that their risk assessment did ask about exposure to other people's tobacco smoke.

Perception of whether their health has suffered

Of the respondents, 57% ($n = 315$) believe that they had suffered health problems as a result of exposure to other

people's tobacco smoke at work, while 29% ($n = 161$) aren't sure (Table 2). Non-smokers are more likely to believe that they have suffered health problems compared with current smokers, and more likely to have taken time off work because of a health condition that they associate with exposure to SHS (Table 2). Amongst all respondents, 30% have taken time off work because of a health problem they associate with SHS (Table 2).

Perceived effect on smoking behaviour amongst current smokers

Smokers do feel that there is a relationship between their smoking habits and exposure to other people's tobacco smoke at work. Of the current cigarette smokers, 77% ($n = 95$) either agree or agree strongly that exposure to other people's tobacco smoke in the workplace makes it harder for smokers to quit smoking. Of the smokers who responded to the survey, 89% ($n = 111$) currently smoke in the workplace, with the majority (91%) smoking in rest areas during breaks. Of those, 53% ($n = 58$) say they would try to quit smoking if they could not smoke at work, with 25% ($n = 27$) saying they would cut down. If no one (customers or staff) were allowed to smoke at work, those who think they would try and quit rose to 59%.

Discussion

Main findings of this study

This study has found that the majority of the casino workers who responded consider themselves heavily exposed to SHS at work, are bothered by this exposure, and many feel that it has affected their health. The majority of casino workers responding to the survey want all working areas in their

Table 2 Health-related questions and responses

Question and responses	Smokers ^a n (%)	Non-smokers ^a n (%)	All respondents n (%)	Chi-square	df	P-value
Do you think that you have suffered a health problem as a result of exposure to other people's tobacco smoke whilst at work?						
Yes	45 (36)	270 (62)	315 (57)	35.7(a)	2	<0.001
No	36 (29)	46 (11)	82 (15)			
Don't know/not sure	43 (35)	118 (27)	161 (29)			
Total	124 (100)	434 (100)	558 (101)			
Have you ever taken time off work because of a health problem that you believe was caused by exposure to other people's tobacco smoke in your workplace?						
Yes	19 (15)	146 (34)	165 (30)	28.1(a)	2	<0.001
No	95 (77)	217 (50)	312 (56)			
Don't know/not sure	9 (7)	68 (16)	77 (14)			
Total	123 (99)	431 (100)	554 (100)			

Note: Not all percentages equal 100, because of rounding errors. (a) Chi-square compares smokers with non-smokers.

^aSmokers are those who currently smoke cigarettes. Non-smokers are never smokers and ex-smokers combined.

casino to be smoke-free, although most would favour separate smoking and non-smoking staff rest areas. Compared with current smokers, non-smokers are more bothered by smoke and more supportive of smoke-free workplaces. However, a significant proportion of current smokers also want smoke-free working areas. Significantly, only 1% of all responders wanted smoking to be allowed throughout the whole casino—the current smoking policy in most casinos.

What is already known on this topic

Other than a single study of bar workers in New Zealand,¹⁸ studies investigating knowledge, attitudes and experiences of workers towards exposure to SHS in the workplace have not focused on those who are most heavily exposed to SHS. Instead, studies have examined workers in psychiatric institutions in Ireland and Holland,^{19,20} hospital staff in Italy and the UK^{21,22} industrial workers in Holland,²³ workers in a German metal company²⁴ and indoor workers in Australia.²⁵ Most studies found that workers were generally supportive of restrictions on workplace smoking, but did not favour totally smoke-free workplaces. Compared with non-smokers, smokers in the workplace are generally less knowledgeable about the health effects of SHS, less concerned about exposure and less supportive of smoking restrictions.²⁶

It is notable that several of the studies were conducted in the health sector, where employers are likely to be more positive towards restricting workplace smoking. The failure to examine those most exposed to SHS, such as those in the hospitality and gaming industries, may be because these workers are harder for researchers to gain access to, sometimes due to obstructive employers.

Findings from studies on knowledge and attitudes are quite context specific, with levels of support for smoke-free policies likely to depend on the exact questions asked, the country under study and the socio-historical context. In particular, public support for smoke-free policies has generally increased over time, illustrated by consistent, year-on-year increases in support for smoke-free public places in the UK.²⁷

What this study adds

To our knowledge, this is the first study in the UK to investigate knowledge, attitudes and experiences of SHS exposure amongst workers who are heavily exposed in the workplace. As such, it provides an important case study of how UK workers most affected by SHS feel about this exposure. Two mailings, along with a number of reminders, achieved a response of 36%, which whilst lower than ideal, does equate to over five hundred and fifty people.

These findings are particularly important for policymakers in the UK at a time when the Health Bill relating to smoking in public places is due to be debated by Parliament. As previously noted, the proposed partial smoking restrictions have been much derided because they are likely to increase inequalities in health and to be harder to enforce than comprehensive smoke-free legislation, whilst also conflicting with the smoke-free measures proposed in the rest of the UK.

The UK Government has justified its stance by suggesting that public opinion does not favour comprehensive smoke-free legislation.²⁸ Whilst even this claim is disputed,¹⁴ we believe that the views of individuals who are actually exposed to SHS at work should be given at least equal status to general public opinion. Our paper demonstrates that the majority of casino workers who responded to our survey want all working areas in their casino to be smoke-free. As one of the first pieces of research to give a voice to those who are most exposed to SHS at work, it is plausible that these views reflect those of other workers exposed to high levels of SHS in the workplace.

The research also suggests that a comprehensive smoke-free policy would have important public health impacts; many current smokers anticipated quitting or cutting down on smoking if their casino becomes smoke-free. Such impacts would be consistent with previous research.¹² Moreover, evaluations of the recent comprehensive smoke-free legislation in Ireland showed important health impacts on workers previously exposed to SHS.^{9,10}

As previously noted, research on knowledge and attitudes towards smoking in the workplace amongst those groups most heavily exposed to SHS is rare. This may be because employers in such industries are reluctant to allow research to take place, fearing the consequences of raising the issue amongst their workforce. Indeed, the refusal of the four major casino companies to participate in our survey appears to validate this theory. We could only conduct our research because a significant proportion of the casino workforce had trade union membership. Despite the limitations of surveying only union members, it may be that elsewhere in the world trade unions offer a route to gain access to workers whose voice would otherwise not be heard.

Limitations of this study

The main limitation of this study relates to the potential representativeness of the respondents to all London casino workers. The need to use union membership lists as the sampling frame, and the relatively low response (36%), effectively means that the results presented cover less than 20% of the current London casino worker population.

Unfortunately it is impossible to ascertain how representative the sample is of the targeted union population or of the wider casino worker population in London. This is due to a lack of data with which to compare respondents with non-respondents and unionized workers with non-unionized workers. Other than gender, the unions held no other summary data on their members against which to assess the representativeness of the responders, nor were we able to obtain data from the casino companies on the characteristics of the wider London workforce.

There is likely to be under-representation of smokers in the study results. Although 22% of respondents were current smokers (similar to national estimates of smoking prevalence²⁷), actual prevalence of smoking in London casino workers is likely to be higher than this. For example, a study commissioned by Smoke-free London indicated that 37% of manual workers in London (into which group casino workers would likely fall) were current smokers.²⁹ Although smoking rates have since fallen (the survey used data from 1995 to 1999), this nevertheless suggests our survey over-represents never- and ex-smokers at the expense of smokers. This, combined with the self-selecting nature of the respondents, may have resulted in a biased estimate of the level of support for smoke-free policies in casinos.

The questionnaires were anonymous, as the unions were very concerned about workers being identified by their employer. Whilst we believe this helped to increase the response, it meant that we did not know who had responded to the first mailing. Therefore all workers received a second copy of the questionnaire in the second mailing, and could potentially have responded twice. However, through a matching analysis using work history and demographic data in the questionnaires returned we identified only one likely duplicate responder who was excluded from the analysis. An individual could have returned two questionnaires and deliberately altered their demographic data (thereby evading detection as a duplicate responder), but we felt this unlikely.

The limitations outlined above mean that care needs to be taken when generalizing the findings of this survey more widely. However, given the difficulties in accessing this hard to reach group, this was a pragmatic approach that has enabled us to gain access to the views of a significant number of workers in a high-exposure environment.

Conclusions

This survey suggests that there is likely to be strong support for smoke-free policies amongst those workers who are heavily exposed to SHS at work. It also reinforces evidence from previous studies regarding the likely public health benefits of

smoke-free workplaces. Caution does need to be taken when interpreting the findings and generalizing to a wider population, because of the limited sampling frame, relatively low response, and likely under-representation of smokers in the group. However, despite these caveats, we believe that this study is a valuable contribution to the evidence based on knowledge and attitudes towards SHS exposure amongst highly exposed, difficult-to-access workers. In the UK context, it adds weight to the argument that the proposed legislation on smoking in public places in England should encompass all workplaces, without exemption.

Competing interests

The authors confirm that they have no competing interests.

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PP designed and conducted the questionnaire survey, with ongoing advice from SG, AG and ND. PP drafted the first version of the paper. PP revised the paper following comments and edits from SG, AG and ND. All authors read and approved the final draft of the paper. Statistical advice was provided by Dr Paul White and Dr Jon Pollock. Special thanks to Michael Ainsley from the GMB trade union and Rose Keeping and Nick Bunn from the TGWU trade union for their assistance during the survey.

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