



Knowledge and attitude toward smoke-free legislation and second-hand smoking exposure among workers in indoor bars, beer parlors and discotheques in Osun State of Nigeria



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Abstract

Background: One of the requirements of the Osun State smoke-free legislation is to ensure smoke-free enclosed and partially enclosed workplaces. This survey was conducted to assess the knowledge and attitude of workers in indoor bars, beer parlors and discotheques to smoke-free legislation in general and the Osun State smoke-free law in particular.

Methods: A convenience sampling of 36 hospitality centers was conducted. Interviewer-administered questionnaires were used to elicit responses about the objectives from non-smoking workers. The questionnaires had sections on knowledge of the Osun State smoke-free law, attitude toward the law and smoke-free legislation in general and exposure to second-hand tobacco smoke by the workers. Questions were also asked about the second-hand tobacco smoking status of these workers. The data were analyzed using SPSS version 15.0.

Results: We had 154 participants recruited into the study. There were 75 males (48.0%) and 79 females (52.0%). On the overall, respondents had a good knowledge of the effects of second-hand smoke on health (70.2%) with 75.0% of them being aware of the general smoke-free law and 67.3% being aware of the Osun State smoke-free law although none of them had ever seen a copy of the law. A high proportion (60.0%) was in support of the Osun smoke-free law although all of them think that the implementation of the law could reduce patronage and jeopardize their income. Attitude toward second-hand smoking was generally positive with 72.0% of them having no tolerance for second-hand tobacco smoke in their homes. Most participants (95.5%) had been exposed to tobacco smoke in the workplace within the past week.

Conclusion: Despite the high level of awareness of the respondents about the dangers of second hand smoke and their positive attitude to smoke-free laws, nearly all were constantly being exposed to second hand smoke at work. This calls for policy level interventions to improve the implementation of the smoke-free law.

Keywords: Smoke-free, Legislation, Osun, Nigeria

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Citation: Onigbogi OO, Odukoya O, Onigbogi M, Sekoni O. Knowledge and attitude toward smoke-free legislation and second-hand smoking exposure among workers in indoor bars, beer parlors and discotheques in Osun State of Nigeria. *Int J Health Policy Manag* 2015; 4: 229–234. doi: 10.15171/ijhpm.2015.44

Article History:

Received: 10 September 2014

Accepted: 26 February 2015

ePublished: 3 March 2015

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Key Messages

Implications for policy makers

- The result of the study provides a baseline before the proposed commencement of implementation of the Osun State smoke-free law and a basis for policy-makers to follow-up to assess the effectiveness of the implementation process.
- The results also have the potential of providing a driving force for stakeholders involved in the Nigerian national tobacco control policy process.
- Policy-makers also have the opportunity of initiating more widespread research into enforcement of the smoke-free law in Nigeria as a model for what might obtain in similar settings.

Implications for public

Our work found that despite 7 years of existence of the Osun State smoke-free law, and despite the fact that many of the workers in enclosed spaces in bars, beer parlors and discotheques had awareness, they were continuously exposed to second-hand tobacco smoke in their workplaces. This finding has implications in public health because it clearly indicates that the workplace smoke-free policy and law in the state has so far not been effective. There is, therefore, the need for opinion leaders, non-governmental organizations and indeed the general public to take the agencies of government assigned with implementing the smoke-free law to task concerning designing effective implementation strategies that would compel owners of these work places to provide a work environment devoid of second-hand tobacco smoke.

Background

Second-Hand Smoke (SHS) is of great concern to hospitality workers who are exposed for more hours than most patrons (1). There is evidence to suggest that bar and night club workers have higher exposure to SHS in comparison to workers in general (2,3). Studies have concluded that public and bar worker attitudes towards smoke-free policies are key variables with regards to compliance with the smoke-free regulations (4,5). A related study of bar tenders reported that their respiratory health improved after smoking was banned in their workplace (6). Some researchers have shown that support increases after implementation of smoke-free policies, even if policy support had been low prior to implementation (7–9).

Article 8 of the Framework Convention on Tobacco Control (FCTC) requires the adoption of effective measures to protect people from exposure to tobacco smoke in all indoor public places including indoor work places (10). This makes it imperative for policy-makers to provide complete protection to the population by ensuring that all indoor public places, indoor workplaces and public transport are free from exposure to second-hand tobacco smoke (10,11).

Nigeria is a party to the FCTC but currently does not have a comprehensive tobacco control law which is in compliance with the requirements of the treaty (10). The most recent law that deals with tobacco control at the national level is the Decree 2 of 1990 which stipulates that it is an offence for anyone to smoke in indoor spaces but does not include bars, beer parlors, restaurants and discotheques and such other places among the list. Several efforts have been initiated at the national level for Nigeria to have a comprehensive tobacco control law that is in compliant with the requirements of the FCTC. Concerted efforts by stakeholders in the nation have not yielded the desired results till date (12–17).

The successful passage of a comprehensive tobacco control bill by the Osun State lawmakers in November 2009 left an opportunity for moving the national tobacco control process forward leaving the challenge of modalities for enforcing the existing law in the state (18). This was a survey of a convenience sample of workers in indoor bars, beer parlors and discotheques to assess their knowledge and attitude to smoke-free legislation in general and the Osun State smoke-free law in particular. Questions were also asked about the second-hand tobacco smoking status of these workers.

Methods

Description of study area

According to the 2005 National Census, the total population of Osun State is 4,137,627 persons (18). The state has 30 Local Government Areas (LGAs) with Osogbo as the state capital. Other big towns include Ilesa, Ife, Ede, Gbongan and Iwo. There are anecdotal reports that people of both sexes and all ages patronize bars, beer parlors and discotheques in the state to catch fun and socialize. Most bars in the state are patronized by the more elite people in the society as a part of other hospitality establishments and have an indoor set-up with ventilation provided by air conditioners. There are also reports that the beer parlors are patronized by people in the lower or middle level socio-economic strata of the society and are usually partially enclosed with ventilation provided

by small windows and one or two doors. The discotheques are patronized mostly by youth and young adults and are usually fully or partially enclosed with very small windows to keep out voyeurs. Anecdotal reports put it that cigarette smoking takes place in all these centers in an unhindered manner.

Study design

The survey was conducted in the cities of Osogbo, Ilesa and Ife, three cities that had been identified as having a large number of centers that can be included in the survey. The survey adopted convenience sampling of 36 centers (4 indoor bars, 4 beer parlors and 4 discotheques in each of the three cities). The training of the four research assistants was conducted by the Principal Investigator (PI) and the Co-Principal Investigator (Co-PI) while the trained assistants administered the questionnaires in all these 36 centers. The assistants were at least those who had completed secondary school were trained over a 10-hour period by the PI on the protocol to adopt when approaching potential respondents, the protocol for obtaining signed informed consent, items on the questionnaire and how to correctly fill them. The assistants were supervised by a Co-PI who had assisted the PI in designing the survey and adapting the questionnaires.

All consenting workers in the 36 establishments were interviewed under as much private conditions as the facilities establishments could arrange. There were no reports of respondents refusing to participate in the survey before or refusing to continue after signing the informed consent forms. Prior advocacy visits were carried out to liaise with management of the establishments and educate them on the objectives of the study with the workers assured of confidentiality of their responses.

A pilot survey was conducted by the members of the team in a bar, a beer parlor and a discotheque in the cities of Ilesa, Ife and Osogbo respectively. The centers used for the pilot survey were excluded from the larger study. The findings of the pilot survey gave the researchers the opportunity to test the sensitivity of the questionnaire deployed and estimate the response rates expected from workers in the study.

The criteria for inclusion of the bars, beer parlors and discotheques were:

1. Operation of the hospitality center for at least six months prior to the study;
2. Staff strength of at least 2 persons working in the indoor area being assessed.

The criteria for choosing workers to be assessed were:

1. Length of service in the establishment for at least 6 months;
2. At least 40 hours of work per week in the enclosed place being assessed as verified from work schedule or supervisor;
3. Report by respondent that he has not smoked a cigarette or any combustible tobacco product one year prior to the survey;
4. Ability to communicate in English language.

Questionnaire

The questionnaire was designed by the PI and Co-PI and included questions on socio-demographic characteristics of respondents, respondents' knowledge about second-hand

smoking, respondents' attitude to smoke-free law generally and the Osun smoke-free law in particular and respondents' experiences with second-hand smoking. The questionnaires were administered to the workers at their convenience during peak hours usually in the late evenings in most centers. The training workshop for the questionnaire administrators also focused on the challenges that they were likely to face on the field and how they could overcome them. There were daily debriefing sessions conducted by the PI and the Co-PI the morning after questionnaire administration on each of the days.

Data analysis

Data analysis included descriptive analysis of all the variables. Data was analyzed with univariate and bivariate analysis of variables of interest in determining knowledge and attitude to the smoke-free law using SPSS version 15.0 for Windows. A P value of less than or equal to 0.05 was considered to constitute a statistically significant association. For questions on attitudes, respondents were asked whether they agreed, not sure or disagreed with the items; answer choices were offered on a three-point Likert scale. Disagree-2, Not sure-1, and Agree-0 with attitudinal score greater than 50% graded as good attitude.

Results

A total of 154 respondents were interviewed in three major categories of establishments i.e. beer parlors, bars and discotheques. Table 1 highlights the socio-economic distribution of respondents. The gender distribution was almost equal with 75 (48.0%) male and 79 (52.0%) being female respondents. Respondents' ages ranged from 16 to 80 years with a mean of 28.1 ± 11.3 years. Majority (72.2%) of the establishments surveyed were beer parlors, 23.8% were bars while 4.0% were discotheques.

Table 2 is a reflection of the overall grading of the knowledge demonstrated by respondents about the health effects of second-hand smoking. It shows that respondents had a good knowledge of the effects of SHS on health (70.2%).

Table 3 highlights the awareness of respondents about the smoke-free law in general and the specifics about the Osun State smoke-free law in particular. A total of 116 respondents (75.0%) were aware of the general smoke-free law with 103 (67.3%) being aware of the Osun State smoke-free law although none of them had ever seen a copy of the law.

Tables 4, 5 and 6 reflect that a high proportion (60.0%) were in support of the Osun smoke-free law although 54% of them thought that the implementation of the law could reduce revenue and jeopardize their income while 52% thought that the implementation could reduce customer satisfaction. Attitude to second-hand smoking was generally positive with 72.0% of them having no tolerance for second-hand tobacco smoke in their homes.

Table 7 reveals that most participants (95.5%) had been exposed to tobacco smoke in the workplace within the past week with 30 (24.0%) having been exposed to passive smoking in another enclosed spaces within the same period. The difference observed was statistically significant ($P=0.002$). The median duration of exposure to passive smoking in the

Table 1. Socio-demographic characteristics of respondents

| Variables (N= 154) | Number (%) | CI 95% |
|-----------------------------------|------------|-----------|
| Age (years) | | |
| <21 years | 43 (28.0) | 21.4-35.4 |
| 21–30 years | 62 (40.0) | 32.8-48.1 |
| 31–40 years | 31 (20.0) | 13.8-26.5 |
| >40 years | 18 (12.0) | 6.6-16.8 |
| Gender | | |
| Male | 75 (48.0) | 40.8-56.6 |
| Female | 79 (52.0) | 43.4-59.2 |
| Religion | | |
| Christianity | 100 (65.0) | 57.4-72.5 |
| Islam | 54 (35.0) | 27.5-42.6 |
| Highest level of education | | |
| Primary | 50 (32.0) | 25.1-39.9 |
| Secondary | 81 (52.5) | 44.7-60.5 |
| Tertiary | 23 (15.5) | 9.3-20.6 |
| Marital status | | |
| Single | 90 (58.5) | 50.7-66.2 |
| Married | 40 (26.0) | 19.0-32.9 |
| Divorced/separated | 24 (15.5) | 9.9-21.3 |
| Average work hours per day | | |
| <8 | 23 (14.9) | 9.3-20.6 |
| 8–12 | 11 (7.1) | 3.1-11.2 |
| 13–16 | 10 (6.5) | 2.6-10.4 |
| >16 | 110 (71.5) | 64.3-78.6 |
| Type of hospitality center | | |
| Beer parlors | 111 (72.2) | 65.0-79.2 |
| Bars | 37 (23.8) | 17.3-30.8 |
| Discotheques | 6 (4.0) | 0.8-7.0 |

Table 2. Overall Knowledge grade about the effect of SHS (N= 154)

| Variable | Number (%) | CI 95% |
|----------------|------------|-----------|
| Good knowledge | 108 (70.2) | 62.9-77.4 |
| Fair knowledge | 21 (13.6) | 8.2-19.1 |
| Poor knowledge | 25 (16.2) | 10.4-22.1 |

SHS= Second-Hand Smoke

Table 3. Respondents' attitude towards SHS

| Respondents (N= 154) | Number (%) | CI 95% |
|---|------------|-----------|
| Believes SHS causes ill health | | |
| Agree | 92 (59.7) | 52.0-67.5 |
| Undecided | 21 (13.6) | 8.2-19.1 |
| Disagree | 41 (26.7) | 19.6-33.6 |
| Believes SHS causes early death | | |
| Agree | 82 (53.2) | 45.4-61.1 |
| Undecided | 50 (32.5) | 25.1-39.9 |
| Disagree | 22 (14.3) | 8.8-19.8 |
| SHS should not be allowed at home | | |
| Agree | 110 (72.0) | 64.3-78.6 |
| Undecided | 11 (7.0) | 3.1-11.2 |
| Disagree | 33 (22.0) | 14.9-27.9 |
| Prefers to have a smoke-free workplace | | |
| Agree | 134 (87.0) | 81.7-92.3 |
| Undecided | 6 (3.9) | 0.8-7.0 |
| Disagree | 14 (9.1) | 4.6-13.6 |
| Supports ban on smoking in all public places | | |
| Agree | 135 (87.7) | 82.5-92.9 |
| Undecided | 7 (4.5) | 1.3-7.8 |
| Disagree | 12 (7.8) | 3.6-12.0 |

SHS= Second-Hand Smoke

Table 4. Knowledge of the Osun State anti-smoking law

| Respondent (N= 154) | Number (%) | CI 95% |
|--|------------|-----------|
| Is aware of the Osun State smoke-free law | 116 (75.0) | 68.5-82.1 |
| Is aware of some components of the law | 41 (26.6) | 19.6-33.6 |
| Is aware of the date of commencement of enforcement | 6 (3.8) | 0.8-7.0 |
| Is aware of the places where the law prohibits smoking | 51 (33.1) | 25.7-40.6 |
| Is aware of the need for smoking and non-smoking sections in indoor hospitality centers | 61 (39.6) | 31.9-47.3 |
| Is aware that Hospitality centers are supposed to hang smoke-free signs in enclosed places | 21 (13.6) | 8.2-19.1 |

Table 5. Respondents overall attitude to Osun smoke-free law

| Variable | Number (%) | CI 95% |
|-------------------|------------|-----------|
| Positive attitude | 116 (75.0) | 68.5-82.1 |
| Negative attitude | 38 (25.0) | 17.9-31.5 |

Table 6. Belief of respondents about the effect of smoke-free laws on revenue and customer satisfaction (N= 154)

| Respondent believes the smoke-free law would have an effect | Direction of effect | Number (%) | CI 95% |
|---|---------------------|------------|-----------|
| Revenue | Decrease | 83 (54.0) | 46.0-61.8 |
| | Increase | 44 (28.5) | 21.4-35.7 |
| | No effect | 27 (17.5) | 11.5-23.5 |
| Customer satisfaction | Decrease | 80 (52.0) | 44.1-59.8 |
| | Increase | 20 (12.9) | 7.7-18.3 |
| | No effect | 54 (35.1) | 27.5-42.6 |

Table 7. Self-reported level of exposure to SHS in one week (N= 154)

| Variable | Exposure (%) | Non-exposure (%) |
|-----------------------|--------------|------------------|
| Work | 147 (95.5) | 7 (4.5) |
| Home and other places | 30 (19.4) | 124 (80.5) |

SHS= Second-Hand Smoke.
P= 0.002

workplace was 4.5 months (range 2–7 months).

Discussion

Our study demonstrates that a despite a high level of general awareness of the health implications of second-hand smoking, most workers in these centers were not aware of how the smoke-free law could protect them and in fact had not experienced any protection from second-hand smoking. This agrees with a similar study that reported significant public support for smoke-free policy in work and public places, and awareness of the health hazards in Ghana but concluded that the awareness of current smoke-free policy was low as most people reported that smoking was still permitted in their workplaces (19).

Our findings point to the fact that 92 (59.7%) of our respondents believed that second-hand tobacco smoke causes ill health and 82 (53.2%) believed that it causes death with 134 (87.0%) supporting an outright ban in the workplace,

their individual thoughts did not seem to reflect on the management of these centers and on the view of their trade associations. Traditionally, apart from tobacco companies, the main opposition to smoke-free legislations has come from hospitality associations and hospitality venue owners, who argue that smoking bans have an adverse economic effect on the hospitality industry although the evidence has been contrary (20). Studies conducted using data from 30 communities of California and Colorado in the USA however, found no negative economic impact. Food, drinking and accommodation services were also used as economic indicators in assessing the state-wide Massachusetts with no significant evidence that state-wide tobacco regulation had affected in any negative way the different economic indicators (21,22). Studies from Canada and Norway came to a similar conclusion showing no decrease in the sales of restaurants and bars (23,24). Other studies conducted in Canada, the United States and New Zealand found that the hospitality sector experienced some growth after the ban was introduced (25–32). These studies agree with our findings based on the response from the workers. However, we had the limitation of a subjective assessment by these workers because no independent economic analysis was carried out to ascertain their perception that a ban on smoking would not affect their services.

Effective implementation of smoke-free legislation has remained a challenge in many developing countries with complete or partial bans on indoor smoking. Studies have found that support in many of these developing countries do not necessarily equate to enforcement (16). The high levels of awareness of health risks associated with smoking in this developing country setting compares with that pertaining in developed countries (20–25). We found that despite a low level of advocacy as reported in studies in other African countries, the generally high level of support for smoke-free public places may be a reflection of a pre-existing cultural or religious aversion to cigarette smoking (15). Such traditional aversions to smoking could be used by agents of government in galvanising public support for enforcement of the Osun State smoke-free law.

Many developing countries, including Nigeria do not have a legal framework for enforcement of tobacco policies and legislation (19). This is in contrast to what has been reported in developed countries (20–32). There is therefore a need for review of existing legislation in Osun State with a view of determining enforcement mechanisms that work. An effective implementation of this policy in this state could rekindle the national efforts aimed at effective legislation.

Our findings also indicate that despite a high level of support for tobacco control policy among workers interviewed in this state, implementation may remain a challenge because of the economic disadvantage of many of the workers in this industry.

Limitations

The key limitations are the limited sample size and the use of a convenience sample, which ultimately jeopardizes the ability to generalize the findings. Our study also has the limitation of recall bias especially as it concerns questions on the health risk of exposure to second-hand tobacco smoke. We also

acknowledge that there might have been some imprecision in the reports by bar workers due to the difficulty in securing the highest degree of privacy for all respondents.

Conclusion

Most of the workers were aware of SHS but less than half of them were aware of the Osun State smoke-free policy and nearly all were exposed to SHS at work. These findings point to a problem with enforcement of the law and calls for policy level interventions targeted at relevant governmental agencies. These comprehensive smoke-free interventions should however seek to address economic concerns of workers and owners of the businesses by presenting results from other climes which suggest a minimal chance of economic problems. Addressing this critical concern would go a long way in ensuring effective implementation.

Acknowledgements

Funding for this research was generated from the researchers.

Ethical issues

Ethical approval was obtained from the Ladoke Akintola University Ethics Committee. Written informed consent was obtained from participants highlighting the basis of the study and requesting for consent for follow-up surveys. The numeric codes corresponding to the names of the respondents were separated from the body of the data itself and were thereafter treated with confidentiality with only the PI and Co-PI having access to them.

Competing interests

The authors declare that they have no competing interests.

Authors' contributions

OOO: Concept development and article write-up; OD and MO: Data analysis and article write-up; OS: Data collection and article write-up.

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