Do exceptions to smokefree environment work? A case study of designated smoking rooms in Indian civil airports

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ABSTRACT

Background: According to the WHO, 603,000 people die annually from secondhand smoke (SHS) exposure, of which nearly 200,000 is in Southeast Asia. India’s national tobacco control legislation provides an exception to create designated smoking rooms (DSRs) in certain hospitality sector and airport.

Objective: To assess the compliance of DSRs in India’s civil airports to national tobacco control legislation and explore the perspectives of key stakeholders regarding its purpose and usefulness.

Methodology: A mixed-method study (triangulation design) where both quantitative (structured survey) and qualitative (key informant interviews) methods were used to measure the compliance level of DSRs and to explore the stakeholder’s perceptions on DSRs, respectively.

Results and Conclusions: Our survey found that all DSRs met with the legislative requirements as specified under the Smokefree Rules. However, nine of the 15 DSRs surveyed were found to be ineffective as they spread SHS in adjacent non smoking areas. Contrary to the prevailing belief that smokers feel an irresistible urge to smoke, our interview results suggest that such urge was entirely manageable even for longer durations. Respondents (smokers) also shared that some DSRs because of poor design and lack of proper ventilation were suffocating and therefore were not a desirable place for smoking. In addition, half of the DSRs violated the tobacco advertising provision. The existing rationale of providing a dedicated space (DSRs) given the operational and public health concerns is questionable. The survey findings calls for elimination of the exceptions provided to smokers in the form of DSRs in public places such as airports.

Keywords: Designated Smoking Rooms, Legislation, Secondhand Smoke, Smokefree, Tobacco Control

Introduction

Exposure to secondhand smoke (SHS) has been irrevocably linked to a range of diseases in comprehensive scientific summaries, whether it originates from the burning of tobacco products directly (such as cigarettes or cigars) or is exhaled or breathed out by a smoker. In effect, there is no safe level of exposure to SHS. WHO’s Framework Convention on Tobacco Control (FCTC) states that “scientific evidence has unequivocally established that exposure to tobacco smoke causes death, disease, and disability”. Globally, SHS exposure accounts for 603,000 deaths per year, of which 200,000 occur in South Asia. A systematic review found that the “effectiveness of legislative efforts will also depend on successful enforcement of smoking bans and compliance with the legislation.”

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In India, 275 million adults use tobacco in various forms; of these, nearly 111 million adults are smokers, which effectively exposes 684 million adult nonsmokers to SHS.\[^{[9,10]}\] India’s tobacco control legislation (Cigarettes and Other Tobacco Products [Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution] Act of 2003 [COTPA]) bans smoking in public places with exceptions for hotels, restaurants, and airports which may have Designated Smoking Rooms (DSRs), under conditions and specifications mandated under the Smokefree Rules, 2008 of COTPA.\[^{[9,10]}\] Subsequent regulations further restrict tobacco product promotions and advertisements and sales to minors at points of sale and through a comprehensive ban on vending machines.\[^{[11‑13]}\]

Since 2008, subnational surveys have confirmed that various public places in 38 jurisdictions have failed to comply with smokefree regulations.\[^{[14]}\] However, to the best of our knowledge, no study has examined the compliance of DSRs at civil airport in India. Nearly 190 million passengers use airports in the year 2014–2015 to travel across the country, and among the world’s largest domestic markets, India had the fastest annual growth of 18.8% in 2015.\[^{[15,16]}\] Therefore, assessing the degree and quality of compliance is a matter of considerable public health importance. We aimed to assess the compliance of the rules specified for DSRs at civil airports in India. The aim of this study is to determine whether DSRs have been designated and maintained as per specifications prescribed under COTPA and to understand the perspectives of various stakeholders regarding the SHS, DSR, and the provisions that regulate it.

**Methodology**

**Study design and study population**

We used a mixed-method triangulation design study involving quantitative (observational survey) and qualitative (key informant interviews) components,\[^{[17]}\] conducted between May 2015 and June 2016.

Indian civil airports constituted the study units for the quantitative survey and key constituent stakeholder groups (medical experts, smokers, tobacco control law enforcement officials, and tobacco control advocates) constituted study population for the qualitative part.

**Study setting**

The Parliament of India enacted COTPA in May 2003, and India ratified the FCTC in February 2004, expressing its commitment to protect public health from the menace of tobacco. Several reasons such as limited political will, complex administrative processes, litigation by the tobacco industry among others delayed the notification and subsequent enforcement of COTPA. With the efforts of civil society groups and directions from the Supreme Court of India, the Smokefree Rules came into force in May 2008 and were implemented in earnest by states from October 2008.

Aligning with the spirit of COTPA to protect nonsmokers from exposure to SHS, the rules have stringent specifications including prohibiting DSRs from being located at the entrance or exit and requirements to display clear signage. The Rules of 2008 specify that DSRs must be enclosed in a full height wall with automatic closing door, with a separate nonrecirculating air ventilation system. It also requires maintaining negative air pressure in DSRs to prevent outflow of tobacco smoke into other enclosed spaces. To discourage smokers from spending time in DSRs, no services to the smoker are allowed inside DSRs. Subsequently, provisions in COTPA prohibit the sale of tobacco products to minors (those under the age of 18 years) and require tobacco vendors to display a signage at the point-of-sale. Complete bans are enforced on any direct or indirect advertisement, promotion and sponsorship of tobacco products. After the Smokefree Rules of 2008 came into force, many airports in India added DSRs.

Of the 15 Indian civil airports surveyed in the study, half of the airports \(n = 8\) served domestic flights within India; seven airports served both international and domestic flights.

**Sample size and sampling technique**

For the quantitative part of the study, 15 Indian civil airports which serve the majority of its air passengers were purposively selected based on traffic volume, number of daily flights, convenience, and geographic representativeness. The following airports were included in the study: Bengaluru, Bhopal, Chandigarh, Chennai, Delhi, Hyderabad, Jaipur, Jammu, Kolkata, Lucknow, Mumbai, Patna, Raipur, Srinagar, and Varanasi.

For the qualitative part of the study, three individuals from each stakeholder group were purposively selected for interviews in discussion with members of Tobacco Control Unit of The Union Southeast Asia Office.

**Data variables, tools, and data collection**

A checklist was developed to measure the compliance of DSRs with COTPA. Relevant provisions of the Rules
were carefully converted into unique variables. The checklist broadly included aspects related to the build and maintenance of DSRs, smoke-free regulations, display of signage, tobacco sales, and advertisements near DSRs. Data were collected by the principal investigator (PI) and tobacco control partners from states who are familiar with COTPA. The survey team was briefed and oriented by the PI on the objectives, methods, and data collection and recording. The checklist was completed within 7–10 min by these expert observers while travelling through the 15 airports.

Personal interviews (face-to-face or telephonic) with selected individuals from all the four stakeholder groups were conducted at a time convenient to the key informant by the PI who was formally trained in qualitative research methods. Ten participants were interviewed with each ranging from 10 to 15 min. All key informants consented to being audio recorded (except one law enforcer who agreed to being interviewed without any audio recording whatsoever). The interviews were based on a topic guide including structured, open-ended questions to elicit the widest range of perceptions from interviewees on DSRs. The interview guide was prepared in consultation with the coauthors. Field notes were taken during interviews. Written informed consent (directly signed in the presence of the PI or provided as a signed scanned copy via e-mail if done telephonically) was obtained from all the study participants who were part of qualitative phase of this study.

Data entry and data analysis
Quantitative data were entered and validated through double-entry using EpiData Entry software (version 3.1) and analysis was done using EpiData analysis (version 2.2.2.182) the EpiData Association, Denmark in 1999. Compliance with each of the provisions of COTPA was expressed as proportion.

Transcripts were prepared by the PI using the audio recording and field notes within 2 days to ensure the completeness and accuracy of information. Descriptive content analysis to derive the common themes was done jointly by the first two authors through manual coding.[17] The findings were reviewed by the two coauthors to reduce bias and interpretative credibility. Any ambiguities or disagreements were resolved through discussion.

Institutional Ethics Committee approval
The study protocol was approved by the Ethics Advisory Group of the International Union Against Tuberculosis and Lung Disease, Paris, France.

Results
Of 15 DSRs studied, except one airport, COTPA specifications for the location, and design specifications of DSRs were largely met. Only one DSR (Bengaluru) was located very close to the exit or entrance of the airport surveyed. Of the 15 DSRs surveyed, the smell of tobacco smoke was perceptible in nine DSRs (60%). This was mainly observed in departure (67%, n = 8) rather than arrival terminals [Table 1]. All 15 DSRs complied with the law regarding display of clear signage which identified their presence and prohibitions on services within the DSR [Table 1].

The Smokefree Rules notified in 2008 (which allowed DSRs as an exception) require that public places be protected from SHS [Box 1]. This was largely observed in all the airports [Table 2]. In the 21 terminals of 15 airports surveyed, only two terminals did not prominently display any “no smoking” signage whatsoever; of the remaining 19 terminals with the signage, 17 had appropriate

### Table 1: Compliance of designated smoking areas with the smoke-free rules of Indian tobacco control law, i.e., Cigarette and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003 in the 21 terminals of surveyed civil airports in India, 2015-2016

| Particular | Specification | Departure terminal (n=12) | Arrival terminal (n=3) | Total (n=15) |
|------------|---------------|---------------------------|------------------------|-------------|
| **DSR’s compliance with design specification** | DSRs should not be located at entrance or exit | 11 (91.7) | 3 (100.0) | 14 (93.3) |
| | DSRs should be have full height closed wall up to roof either of glass or wood or building material | 12 (100.0) | 3 (100.0) | 15 (100.0) |
| | DSRs should have an automatic closing door | 11 (91.7) | 3 (100.0) | 14 (93.3) |
| | DSRs should have non-re-circulating air ventilation and/or air cleaning system | 11 (91.7) | 3 (100.0) | 14 (93.3) |
| | Smoke exhausted directly outside | 10 (83.3) | 3 (100.0) | 13 (86.7) |
| | Tobacco smoke should not spread outside the DSR | 4 (33.3) | 2 (66.7) | 6 (40.0) |
| **DSR’s compliance with other smoke-free rules** | Smoking area/room should be clearly marked as “smoking area” | 12 (100.0) | 3 (100.0) | 15 (100.0) |
| | Smoking area signage should be in English or one Indian language | 12 (100.0) | 3 (100.0) | 15 (100.0) |
| | No service(s) should be allowed inside DSRs | 12 (100.0) | 3 (100.0) | 15 (100.0) |

*Number in the parenthesis indicates percentage. DSRs - Designated smoking rooms*
Table 2: Compliance with Indian tobacco control law, i.e., Cigarette and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply, and Distribution) Act, 2003 in the 21 terminals of surveyed civil airports in India, 2015-2016

| Particular | Specification | Departure terminal | Arrival terminal | Total (n=21) |
|-----------|---------------|-------------------|-----------------|-------------|
| Terminals’ compliance with the smoke-free rules | No-smoking signage(s) should be displayed at each entrance/floor and other conspicuous places inside of public place | 13 (66.7) | 6 (100.0) | 19 (90.5) |
| | No smoking signage should be as specified by COTPA in size, text and color | 12 (92.3)* | 5 (83.3) | 17 (89.5)** |
| | Name of a person to whom complaint may be made should be displayed | 3 (20.0) | 1 (16.7) | 4 (19.0) |
| | There should be no smoking in public place | 15 (100.0) | 5 (83.3) | 20 (95.2) |
| | There should be no cigarette or bidi or other smoking products butt in public place | 14 (93.3) | 5 (83.3) | 19 (90.5) |
| | No product such as ashtray and lighter should be provided to facilitate smoking | 15 (100.0) | 6 (100.0) | 21 (100.0) |
| Terminal’s compliance with the provisions on tobacco advertisement and sale to minors rules | Any direct or indirect advertisement or promotion of tobacco product is prohibited | 10 (66.7) | 4 (66.7) | 14 (66.7) |
| | Signage prohibiting sales of tobacco products to minors should be displayed at POS of tobacco products near DSRs | 3 (100.0)* | 2 (100.0)** | 5 (100.0)*** |

Box 1: Section 4 of Cigarettes and Other Tobacco Products Act, 2003 and its Smokefree Rules 2008: Provisions and specification of designated smoking rooms

Section 4 of COTPA 2003 and Smokefree Rules 2008

- Smoking in all public places including airport is prohibited
- Liability on every owner, proprietor, manager, supervisor or in charge of the affairs of a public place to ensure
- Display of “no smoking” signage
- No smoking aids such as ashtrays and matchboxes are provided
- Notify and display the name of the person at prominent place to whom a complaint may be made

DSR

- Only: Hotels with 30 or more rooms; restaurants with seating capacity of 30 or more and airport are allowed to create DSR
- Guidelines for DSR
  - It should be distinctively marked as “smoking area”
  - It should be never be at the entrance or exit point
  - It should have a physically separated and surrounded by full height walls on all four sides
  - It should be fitted with an automatic closing door
  - It should have an appropriate air ventilation/cleaning system/exhaust fan to exhaust the smoking area air directly outside must be installed
  - It is used only for smoking and no service(s) are allowed therein

“no smoking” signs at conspicuous places as per the dimensions and design mandated under the Smokefree Rules. Cigarette butts were found in two places (Delhi and Varanasi), suggesting that smokers violate these rules in the no smoking area. Active smoking was also observed at one site (Delhi). In 17 terminals (80%), information regarding the contact details of the official-in-charge with whom complaints could be lodged in the event of violations were not displayed [Table 2].

For the qualitative data, inductive manual content analysis of the responses suggested 10 broad categories. Further, of these 10 categories, three themes clearly emerged: perceptions on smoking and its effects; knowledge and perceptions about DSRs; and perceptions about exceptional to the law and other pertinent issues. Some respondents suggested improving the availability of low-cost nicotine replacement therapies for smokers to abstain from smoking whilst using airports. These themes are summarized in Table 3.

Discussion

By permitting DSRs, COTPA provides an exception for smoking in a public place, albeit by isolating smokers from exposing nonsmokers. While most DSRs surveyed were compliant to the specifications of the Smokefree Rules, leakages of SHS were noted by observers in 60% of the airports, thereby defeating the very purpose for which DSRs were set up. Contrary to the spirit of the law, the tobacco industry displays its products at points-of-sale and advertises logos, colors, and designs in the interiors of DSRs, thereby violating provisions of COTPA [Box 2].

Respondents including smokers not only conceded that the urge to smoke could be managed for short duration flights within India but also agreed that they could be controlled
Table 3: Global thematic analysis of key categories emerging from semi-structured qualitative interviews with smokers, medical experts, tobacco law enforcement officials and tobacco control advocates (2016)

| Category                                      | Theme 1: Perceptions on smoking and its effects | Theme 2: Knowledge and perception about designated smoking area |
|-----------------------------------------------|-------------------------------------------------|---------------------------------------------------------------|
| Perceptions on smoking itself by various respondents | Once you get into [the] habit, you smoke… you find a reason to smoke. Even if you feel normal… you go out and smoke (Smoker 1) | Attitudes toward DSRs Whenever I was in an airport, I used to smoke outside the airport. I never smoked in [the] airport area… Also when I used to smoke, I took care of other people also. (Smoker 3) |
|                                               | As a good smoker, [the] etiquette of smoking is that smoke should not go on the face of [the] other person (Smoker 1) | If [DSRs] is a nuisance… I don’t think these people are protected. Even if you approach [them], one can smell it from far away. (Tobacco Control Advocate 1) |
|                                               | We can’t take risks [with the health] of [a] majority of the population for a [small] percentage [of] smokers. (Tobacco Control Advocate 3) | Yes, a smoker has a right to smoke. So they need some place… the idea of the DSR is to avoid passive smoking… But our aim should be [to] avoid this smoking… if you give them a room, people will come (Tobacco Control Advocate 3) |
|                                               | It is a slow process, it is a silent killer. This is going to kill, [it is] not going to benefit in any way (Medical Expert 1) | Yes, it is very useful; it is required to protect [the] nonsmoker’s health. It also gives a clear picture to smoker[s] that it is not good for them. And over a period [of] time [they will be] demotivated (Law Enforcer 1) |
| Perceptions on health effects on smoking on smokers/ nonsmokers | I am a smoker and I am working in public health also. I really understand [that] this is not good for health. (Smoker 1) | Perceptions on Operational quality/ effectiveness of DSRs in practice Generally, what I [have] seen [is] that these places are really too small, which lead[s] to sometimes people keep[ing] the door open actually. Or maybe they just stand outside the smoking room. And… most of the time the ventilator is not working… they don’t prefer to go to an area which is too dingy, which is not lit up and has poor ventilation (Smoker 1) |
|                                               | In our local language we say that tobacco smokers are killing themselves, it’s a kind of suicide for them but they are murdering the other [also]. “Wo khud to atmahatya karte hai lekin dusre ki bhi hatya karte hai.” [“They commit suicide with this habit, but they murder others as well”] (Tobacco Control Advocate 3) | It was good, it was perfect (Smoker 2) |
|                                               | …as far as I know, passive smoking is not injurious to health. (Medical Expert 2) | In Delhi and Bombay I have experienced this… people… smoking have to be inside, and I have usually seen that going in and out with a cigarette in their hand… We have not perfected them [DSRs], but I think perhaps it is very difficult to perfect them (Tobacco Control Advocate 1) |
|                                               | Yes, a smoker has a right to smoke. So they need some place… the idea of the DSR is to avoid passive smoking… But our aim should be [to] avoid this smoking… if you give them a room, people will come (Tobacco Control Advocate 3) | They have made the DSR just outside [at entrance/exit of the airport]. So every airport, …is making DSRs in separate ways (Tobacco Control Advocate 2) |
| Perceptions toward DSRs impact on nonsmokers | I don’t think this has that kind of impact on the general public…. generally all these places are in an excluded or a bit of a faraway [place] or in a corner which airports generally don’t use (Smoker 1) | They [DSRs] are quite an airtight area. they are mostly the corner areas. So, I don’t think that a nonsmoker has any problem with the DSRs (Smoker 2) |
|                                               | They [DSRs] are quite an airtight area. they are mostly the corner areas. So, I don’t think that a nonsmoker has any problem with the DSRs (Smoker 2) | On the whole, a nonsmoker can end [up] with any disease that a smoker himself is at risk of [getting]… We have seen studies where the wives of the smokers got lung cancer (Tobacco Control Advocate 1) |
|                                               | In Delhi and Bombay I have experienced this… people… smoking have to be inside, and I have usually seen that going in and out with a cigarette in their hand… We have not perfected them [DSRs], but I think perhaps it is very difficult to perfect them (Tobacco Control Advocate 1) | Encouraging DSRs is a good thing for smokers and for nonsmokers. They are not exposed to second-hand smoke that smokers create (Medical Expert 3) |
|                                               | In fact it is beneficial to them as the smokers are smoking here and there. They are not exposed to the smoke that is passive smoking (Law Enforcer 1) | In fact it is beneficial to them as the smokers are smoking here and there. They are not exposed to the smoke that is passive smoking (Law Enforcer 1) |
| Perceptions/attitudes towards removal of DSRs | The goal of ours should be that this area should be totally eradicated, but not immediately (Medical Expert 1) | Perception/attitudes towards removal of DSRs The goal of ours should be that this area should be totally eradicated, but not immediately (Medical Expert 1) |
|                                               | If you remove these designated smoking places… people are very smart… they will find very innovative ways of smoking. I have seen people standing on the toilet [seat], standing on the spot and then smoking near the exhaust (Smoker 1) | If you remove these designated smoking places… people are very smart… they will find very innovative ways of smoking. I have seen people standing on the toilet [seat], standing on the spot and then smoking near the exhaust (Smoker 1) |
|                                               | I don’t think there should be any [such] places in the airport… They [smoker] can stay without smoking (Smoker 3) | I don’t think there should be any [such] places in the airport… They [smoker] can stay without smoking (Smoker 3) |
|                                               | They have made the DSR just outside [at entrance/exit of the airport]. So every airport, …is making DSRs in separate ways (Tobacco Control Advocate 2) | They have made the DSR just outside [at entrance/exit of the airport]. So every airport, …is making DSRs in separate ways (Tobacco Control Advocate 2) |
| Views on health impact on smokers/ nonsmokers due to removal of DSRs | Nothing is going to happen if you [do] not smoke. I believe [this] as a smoker… Most of the smokers used to smoke mainly just for the sake of smoking after [the] first cigarette (Smoker 3) | Views on health impact on smokers/ nonsmokers due to removal of DSRs Nothing is going to happen if you [do] not smoke. I believe [this] as a smoker… Most of the smokers used to smoke mainly just for the sake of smoking after [the] first cigarette (Smoker 3) |
|                                               | Smoking you know is a chronic problem and they have get psycho-social effects. And physical dependence and mental dependence. And there is an inside need, [an] urge that they want to smoke (Medical Expert 1) | Smoking you know is a chronic problem and they have get psycho-social effects. And physical dependence and mental dependence. And there is an inside need, [an] urge that they want to smoke (Medical Expert 1) |
|                                               | [A] heavily nicotine-dependent person [on] a flight of 4-5 h can’t control the urge to smoke, this will link psycho-dependence rather than only the physical dependence or only the biological dependence. So definitely if it is a domestic flight of one or 2 h, the smoker can control the urge but [not] if it is a long flight of eight to 12 h (Medical Expert 3) | [A] heavily nicotine-dependent person [on] a flight of 4-5 h can’t control the urge to smoke, this will link psycho-dependence rather than only the physical dependence or only the biological dependence. So definitely if it is a domestic flight of one or 2 h, the smoker can control the urge but [not] if it is a long flight of eight to 12 h (Medical Expert 3) |
| Management of possible effects of removal of DSRs | Smoking can be managed through willpower (Smoker 3) | Management of possible effects of removal of DSRs Smoking can be managed through willpower (Smoker 3) |
|                                               | No I don’t think so [that this anxiety can be managed somehow without smoking] (Smoker 2) | No I don’t think so [that this anxiety can be managed somehow without smoking] (Smoker 2) |
|                                               | We have seen people managing their addiction since there is no smoking in the airplane. They go without smoking for 10 [to] 12 h for long flights (Tobacco Control Advocate 1) | We have seen people managing their addiction since there is no smoking in the airplane. They go without smoking for 10 [to] 12 h for long flights (Tobacco Control Advocate 1) |
Table 3: Contd...

| Category                              | Verbatim quotes                                                                                                                                 |
|---------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| DSR giving an opportunity for the    | Smokers can smoke before entering [the] airport or may be after the flight. So if at all nicotine dependency is there, they may use ... nicotine gum (Tobacco Control Advocate 3) |
| person to go and smoke. Otherwise no | Companies [have] come up with these [products such as nicotine patches, nicotine capsules, gums, and dermal patches] in the recent past and the cost factor and availability is [an] issue (Medical Expert 1) |
| one will (Tobacco Control Advocate 2)| A person going even for longer flights let’s say 10 h or 12 h even 15 h duration, so we have nicotine replacement product available in the market through which that urge can be manage in that duration (Medical Expert 3) |

**Theme 3: Perception about exceptionalism in the law and allied pertinent issues moving forward**

**Views by stakeholders on the goals and spirit of legislations**

[The] idea of the DSR is to avoid passive smoking. In fact this is good. But our aim should be [completely] avoiding this smoking, if you give them a room, people will come. It has, pro and cons (Medical Expert 1)

Next to it [DSR]... [Indian tobacco companies] have been displaying and promoting their products (Tobacco Control Advocate 2)

This is a kamjor kadi [weak link] in [the] whole tobacco control mechanism. The tobacco industry propagates it by utilizing this weak law to compel even the nonsmokers-I mean [the] very occasional smoker-to smoke. They [DSRs] were violating section 5, they were displaying cigarette packs and message and all (Tobacco Control Advocate 3)

[Given the] low awareness about smoking, nonsmokers definitely should [be] the priority. Nonsmokers' health comes first (Medical Expert 3)

**Solutions suggested by responded to the larger issues raised by DSRs**

Since... everybody will keep smoking and they will be travelling... due emphasis should be given [to] the design of this smoking area (Smoker 1)

It is only hard rules that can stop tobacco smoking (Smoker 3)

So I think we should [do] as much [as] possible to eradicate this [Smoking]. The next generation has to be taught that it is bad and one should not take it. If I cannot quit smoking, I should teach my generation [and the] next generation to avoid [smoking] (Medical Expert 1)

There should be many advertisements in [the] form of visual clippings... in those places [DSRs]... so that we may hit the target (Medical Expert 2)

Box 2: Evidences of violations of rules related to tobacco advertisement ban at DSR

Photograph taken at the airports

Resembling product advertisement at market place

for longer duration flights using nicotine supplements. In addition, smokers criticized the functional design of DSRs and shared that they felt suffocated while smoking there. As a consequence, many kept the doors of DSRs open or stood near the door while smoking. With a few exceptions, most respondents were aware of the dangers of smoking. No tobacco control advocate supported the presence of DSRs at airports whereas medical experts expressed the need of DSRs to protect nonsmokers from SHS. The only tobacco control law enforcement official interviewed supported DSRs mainly to avoid the increase of violations of Smokefree Rules on the part of smokers since the fine was not high enough to deter them from smoking in public places. Others recommended the importance of information, education, and communication (IEC) strategies. As a group, medical experts and tobacco control advocates highlighted the need to strategically use IEC methods at DSRs for greater effect.

**How these findings compare with previous studies**

This is possibly the first mixed-methods design study systematically examining the observed implementation of COTPA legislation in India’s major airports and the potential exposure of 190 million passengers to SHS by the legal provision for DSRs prescribed under Indian law.\(^{[15]}\) In our literature survey, we found policy reviews and scientific studies, but no study comprehensively surveyed DSRs and taken the opinion of various stakeholders for creating DSRs.

Globally, policy reviews encourage the need to widen and deepen smokefree airport policies. In 2004, the US Centers for Disease Control and Prevention advocated the
increased enforcement of smokefree policies in US airports to protect both workers in airports and air passengers.\[18\] A survey of US flight attendants confirmed that they were "still being exposed to SHS…sometimes at concerning levels during the nonflight portions of their travel."[19] A global review of policies in 34 major international airports noted that SHS could be more strictly regulated in public and occupational spaces,[20] but the enforcement of rules related to DSRs was often overlooked given the legal and policy ambiguity in national and subnational legislation.

Scientific studies have largely been done in developed country settings (USA, South Korea, and EU), except a study examining the air quality of airports in Thailand.[21‑23] A 2004 study in the US documented the advocacy of tobacco industry lobbying for DSRs as a measure to weaken efforts to make major US airports smoke-free. Scientific monitoring of the air quality around DSR had established that smoking rooms at airports "expose (d) nonsmokers in adjacent nonsmoking areas to a significant concentration of nicotine vapor from SHS."[24] A 2015 study from Thailand validated that “levels of PM2.5 in DSRs were extremely high in all four Thai airports and were more dangerous inside DSRs than in US airports”.[25] This same study elicited the views of tourists regarding their perceptions and support regarding smoke-free policies in Thailand; though half of the respondents were smokers, the support for a complete smokefree policy was very strong across respondents. Partial smoking bans clearly do not protect nonsmokers. A 2009 study in South Korean airports concluded that despite the functional ventilation systems installed in smoking rooms, fine particles from SHS leaked into surrounding “no smoking area” areas and recommended that indoor space inside airports should be completely nonsmoking.[26]

Strengths and limitations of the study

A key strength of this study is the use of a mixed-methods design. Within this study, we measured legislative compliance to DSRs and other tobacco control provisions along with a representative exploration of the views and opinions of diverse stakeholders who have a significant interest in DSRs.

A second strength is an objectivity of assessing compliance. Since the observers were sensitized, the mixed-method study design allows us to conduct research with relatively low costs of the training and deployment. Regardless of the constituency interviewed, our interviews were unexpectedly similar in the levels of overlap in the opinions expressed [Table 3]. We believed that we have reached data saturation. The STROBE and COREQ guidelines were followed for reporting quantitative and qualitative components, respectively.[25,26]

One limitation of this study is the under-representation of those involvements in the enforcement of tobacco control rules. This is largely because enforcers considered for this study were those officials limited to the airport alone and not those in-charges of the administrative jurisdiction (since the latter have limited access within airports). The opinions of enforcer under whom DSRs operate, is limited to one individual, which could have been due to reasons not related to the research topic but due to factors beyond their control. Another limitation of this study is that we were unable to measure the SHS levels in nonsmoking areas of the airport.

Recommendations

Our survey finds that DSRs currently have mixed levels of support from various constituencies. Our findings – from compliance measures and interviews – confirm that DSRs fail to protect nonsmokers. This is largely because DSRs’ infrastructure (including exhaust system and automating closing door) are faulty, and the design of DSRs has to be reevaluated for their effectiveness. Authorities need to check for violations regularly, for smoking-related issues and tobacco advertisements at points-of-sale and indirect advertising within DSRs. Given the behavioral evidence reported in this study, nicotine replacement therapies be made available at airports to counter the urge to smoke at airports. This study needs to be further validated through scientific measurement and validation for the particulate matter (PM\(_{<2.5}\)) and SHS outside DSRs. This would in our view provide indisputable support for rolling out fully compliant smoke-free policies in Indian airports given the interests of over 190 million travelers who fly annually, as well as the imperative to protect future generations from SHS.

In addition, DSR diverts public space and public money to support a deadly habit. This in effect encourage smokers while harming the larger interest of the public.

Conclusions

This study has raised questions about the existence of DSRs due to its ineffectiveness in confining SHS and also its de facto use to promote tobacco brands. Our results confirm that DSRs fail to protect due to low levels of compliance with design specifications. Regular monitoring and oversight of the implementation of
existing COTPA provisions cannot be overemphasized. Stakeholders (including smokers) have reiterated that tobacco addiction is manageable and that the health of nonsmokers should be the priority and must be protected. Keeping this in view, a policy revision is needed which eliminates DSRs.

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Conflicts of interest

There are no conflicts of interest.

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