ISSN: 2252-8806, DOI: 10.11591/ijphs.v12i4.22933

Compliance, enablers and barriers to implementation of the cigarette and other tobacco products act, in Jodhpur, Rajasthan

Shubham Rai¹, Nitin Kumar Joshi¹, Yogesh Kumar Jain¹, Suman Saurabh², Pankaj Bhardwaj^{1,2}

¹School of Public Health, All India Institute of Medical Sciences, Jodhpur, India

²Department of Community Medicine and Family Medicine, All India Institute of Medical Sciences, Jodhpur, India

Article Info

Article history:

Received Jan 6, 2023 Revised Aug 15, 2023 Accepted Sep 11, 2023

Keywords:

Attitude
India
Intersectoral collaboration
Minors
Schools
Tobacco control

ABSTRACT

Section 6 of the cigarette and other tobacco products act (COTPA) of India, lays down provisions and offences against tobacco sale to minors and near educational institutions. Considering well-documented violations and the significance of its better implementation, this study was planned to assess the knowledge and attitudes and compliance regarding provisions of COTPA section 6 among stakeholders, and identify potential enablers and barriers to implementation of the act. A cross-sectional study was conducted in ten senior secondary schools, two each from 5 zones of Jodhpur district. Principal and staff were interviewed to assess their knowledge and awareness, while a checklist was used to observe the compliance in the vicinity of schools. In-depth interviews were conducted amongst stakeholders to identify enablers and barriers. Only nine (45%) participants were aware about COTPA and six (30%) knew whom to report any violation. 60% schools had international "no smoking" signage and vendors were observed near 50% of the schools. Sale to minors was observed at two such stalls. Observed barriers were related to law and act, implementing personnel and community. Sensitisation of health hazards, intersectoral collaborations with prompt reporting might enhance compliance towards the

This is an open access article under the CC BY-SA license.



1422

Corresponding Author:

Pankaj Bhardwaj

Department of Community Medicine and Family Medicine, All India Institute of Medical Sciences C-204, Medical College Building, Basni Phase–II, Basni, Jodhpur, Rajasthan, India Email: pankajbhardwajdr@gmail.com

1. INTRODUCTION

Tobacco use is a major preventable cause of death and disease in the world. Approximately 50 lakh people die prematurely every year as a consequence of tobacco use. Furthermore, it is estimated that tobacco will be responsible for more than 9 million annual deaths by the year 2030, majority of whom will be between ages 35 and 69 years [1]–[3]. It is therefore speculated that early age of initiation, especially during the teen-age and adolescence will be the major factor for such unprecedented number of deaths and disabilities in such a young age group of the population [4].

A major share of the affected are constituted by the low- and middle-income countries where 80% of the smokers reside and the governments in many of these countries have formed stringent laws to check the ever-growing epidemic of tobacco [5]. One such legislation is the cigarettes and other tobacco products (prohibition of advertisement and regulation of trade and commerce, production, supply and distribution) act (COTPA) that came into effect in the year 2003 in India [6]. Notably, India is the second largest consumer as well as producer of tobacco in the world and one of the countries with a low age of initiation [7], [8]. In compliance with the World Health Organisation's Framework Convention on Tobacco Control (WHO

FCTC) [9], there are many sections in the COTPA which cater to the provisions enlisted in the articles of WHO FCTC. Sections 6 (a and b) is one such section which caters to the provisions and penalties regarding sale of tobacco products to minors. The section covers provisions and corresponding penalisation for offences such as prohibition of sale to anybody under 18 years (6a) and within 100-meters of any educational institution (6b) [6], [10], [11]. Although COTPA has been in effect since 2003 and many amendments have also been in place to refine the implementational aspects of the act, there is a well-documented general trend of violations and repeated offences of its provisions [12]–[14]. There is an abundance of studies that have assessed the compliance of the various sections along with barriers to implementation, yet there remains a paucity of literature from the western thar desert region of the country which is marked by one of the lowest age of initiation and higher prevalence rates in the country [15]–[18]. Considering the significance of its better implementation and health impacts of lower accessibility amongst the vulnerable younger population, this study was planned with the objective of assessing the knowledge and attitudes regarding various provisions of the COTPA act among stakeholders of major academic institutions of Jodhpur, to measure compliance with the provisions of sections 6 (a and b) of COTPA at institutional places and to identify potential enablers and barriers in the implementation of the act.

2. RESEARCH METHOD

A survey was conducted in the months of June and July 2021. A checklist based on the provisions of section 6 (a and b) of COTPA was used to observe the compliance in the vicinity of the educational institutions. For the compliance assessment, two senior secondary schools, not located within 100 meters of each other, from each of the 5 zones (North, West, East, South and Central) of Jodhpur district were selected. Lastly, in-depth, interviews were conducted amongst different stakeholders such as school staff, police personnel, local people, district education officer, to identify potential enablers and barriers in the implementation of COTPA provisions. Information about self-tobacco use, awareness, and perception about the ill effects of tobacco and existing tobacco control legislation in the country were also noted during the interviews which lasted approximately 15-20 minutes. For qualitative data, themes were identified and interviews were conducted till saturation in responses was observed. Ethical approval was obtained from the Institutional Ethics Committee (Certificate Reference Number: AIIMS/IEC/2021/3507), and official permission was obtained from the concerned government and private organizations where the study was done.

3. RESULTS AND DISCUSSION

3.1. Compliance observation

A total of 10 schools were surveyed, two each from the 5 geographic zones of Jodhpur district (North, West, East, South and Central). The checklist for schools included the presence of 'no smoking' signs and symbols, the existence of international 'no smoking' signs, and penalties regarding violations stated on the signs. Seven (70%) of the ten schools had writings and symbols related to 'no smoking', and six (60%) had displayed the international 'no smoking' sign, while only three (30%) had signs clearly stating the penalties under COTPA act. Out of the 10 schools included in the study, 5 were observed to have tobacco stalls within a 100-meter radius making a total of 6 vendors. Active smoking and tobacco stalls/vendors were observed near the vicinity of four (40%) schools, while, in two such stalls, the seller himself was a minor (<18 years of age). In one of the instances, the seller was seen consuming tobacco. All the observed stalls had signs of warning against sale to minors and the signs related to tobacco sales and smoking were observed to be as per the COTPA norms. However, only two-thirds of the stalls had signs in the local language and sale of smoking aids like lighters, matchboxes were seen in all the stalls. Not a single vendor was seen verifying the age of any customer and two were observed to be selling the product to minors (Table 1).

Table 1. Compliance observation around educational institutions

Checklist		n
International "no smoking" signs in schools		6 (60%)
Display of penalties a	3 (30%)	
Presence of tobacco vendors within 100-meter radius of schools		5 (50%)
Active smoking within 100-meter radius		4 (40%)
Warning signs against sale to minors at tobacco stalls		6 (100%)
Warning signs in local language		4 (67%)
Presence of smoking aids (lighters/ matchboxes)		6 (100%)
Verification of identity card of costumer before sale		0 (0%)
Sale to minors by tobacco vendors		2 (33%)

1424 □ ISSN: 2252-8806

3.2. Stakeholder interviews

A total of 33 participants were interviewed from including 10 school principals and 10 teachers from the 10 surveyed schools, eight police personnel, one local leader (elected municipality ward parshad), one representative from education department (district education officer), three local people residing in vicinities where violations were observed. Out of the three local residents, one was a medical doctor, one was a food and drug inspector and one was factory worker. The interviews were aimed at identification of potential enablers and barriers in the implementation of COTPA. The data collected was categorized under basic themes identified and grouped under three main categories of "law and act related barriers", "implementing personnel related barriers" and "community related barriers" (Figure 1).

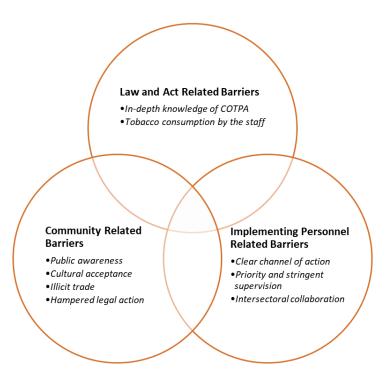


Figure 1. Barriers and enablers to COTPA implementation

Amongst the school staff there was a high level of information about the law that restricts sale of tobacco to minors and had heard about COTPA act. However, the participants interviewed had a low level of information about the provisions mentioned in the section six regarding minimum distance of tobacco vendors from educational institutions. The information regarding presence or absence of any tobacco stalls in the nearby locality was also low, and only three teachers reported the same to any higher authorities i.e., school management or the principal. Besides, mobile cycle vendors were also observed by the interviewees on numerous incidents over the past 12 months and they were unsure whether or whom to report about such vendors. No formal complaint was filed by the school authorities against these violations. A low awareness was observed about the penalties under section 6 of COTPA, while only three principals and two teachers knew whom to contact in case of any violations. None of the schools included in the study were found to be running any program against substance abuse (Table 2).

Table 2. Information regarding COTPA by school staff

Attributes	Grade	Qualifiers
Information about COTPA	High	
Information about COTPA section 6	Moderate	High (75%-100%),
Information about tobacco sale violation	Low	Moderate (50%-75%),
Tobacco sale violation reported	Negligible	Low (25%-50%),
Information about penalties section 6	Low	Negligible (0%-25%)
Information about the complaint channel	Low	

All the interviewees were aware about the ill effects of tobacco, the negative consequences of the tobacco consumption and the carcinogenic effect on the lungs. Some of them mentioned about harmful effect on the heart as well. Further, the source of information about the ill-effects of the tobacco product were enumerated as movies, newspapers, bill boards, ailments of some relative and social media, with advertisements before movies in cinema halls being most common source. Majority of the interviewees admitted consuming at least one kind of tobacco product (either smoked or smokeless) on a daily basis. They were unaware about any specific provisions or penalties under the COTPA act, but they had seen anti-tobacco commercials and heard from others tobacco users that smoking in public is illegal. All the interviewees who used tobacco products admitted that they had never smoked in front of ladies or children, but had often did it in public places, usually at nearby tea shops.

3.2.1. Law and act related barriers

- a. Police officials were observed not having an in-depth knowledge of COTPA which significantly hampered their role in implementing it.
 - "Even police officers are unaware of the depth of the act. COTPA is something which I have only heard of in trainings and meetings, but I don't know much about it in detail." (Police officer 1, 43-year-old male)
- b. Tobacco smoking by police personnel and the staff from another department had an influence in the overall view towards the law.
 - "Our staff also uses Gutkha [a chewable form of tobacco], and I occasionally eat with them because I think it's okay if I try it once in a while. I know, this is how the habit forms, but in a stressful job, occasional use is ok." (Police officer 2, 49-year-old)
 - "We cannot end up penalising our co-workers due to public use of gutkha and bidi. Most of the time we remain amongst public only. Even our senior officials smoke and we cannot question them." (Police officer 3, 40-year-old)

3.2.2. Implementation related barriers

- a. It was observed that the difficulties in the implementation of the law were attributed to a lack of a clear channel of action about the law and its mandates.
 - "We can implement the law if we get instructions through the proper channels [Administration and senior officials]. Give it to us on a piece of paper and we'll put it into action." (Police officer 2, 49-year-old)
 - "There should be a single channel that will be easy to follow or in implementation of the law like this." (Police officer 3, 39-year-old)
- b. COTPA implementation held a low priority amongst police officers in comparison to other crimes, and is thus, not taken seriously or stringently supervised.
 - "We have authority, but no one seems to care about it, and it is disregarded." (Police Officer 3, 39-year-old)
 - "Police officers are allocated to different regions and given many responsibilities, but it is up to them which they conduct checks on." (Police officer 1, 43-year-old)
 - "There is very less staff and we are always overworked. If we start collecting fines from tobacco vendors, we will miss out on other important crimes and responsibilities." (Police Officer 5, 42-year-old)
 - "There are so many criminal cases, people are committing crimes on regular basis, the graph of crime has increased manifold so this law becomes secondary to us." (Police officer 6, 54-year-old male)
 - "We are briefed about challan collection targets in some meetings on special days of year and we even rigorously meet those targets. But after those deadlines, this activity dies out. No follow up is demanded by seniors and so we don't take them." (Police officer 7, 45-year-old)

- "Most of the vendors are prepared at what times of year random checks will happen, but even they are least affected by it." (Police Officer 5, 42-year-old)
- c. Lack of intersectoral collaboration was another important challenge for adequate implementation.
 - "Near schools, we only see 100 yards. We don't get involved in the other parts. We don't cross any lines that we should not cross." (Education Department high-ranking official, 54-year-old)
 - "The Police Department, to my knowledge, does not collect fines. I have never done so myself. I'm not sure which department, Food or Health Departments collect fines." (Police official 8, 48-year-old)

3.2.3. Community related barriers

- a. One of the most frequently mentioned barriers to COTPA implementation had been a low public awareness about the provisions of the law and related penalties.
 - "This law is not well-known among the general public. For example, when we see people smoking in open places, we don't know where and whom to report or complain to." (Local resident 1 Medical Doctor, 35-year-old)
- b. Cultural acceptance of certain tobacco products in society was also observed as an important hindrance to the implementation of the law.
 - "I have seen people in family ceremonies and gatherings, welcoming guests with Afeem [a form of opium]. How can any government laws counter such activities?" (Local resident 2, 51-year-old)
 - "All types of alcohol and tobacco products are readily available in Jodhpur. This is the most important encouraging factor for more tobacco use. I have seen that alcohol with tobacco use is a common practice." (Municipality representative, 46-year-old male)
- c. The illicit trade of tobacco products in some regions Jodhpur of Rajasthan was also mentioned as a hurdle during the interviews.
 - "In Jodhpur, there is a ban on gutkha, but illicit sales continue in most areas of the city. Many elderly ladies themselves mix tobacco powder and use it as toothpaste every morning." (Local resident 3 Food and Drug Inspector, 46-year-old)
- d. An important finding was that legal action against lawbreakers was seldom hampered by the influence over government officials.
 - "We can't act since we don't have power and because local law breakers in Jodhpur know some or the other influential person, so we have to overlook them." (Police officer 2, 49 years old)

Knowledge about legal restrictions of public tobacco use, widespread awareness of ill-effects and stigma associated with tobacco use in front of kids and women across all categories of interviewees were few potential enablers recorded through the interviews.

3.3. Discussion

The present study was attempted to assessed the compliance towards section 6 of COTPA around the academic institutions in Jodhpur. It was observed that although all the principals of the schools were aware of the COTPA act but those who were actually aware of the specific parameters of distance from institutions were low. This could be directly related to the number of violations and lack of complains observed during the study. Similar findings were observed in the study conducted by Jain *et al.* [19], in rural and urban areas of Alwar districts of Rajasthan and Ali *et al.* [20] in open places of Delhi.

Out of the selected schools, seven were found to have 'no smoking' signages out of which six were complaint with the prescribed international sign, and only three stated penalties against violation. Another significant finding was direct violations of sections 6 (a and b) near the vicinity of institutions, with active smoking and presence of vendors in less than 100-meter perimeter of five schools, reports of mobile vendors

and observed sale to minors in two instances. These findings were further supported by qualitative component of the study and shows poor prioritization amongst enforcement officials. Such findings were similar to the study conducted by Khargekar *et al.* [21] in Bangalore City, which inferred only a 15% compliance of signages in educational institutions and 62% violations of section 6b. Another study in the northern part of the country by Pradhan *et al.* [22] reported an even higher, 69% vendors in the radius.

Moving forth, this study attempted to systematically analyse potential barriers and enablers in the implementation of COTPA. The lack of stringent enforcement of the law among police officers and education officers could be attributed to a lack of clarity about the legislation, channel of enforcement, and low priority in comparison to other criminal offenses. Further, lack of coordination between different departments and a low level of awareness regarding provisions of the act amongst teachers. Thus, senior-level officials, district education officers, and school management were identified to be potential enablers who may improve the implementation of the act if subjected to regular sensitization and awareness regarding the burden of tobacco in the country. Such results were also obtained from the study conducted by Sharma *et al.* [23] in the state of Assam in the general public and local self-government groups.

Competing priorities were seen to be more critical, such as criminal cases, surpassed the COTPA on the police personnel's priority list as also seen in study [22]. The interference of legal action also hampered COTPA implementation as is well documented in a number of studies related to tobacco industry interference such as those by Yadav and Glantz [24], Kumar *et al.* [25] and Chugh *et al.* [26]. This could be one reason for the law's slow and inefficient enforcement.

It was an interesting finding as how smoking amongst enforcement officials affected enforcement and how non-users were found to be more enthusiastic about the implementation of the law than the non-users. Although law is a crucial instrument of the war against tobacco, it is ineffectual unless coupled with a shift in public opinion. According to stakeholders who participated in our survey, there is insufficient public awareness about the dangers of smoking and the provisions of COTPA. There is already evidence of low public knowledge and weak adherence to the legislation in India [27]. As a result, neither the individual nor society receive all of the advantages provided by the law [28].

Moreover, illegal tobacco sales continue in various parts of Jodhpur. Similar findings were documented in research in Manipur, India, where tobacco was illegally sold throughout the state notwithstanding the ban. It has been found that tobacco vendor compliance with COTPA point-of-sale standards is linked to higher consumption. Even when sellers were aware of the law, adherence was poor, necessitating harsh penalties and punishments to enforce compliance. When sellers broke the law, local authorities interfered, making it impossible for police to take action against them [29], [30].

Nevertheless, our study was accomplished with a few limitations, listed as follows. This study was a non-funded study conducted in a limited area of Jodhpur. A major part of data collection from school staff relied on telephonic data due to COVID-19 restrictions, making physical data gathering problematic.

4. CONCLUSION

This study revealed that the COTPA along with its various sections held lesser priority amongst the law enforcement personnel. The school staff interviewed also had limited awareness about the provisions and reporting of violations. Thus, sensitization of tobacco-related health hazards and long-term benefits of COTPA enforcement, intersectoral coordination with district tobacco control cells and district education officials, and setting up of prompt reporting mechanisms against violations might lead to stringent compliance towards COTPA.

REFERENCES

- [1] World Health Organization, "Tobacco," World Health Organization, 2022. https://www.who.int/news-room/fact-sheets/detail/tobacco (Accessed: January 04, 2023).
- [2] Pan American Health Organization, "World no tobacco day 2010," Pan American Health Organization, 2010. https://www3.paho.org/hq/index.php?option=com_content&view=article&id=1310:2009-world-no-tobacco-day-2010&Itemid=0&lang=en#gsc.tab=0 (Accessed: January 04, 2023).
- [3] J. E. Bennett *et al.*, "NCD countdown 2030: worldwide trends in non-communicable disease mortality and progress towards sustainable development goal target 3.4," *The Lancet*, vol. 392, no. 10152, pp. 1072–1088, Sep. 2018, doi: 10.1016/S0140-6736(18)31992-5.
- [4] Centers for Disease Control and Prevention, "Youth and tobacco use," Centers for Disease Control and Prevention, 2022. https://www.cdc.gov/tobacco/data_statistics/fact_sheets/youth_data/tobacco_use/index.htm (Accessed: January 04, 2023).
- [5] M. Theilmann *et al.*, "Patterns of tobacco use in low and middle income countries by tobacco product and sociodemographic characteristics: nationally representative survey data from 82 countries," *BMJ*, pp. 1–17, Aug. 2022, doi: 10.1136/bmj-2021-067582.
- [6] Ministry of Law and Justice India, "Cigarettes and other tobacco products (prohibition of advertisement and regulation of trade and commerce, production, supply and distribution) act, 2003," *Ministry of Law and Justice India*, 2018. https://www.indiacode.nic.in/handle/123456789/2053?sam_handle=123456789/1362 (Accessed: January 04, 2023).
- [7] World Health Organization, "Tobacco control, no tobacco, commit to quit, tobacco control saves lives, tobacco exposed, tobacco

- kills, quit tobacco," World Health Organization, 2022. https://www.who.int/india/health-topics/tobacco#:~:text=It is one of the, consumer and producer of tobacco (Accessed: January 04, 2023).
- Tata Institute of Social Sciences (TISS) and Mumbai and Ministry of Health and Family Welfare India, "Global adult tobacco survey: India 2016-17 report." Ministry of Health and Family Welfare India, New Delhi, 2017.
- World Health Organization, "WHO framework convention on tobacco control (WHO FCTC)," World Health Organization, 2023. [9] https://www.who.int/europe/teams/tobacco/who-framework-convention-on-tobacco-control-(who-fctc) (Accessed: January 04, 2023).
- K. S. Reddy, M. Arora, and A. Yadav, "A comparative analysis of WHO framework convention on tobacco control and the Indian laws regulating tobacco." Public Health Foundation of India, New Delhi, 2008.
- [11] K. S. Reddy, M. Arora, R. Shrivastav, A. Yadav, D. Singh, and A. Bass, "Implementation of the framework convention on tobacco control (FCTC) in India." HRIDAY (Health Related Information Dissemination Amongst Youth), New Delhi, 2010
- [12] S. Pimple, S. Gunjal, G. A. Mishra, M. S. Pednekar, P. Majmudar, and S. S. Shastri, "Compliance to Gutka ban and other provisons of COTPA in Mumbai," Indian Journal of Cancer, vol. 51, no. 5, pp. 60-66, 2014, doi: 10.4103/0019-509X.147475.
- N. Sharma and B. S. Chavan, "Compliance to tobacco-free guidelines (cigarettes and other tobacco products act) in medical institute of North India," Indian Journal of Social Psychiatry, vol. 34, no. 3, pp. 213-216, 2018, doi: 10.4103/ijsp.ijsp_87_17.
- J. P. Tripathy, S. Goel, and B. K. Patro, "Compliance monitoring of prohibition of smoking (under section-4 of COTPA) at a tertiary health-care institution in a smoke-free city of India," Lung India, vol. 30, no. 4, pp. 312–315, 2013, doi: 10.4103/0970-2113.120607.
- [15] K. Rijhwani, V. R. Mohanty, A. Y. Balappanavar, and S. Hashmi, "Compliance assessment of cigarette and other tobacco products act in public places in Delhi government hospitals," Asian Pacific Journal of Cancer Prevention, vol. 19, no. 8, pp. 2097-2102, 2018, doi: 10.22034/APJCP.2018.19.8.2097.
- [16] S. Goel, M. Sardana, N. Jain, and D. Bakshi, "Descriptive evaluation of cigarettes and other tobacco products act in a North Indian city," Indian Journal of Public Health, vol. 60, no. 4, pp. 273-279, 2016, doi: 10.4103/0019-557X.195858.
- P. Banandur, M. Kumar, and G. Gopalakrishna, "Awareness and compliance to anti-smoking law in South Bengaluru, India," Tobacco Prevention & Cessation, vol. 3, pp. 1–7, Sep. 2017, doi: 10.18332/tpc/76549.

 [18] S. Singh, P. Jain, P. K. Singh, K. S. Reddy, and B. Bhargava, "White paper on smokeless tobacco & women's health in India,"
- Indian Journal of Medical Research, vol. 151, no. 6, pp. 513-521, 2020, doi: 10.4103/ijmr.IJMR_537_20.
- M. L. Jain, M. Chauhan, and R. Singh, "Compliance assessment of cigarette and other tobacco products act in public places of Alwar district of Rajasthan," Indian Journal of Public Health, vol. 60, no. 2, pp. 107-111, 2016, doi: 10.4103/0019-557X.184540.
- [20] I. Ali et al., "Assessment of implementation and compliance of (COTPA) cigarette and other tobacco products act (2003) in open places of Delhi," Journal of Family Medicine and Primary Care, vol. 9, no. 6, pp. 3094-3099, 2020, doi: 10.4103/jfmpc.jfmpc_24_20.
- [21] N. C. Khargekar, A. Debnath, N. R. Khargekar, P. Shetty, and V. Khargekar, "Compliance of cigarettes and other tobacco products act among tobacco vendors, educational institutions, and public places in Bengaluru City," Indian Journal of Medical and Paediatric Oncology, vol. 39, no. 4, pp. 463-466, Oct. 2018, doi: 10.4103/ijmpo.ijmpo_136_17.
- [22] A. Pradhan et al., "Cigarettes and other tobacco products act (COTPA) implementation in education institutions in India: a crosssectional study," Tobacco Prevention and Cessation, vol. 6, pp. 1-7, Sep. 2020, doi: 10.18332/tpc/125722
- [23] I. Sharma, P. S. Sarma, and K. R. Thankappan, "Awareness, attitude and perceived barriers regarding implementation of the cigarettes and other tobacco products act in Assam, India," Indian journal of cancer, vol. 47, no. 1, pp. 63-68, 2010.
- [24] A. Yadav and S. A. Glantz, "Tobacco industry thwarts ad ban legislation in India in the 1990s: lessons for meeting FCTC obligations under Articles 13 and 5.3," Addictive Behaviors, vol. 130, pp. 1-10, Jul. 2022, doi: 10.1016/j.addbeh.2022.107306.
- [25] P. Kumar, R. A. Barry, M. M. Kulkarni, V. G. Kamath, R. Ralston, and J. Collin, "Institutional tensions, corporate social responsibility and district-level governance of tobacco industry interference: analysing challenges in local implementation of Article 5.3 measures in Karnataka, India," *Tobacco Control*, vol. 31, no. 1, pp. 26–32, Jun. 2022, doi: 10.1136/tobaccocontrol-2021-057113.
- A. Chugh et al., "Tobacco industry interference index: implementation of the World Health Organization's framework convention on tobacco control article 5.3 in India," Asia Pacific Journal of Public Health, vol. 32, no. 4, pp. 172-178, May 2020, doi: 10.1177/1010539520917793.
- Y. K. Jain, N. K. Joshi, P. Bhardwaj, K. Singh, P. Suthar, and V. Joshi, "Developing a health-promoting school using knowledge to action framework," Journal of Education and Health Promotion, vol. 10, no. 1, pp. 1-7, 2021, doi: 10.4103/jehp.jehp_1139_20.
- N. Sharma, T. Anand, S. Grover, A. Kumar, M. M. Singh, and G. K. Ingle, "Awareness about anti-smoking related laws and legislation among general population in slums of Delhi, India," Nicotine & Tobacco Research, vol. 20, no. 5, pp. 643-648, Apr. 2018, doi: 10.1093/ntr/ntx098.
- M. M. Turner et al., "Compliance with tobacco control policies in India: an examination of facilitators and barriers," The International Journal of Tuberculosis and Lung Disease, vol. 20, no. 3, pp. 411-416, Mar. 2016, doi: 10.5588/ijtld.15.0376.
- D. Persai, R. Panda, and A. Gupta, "Examining implementation of tobacco control policy at the district level: a case study analysis from a high burden state in India," Advances in Preventive Medicine, vol. 2016, pp. 1-8, 2016, doi: 10.1155/2016/4018023.

BIOGRAPHIES OF AUTHORS



Shubham Rai D 🔀 🚾 🗘 was an MPH Scholar at School of Public Health, All India Institute of Medical Sciences, Jodhpur during this study, which was part of his academic project for the partial fulfilment of the post graduate degree. He is currently working as State Operations Manager for Uttar Pradesh at FIND. Mr Rai has over seven years of experience in communicable and non-communicable diseases related public health practice and implementation. He can be contacted at email: sbmrai@gmail.com.



Nitin Kumar Joshi currently works at School of Public Health, All India Institute of Medical Sciences, Jodhpur and is an investigator in numerous national and internationally funded public health research projects. He is also a site facilitator for the eDGH courses hosted by Department of Global Health, University of Washington. Dr Joshi has over 15 years' experience of public health teaching, research and practice with over 60 peer reviewed publications and book chapters. He can be contacted at email: drjoshinitin30@gmail.com.



Yogesh Kumar Jain is a Ph.D. Scholar at the Department of Community Medicine and Family Medicine and Project Manager for the Bloomberg Initiative to Reduce Tobacco Use Grant at School of Public Health, All India Institute of Medical Sciences, Jodhpur. He has over 7 years of experience in public health teaching and research. Dr Jain is currently working extensively in the field of tobacco related health, environmental and economic burden. He can be contacted at email: dryogeshjain14@gmail.com.



Suman Saurabh (1) Suman Saurab



Pankaj Bhardwaj is the Academic Head of School of Public Health and Additional Professor at the Department of Community Medicine and Family Medicine, and, All India Institute of Medical Sciences, Jodhpur. He has over 150 peer reviewed publications and book chapters in varying public health issues of concerns. His area of interest includes tobacco control policy and systems research, infectious disease epidemiology and geriatric health. He can be contacted at email: pankajbhardwajdr@gmail.com.