

Research Article

Tobacco-related content on social networking sites: evidence from a youth-led campaign in India

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Background

Social networking sites (SNS) have become the contemporary platform of choice for advertising, promoting, sponsoring, boosting and expanding tobacco marketing. A youth-led campaign was conducted to (i) identify and collate violations of tobacco advertisement, promotion, and sponsorship on SNS; and (ii) undertake content analysis of the collated violations.

Methods

After a series of capacity-building webinars aimed at empowering youths, they were tasked with collating posts (photos and videos) that showcased the promotion and sale of tobacco products online. Additionally, the youth identified relevant hashtags used to promote tobacco.

Results

The youth identified 748 posts (photos and videos) on SNS where tobacco was being promoted. Most of these posts (84.7%) promoted the 'smoking form' of tobacco. Renowned celebrities and influencers with massive followership actively endorsed tobacco products. The youth identified 148 pages that were involved in selling tobacco online. Instagram (62.7%) accounted for the majority, followed by Facebook (23.7%). The most commonly available forms of tobacco in these online stores were 'smoked forms' (73.5%). In their efforts, the youth collated 1412 hashtags related to tobacco promotion. The most commonly reported hashtags were #smoking and #hookah. The maximum numbers of tobacco posts were for #vape (296 million) and #smoke (218 million).

Conclusions

There is an urgent need to revise Section 5 of "*The Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply, and Distribution) Act, 2003*" to broaden the coverage of tobacco advertising, promotion, and sponsorship (TAPS) prohibition on all internet-based platforms including SNS to protect Indian youth.

The tobacco industry has been amplifying the global tobacco epidemic through aggressive advertisement, promotion, and sponsorship for years.¹ In response, Article 13 of the World Health Organization's Framework Convention on Tobacco Control (WHO FCTC), suggests a comprehensive advertising ban.² Aligned with FCTC, the preamble and section 5 of Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Com-

merce, Production, Supply, and Distribution) Act (COTPA), 2003 prohibits any kind of tobacco advertising, promotion, and sponsorship (TAPS)³ in India. With the prohibition of TAPS in entertainment media (television, radio), and other platforms (billboards), the tobacco industry is strategically using digital and social media, including social networking sites(SNS) for TAPS⁴; primarily due to extensive utilization

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by the youths⁵ and limited enforcement restrictions on these sites.⁶

'Youths' are targeted on SNS, as they are impressionable, with no brand preferences and have a high probability of becoming lifelong buyers.⁷ Studies highlighted that pro-tobacco content on social media has the potential to influence youth towards tobacco.^{8,9} Promotional strategies for tobacco products encompass both direct (advertisements featuring the products) and indirect marketing approaches (via influencers).¹⁰ Tobacco companies make continuous efforts to normalize tobacco use on SNS by employing several innovative strategies such as paid influencers, posting pictures of celebrities using tobacco or advertising tobacco, and leveraging popular hashtags, among others.¹¹ There have been reports of influencers receiving guidance and training to include specific hashtags and present a 'natural' appearance while promoting cigarettes on their social media posts.¹² Active digital marketing can be more problematic than traditional marketing as it has the potential to directly connect to millions of customers¹³ and increase engagement for youth, like watching online videos, consuming content for and from peers, which tends to increase advertising effectiveness.⁵

Counteractively worldwide, governmental and non-governmental organizations are working relentlessly on the formulation of policies, enactment of laws, and organizing awareness campaigns to prevent youth tobacco exposure.¹⁴ One of the innovative concepts is to involve youth themselves in sensitization campaigns. Youth involvement can lead to important environmental and social norm changes and reduce pro-tobacco influences.¹⁵ Globally, there are multiple youth sensitization programs that have been conducted.^{16,17} Few youth-led anti-tobacco campaigns have been undertaken in India like 'Children Against Tobacco' (CAT),¹⁸ Tambakhu ko Dishum (Quit Tobacco Movement),¹⁹ students appealing policy-makers for a comprehensive governmental ban on tobacco advertising and sponsorship,²⁰ but none of the work focused on tobacco advertisement and promotion through SNS. Furthermore, in spite of being deemed effective, work on empowering youth by meaningfully engaging them in recognizing ways in which the tobacco industry targets them via social media and helping them understand the legal complexities of tobacco prevention, among others, is scarce in India. Bridging this lacuna, a youth-led campaign was organized in India to (i) sensitize and empower youth to identify tobacco advertisement, promotion, and sponsorship (TAPS) violations on SNS and; (ii) undertake the content analysis of the posts collated by the youths.

METHODS

The campaign was conducted with youth (14–24 years) from three metropolitan cities (Delhi, Pune, and Bengaluru) in India, from June–September 2020, as a part of World No Tobacco Day 2020. The activities included (i) campaign registration, (ii) sensitization webinar, (iii) training webinars, and; (iv) collation of posts on SNS. Youths aged 14–24 years,

having familiarity and personal accounts on SNS (Facebook, Instagram, Twitter, etc.) were eligible to participate.

The campaign started with registration, followed by a 'sensitization webinar' (July 2020) led by a panel of tobacco control experts, lawyers, and communication experts. During the sensitization webinar, all registered youth were introduced to the campaign and sensitized about the 'tactics employed by the tobacco industry to target youth along with the existing 'self-regulatory policies' of SNS related to tobacco. Following the sensitization webinar, a series of training webinars (n=10) were conducted with registered youth. Webinars were separately organized for school (category A: 14–17 years) and college students (category B: 18–24 years) in groups of 10–12 youths. In training webinars (July 2020), youth were further closely trained by experts on SNS 'self-regulatory' policies^{21–24} related to TAPS on SNS and the process of identifying these violations. Following this, youth collated posts (photos or videos) i.e., where tobacco was being promoted, sold online on SNS sites (Facebook, Instagram, Twitter, YouTube, and Pinterest), and identified popular hashtags. Each youth was given 15 days to collate these violations and submit to the study team (August 2020). (Figure 1)

DATA ANALYSIS

A content analysis of the collated violations was performed by experienced researchers (DB and SB). All collated posts by youth were organized by entering in an Microsoft Excel sheet by identifying variables (key themes) based on the review of the literature.^{25–32} Descriptive analysis of social media posts, as observed in prior studies, was utilized to perform data analysis.^{32,33} For *posts where tobacco was promoted*, apriori variables that were considered for evaluation were the type of post (like photo or video), SNS medium on which it was seen (Facebook, YouTube, Instagram, Twitter, other), form of tobacco (cigarette, chewing, hookah, e-cigarette, smoking pipe, etc.), presence of celebrity (yes or no), gender of the celebrity or model (male or female), year of uploading the post, use of cartoon characters (yes or no), display of health warnings (yes or no), number of views on a post, social context of post (type of message delivered in the post i.e. warn against tobacco use or glamorize tobacco use), tobacco use promoted through (text, pictures or both), influencer name, likes and followers on their page. For *posts where tobacco was sold online*, the information was extracted for variables namely, online store name, SNS platform (Facebook, Instagram, Pinterest, etc.), form of tobacco sold (cigarette, chewable tobacco, hookah, e-cigarette, smoking pipe, etc.), year of the launch of store on SNS, number of followers, hashtag name and number of tobacco-related posts were noted.

RESULTS

In total, 233 youth (school students 94, college students=139) registered in this campaign. Out of 233, 115 participated in the sensitization webinar (schools=32, colleges=83). Subsequently, 102 youth participated in the

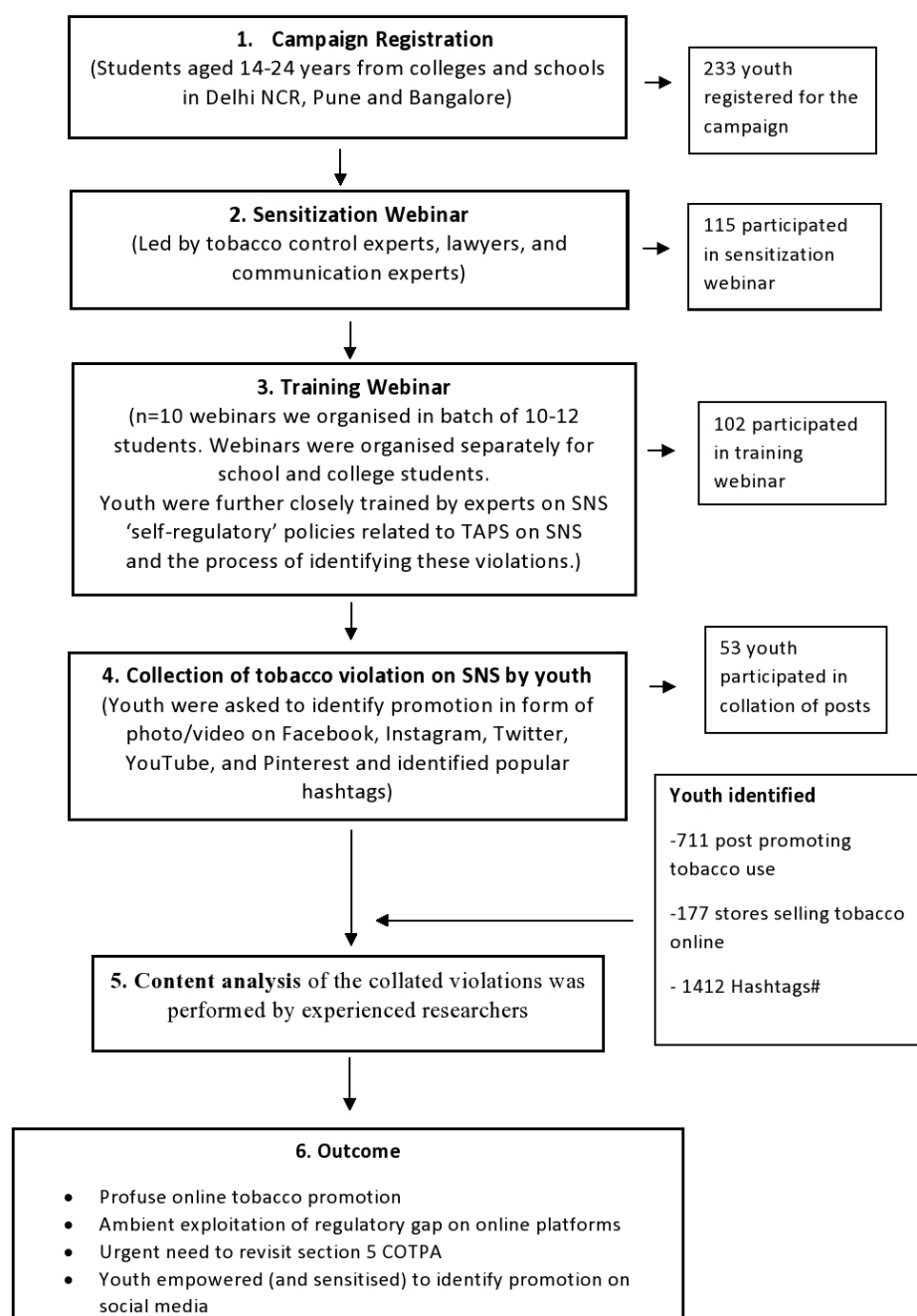


Figure 1. Stepwise representation of campaign

training webinar (schools=32, colleges=70). Finally, 53 youth (schools=18, colleges=35) collated the posts.

POSTS (PHOTOS OR VIDEOS) WHERE TOBACCO WAS PROMOTED

A total of 748 posts promoting tobacco were collated by youth (n=53). Of these, 37 posts were excluded as tobacco was 'not visible'. Finally, 711 posts were considered for detailed content analysis. These posts (n=711) were collated from various SNS platforms, including Instagram (72.1%), YouTube (12%), Twitter (6.8%), Pinterest (5.3%), Facebook (3.2%), Snapchat (0.3%) and Tinder (0.3%). 81.9% of posts were pictures and 18.1% were videos. Within the posts,

52.7% had text messages, whereas 47.3% were only images. More than half (59.5%) of the posts had a male model and 46.7% of them had a model in the age group 10-24 years (*as perceived by the researcher*). Of the 711 posts, only 312 posts had the 'year of upload'. A steady increase in uploading of posts (photos and videos) promoting various kinds of tobacco products was observed in the last few years (since 2017) as shown in [Figure 2](#).

Tobacco products seen in the post were categorized as in GATS-2³⁴; 'smoke form of tobacco', 'smokeless form of tobacco' and 'e-cigarette'. The majority (84.7%) of posts prompted smoke form of tobacco, 4.1% of posts depicted smokeless tobacco and 11.2% promoted e-cigarettes. Out of the posts promoting a smoke form of tobacco (84.7%); the

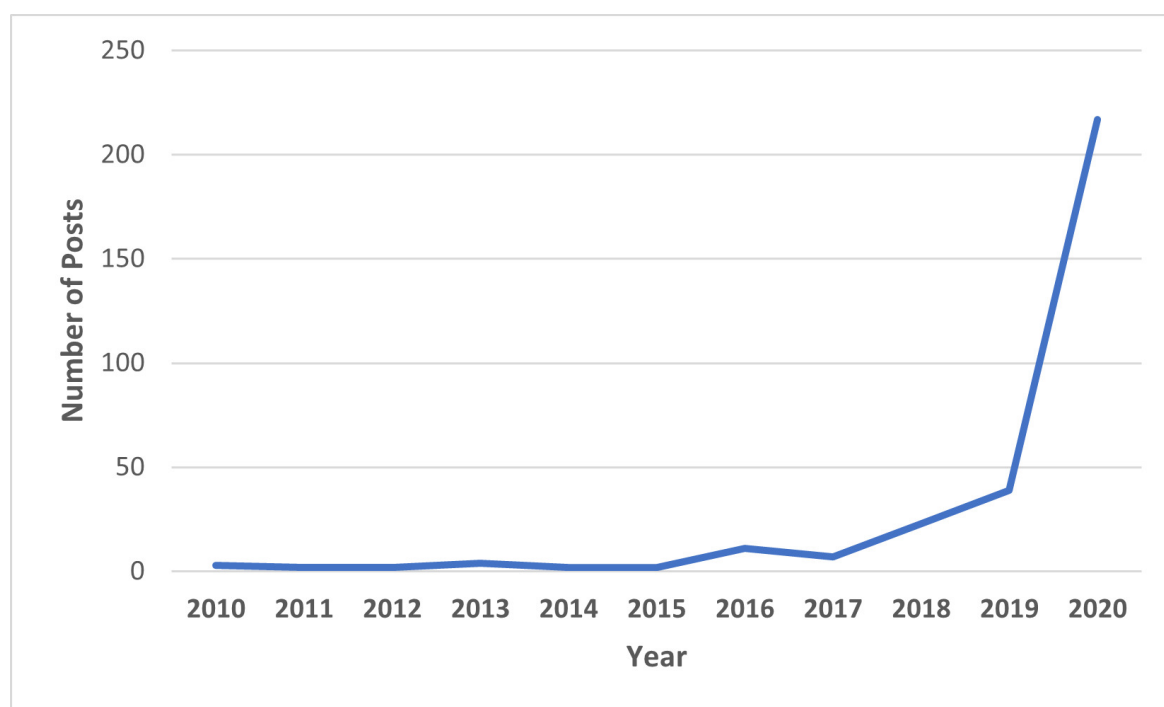


Figure 2. Annual distribution of posts uploaded on SNS, 2010-2020.

maximum depiction was of cigarettes (65.3%) followed by hookah (17.4), beedi (1%), and smoking pipe (1%). There were 79 posts for e-cigarettes out of which 18 were uploaded in the year 2020.

Strategic placement of packs in the post was done to diminish the visibility of health warnings. More warnings were on smokeless tobacco products (17.2%) than on other forms (smoke 2.3% and e-cigarettes 3.8%). Few health warnings highlighted the consequences of tobacco use: *'smoking is bad', 'smoking is injurious to health', 'smoking contains benzene, nitrosamines, formaldehyde, and hydrogen cyanide', 'smoking kills', 'tobacco causes mouth cancer', 'smoking leads to a slow and painful death', 'product contains nicotine and nicotine is an addictive chemical', 'injurious to health', 'tobacco causes painful death'*. Few warnings glamorized tobacco use *"They say smoking kills...but what about feelings? Smoking kills but we were born to die either way; It kills, but it thrills"*.

Analysis depicted, 14.1% of posts (photos and videos) promoting tobacco had celebrities like Bollywood stars, singers, or rappers. Major section of posts saw 'influencers' (people who have a certain amount of following on social media) with tobacco products. These posts by influencers had many 'likes' and 'views'. 'Likes'/'views' often correspond to the number of people who have seen the post. The highest followers were of a singer, rapper, songwriter and record producer based in the WHO American region with 226 million followers. The maximum number of likes for a photo on Instagram with a tobacco depiction was for a singer and songwriter based in the WHO European region with approximately 3 million likes. Few others, who were observed to have a large following and posts promoting tobacco were, singer, rapper, songwriter and record producer based in the WHO American region (226 million), singer

and actor based in the WHO American region (29.9 million), singer, songwriter, actor, and record producer based in the WHO American region (24.6 million), story-telling platform (10 million), Inspiring content page (8.79 million), and TikTok artist based in the WHO SEARO region (6.13 million), etc. (Table 1).

POSTS (PHOTOS OR VIDEO) WHERE TOBACCO WAS SOLD ONLINE

177 stores on SNS were identified, selling tobacco products online. After removing repeated pages (which were the same), 148 pages were included for content evaluation (both national and international pages). Maximum stores were on Instagram (62.7%), followed by Facebook (23.7%), Twitter (5.7%), Pinterest (4%), YouTube (1.1%), and Snapchat (2.8%). The most common forms of tobacco available through these stores were 'smoke form of tobacco' (73.5%) followed by 'smokeless' (6.2%) and 'e-cigarettes' (18.6%) and the remaining 1.7% of stores sold all these forms of tobacco. Only 50 pages had 'year of establishment' visible. Out of them, 15 pages had been opened in/after 2019 (during a pandemic). Of these 15 pages; 10 sold smoke forms of tobacco, 3 sold smokeless tobacco, 1 sold e-cigarettes and 1 sold all kinds of tobacco. In terms of followers, the most hit page was seen on Instagram, for the sale of e-cigarettes and this webpage has 0.777 million followers. Some of the other identified Indian pages with many followers are shown in Table 2 (names and real identities have been removed).

Table 1. Top 10 identified Influencers on SNS by youth with maximum 'likes'/'views'

S.No.	Influencer Name*	SNS Platform	Followers of influencers in million (as on 15 Sep 2020)	'Like'/'views' on post up (as on 15 Sept 2020)
1.	Singer, rapper, songwriter and record producer based in the WHO American region	Instagram	22.6	3,032,337 likes
2.	Singer, rapper, songwriter and record producer based in the WHO American region	Instagram	22.6	3,043,430 likes
3.	Singer and songwriter based in the WHO European region	Instagram	36.9	3,056,871 likes
4.	Singer and Actor based in the WHO American region	Instagram	29.9	499,223 likes
5.	Singer, songwriter, actor, and record producer based in the WHO American region	Instagram	24.6	1,403,486 likes
8.	Storytelling platform WP	Pinterest	10	Not visible
9.	Inspiring content page WHI	Pinterest	8.79	Not visible
10.	Tik Tok Artist based in the WHO SEARO region	Instagram	6.13	5099 views

*De-identified data is presented to maintain ethical standards

Table 2. List of top 10 stores selling tobacco products on SNS platform*

Name of online store selling tobacco#	Year of establishment	Tobacco Product category of sale	Number of followers
Store A1	NA	e-cigarettes	777,000
Store A2	N.A	Smoke	233,000
Store A3	2020	Smoke, SLT, e-cigarettes	4,600
Store A4	2020	SLT	3,700
Store A5	NA	Smoke	2,500
Store A6	2015	Smoke	1,300
Store A7	NA	Smoke	1,300
Store A8	2016	Smoke	1000
Store A9	NA	Smoke	790
Store A10	2018	Smoke	700

*Top 10 Indian pages in descending order of the number of followers.

#De-identified data is presented to maintain ethical standards

HASHTAGS (#) PROMOTED TOBACCO

Youth identified 1412 hashtags that promoted tobacco on SNS. The most commonly reported hashtags were #smoking (reported by 20 participants) and #hookah (reported by 15 participants). Amongst all the reported hashtags, maximum numbers of tobacco posts were seen for #vape (296 million) and #smoke (218 million). Other frequently used hashtags were #cigarlife, #hookalounge, #smokingfetish, #hookahlife, etc. ([Table 3](#)).

DISCUSSION

COTPA-2003, Tobacco-Free Films and Movie Rules, national-level public awareness campaigns, Tobacco-Free Educational Institutional Guidelines, ban on smokeless tobacco, The Prohibition of Electronic Cigarettes (Production, Manufacture, Import, Export, Transport, Sale, Distribution,

Storage and Advertisement) Act (PECA), tobacco taxation and School health program under the National Tobacco Control Programme (NTCP) are some initiatives taken by the Government of India to protect youth from tobacco.³⁵ However, despite such progressive restrictions and strong tobacco control measures, our findings revealed; tobacco being insidiously promoted on various new mediums (online). This could be attributed to regulatory gaps, and 'lack of clarity' on the applicability of section 5 of COTPA on SNS platforms. The tobacco industry considers SNS as an opportunistic medium, as evidenced from our youth campaign, the increase in uploading of posts since 2017 and globally.^{36,37} Similar to ours, 'another study across 40 countries, observed tobacco companies secretly advertising cigarettes on SNS through social media influencers.¹² The uniqueness of influencer's posts is that they are not identified as advertisements or associated with tobacco companies/products but instead make posts appear seamlessly nor-

Table 3. Commonly identified hashtags (#) on SNS*

S.No	Name of Hashtag(#)	Number of participants reported hashtags	Number of posts for each hashtag (million)
1.	#Vape	14	296
2.	#Smoke	11	218
3.	#tobaccopipe	8	204
4.	#vapenation	6	115
5.	#vaping	6	96
6.	#hookah	15	94
7.	#Smoking	20	61
8.	#Cigar	11	58
9.	#shisha	11	57
10.	#cigars	7	46

*Top 10 hashtag in descending order of the number of posts for each hashtag

mal.³⁸ Vexation also comes looking at the kind of impact influencers hold over young impressionable minds and the amount of time youth spent on SNS viewing such content, thereby increasing exposure and susceptibility to tobacco use. Research studies conducted by the authors of this paper also showed that watching tobacco use in Bollywood movies was independently associated with ever tobacco use among adolescents (12-16 years) in India³⁹ and this association might be valid for social media due to its widespread prospect of interaction among people. Evidence from a longitudinal study depicts an increased risk for various tobacco and electronic nicotine delivery system use behaviours among adolescents who encounter or engage with online tobacco content. Furthermore, the risk for initiation and persistence is even more pronounced among adolescents who self-report actively interacting with online content about tobacco on social media.⁹

Youth in this campaign identified the stores/sites selling tobacco products online similar to other studies.^{40,41} As per COTPA (2003), there is a prohibition on the sale of tobacco products to and by minors, and through vending machines,³ but this provision does not cover new and emerging forms of media, for example, SNS, which can even be used by minors. This regulatory gap is exploited by the industry to sell their products to adolescents and expand their market. Posts with positive messaging, to create normalcy about tobacco use in the minds of youth and limited harmful health warnings were observed in our and other studies.^{6,42} A major concern associated with creating normality and positive messages, is its direct influence on youth knowledge and attitude, which can influence their behavior resulting in initiating tobacco use.

The campaign findings suggest an urgent need to revisit the COTPA 2003 as it was enacted almost two decades back, with the specific aim to prohibit all forms of advertisement and for protecting non-smokers, especially youth from exposure to tobacco. Thenceforth, with the emergence of new technologies, global digital revolution, new forms of media, increased patterns of media consumption and the global shift of supply and consumer chain to online marketing; made provisions under COTPA redundant. Given these de-

velopments and to prevent decades of tobacco control efforts from dissipating, there is an urgent need to revisit Section 5 of COTPA,³ to extend the TAPS prohibition on SNS including on bloggers and influencers. The government may also consider placing warnings and messages whenever tobacco product or tobacco use is shown on social media. This could be similar to the 'Tobacco Free Films and Movie Rules' for television and films under COTPA.³ These rules are found to be effective in reducing tobacco imagery; in 2015, less than 48% of movies had tobacco imagery compared with 89% in 2005.⁴³ Those amendments would act as a further step towards a 'tobacco-free future generation' and protect youth from prospective tobacco initiation. Globally, as many as 55 countries have banned the sales/ advertisement/ promotion of tobacco via the internet with Finland being a policy success story.^{44,45} Singapore and Bahrain have laws on cyber-surveillance and social media monitoring to counter the tobacco menace.⁴⁶ Singapore has penalized and taken legal action on the same by collecting fines worth S\$3000-53,500 each from 13 people (2 people being imprisoned) between the ages 20-40 years for selling e-cigarettes and its components online.⁴⁷

Besides policy amendments and intensifying efforts by regulatory authorities, there is a need to empower youth by involving them in the planning and implementation of tobacco control initiatives in our country. Youth-driven programs have been observed to bring about legislative changes in countries.⁴⁸ Even in India, meaningful and successful youth-driven initiatives are seen to have a favorable role in the introduction and later passing of COTPA Act in 2004.²⁰ In addition, ample localized efforts by youth themselves in the form of peer activism and with support from community based organizations^{49,50} and others to achieve tobacco-free schools/colleges/villages/communities has been observed. In addition, in 2013, Indian and international organizations spoke about Tobacco Free Future Generation with context to India at the 'International Conference on Public Health Priorities in the 21st Century' and this idea was highly supported by the youth.⁵¹ Thus, the involvement of youth is also essential for the development of relevant and effective policies.

LIMITATIONS AND FUTURE RECOMMENDATIONS

This study has limitations as well. It would benefit to have more youth participation in future campaigns with national and global representation. All observations in the study could not apply to children below the age of 14 years as it is the minimum age criteria by SNS to hold an account. Although, future awareness campaigns could consider capacity-building initiatives for children in the age group 10–14 years to equip them to protect themselves from being targeted by the tobacco industry. The campaign did not attempt to assess the susceptibility toward tobacco use when exposed to these advertisements. Future studies can further explore the impact of exposure to pro-tobacco content on social media on youth. Another limitation of our study is that we did not employ any data mining techniques to analyze social media posts. It would have benefited the study to adopt such a technique to gain insightful and meaningful patterns and trends on social media.

CONCLUSIONS

The exploitation of the regulatory gaps and policy ambiguities is the hallmark of the tobacco industry playbook strategy. There is direct and indirect promotion, advertising, and sales of tobacco on SNS. The tobacco industry is insidiously circumventing the TAPS ban on traditional forms of media. Since SNS is the new medium, there is a need to revisit Section 5 of COTPA and remove any ambiguities with strengthened enforcement at the national, state and district level to ensure that the progress made in tobacco control in the last two decades is not undone. Moreover, the need to empower youth by engaging them in similar youth-led campaigns to generate awareness and make them agents of change in the community by spreading awareness is apparent.

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ETHICS CLEARANCE AND CONSENTS

Ethical approval for this study and consent from participants was not required in accordance with local legislation and national guidelines, as the study entailed analysing the publicly available data collected by the participants as part of the campaign. None of the personal socio-demographic information was collected from the participants in this campaign. All personal data were removed and de-identified during analysis and reporting.

FUNDING

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AUTHOR CONTRIBUTION

VM, DB, SB and MA conceptualized the study. SB and DB contributed to study implementation, trained youth, supervised data collection, and contributed to the analysis and interpretation of results. DB, SB and NT drafted the manuscript. MA, PS, and VM reviewed the manuscript critically for intellectual content. All authors reviewed and approved the final manuscript.

CONFLICT OF INTEREST

The authors completed the Unified Competing Interest form at <http://www.icmje.org/disclosure-of-interest/> (available upon request from the corresponding author), and declare no conflicts of interest.

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