RESEARCH ARTICLE

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Tobacco Control Policy in India: Progress and Challenges Quantified Using the Tobacco Control Scale

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Abstract

Introduction: One of the most vexing challenges to public health today is the menace of tobacco. Despite the large body of evidence indicating the vast scale of health hazards, tobacco use continues to be a major cause of preventable death. This study was conducted with the objective of quantifying the progress and challenges of the tobacco control policy of India. **Methods:** The Tobacco Control Scale (TCS) was used, which has a maximum score of 100 and assesses nine components including, price of cigarettes, smoke-free public and work places, spending on public information campaigns, comprehensive bans on advertising and promotion, large pictorial health warning labels, treatment to help smokers stop, illicit tobacco trade, tobacco industry interference and ratification of the WHO FCTC. The components of the TCS for India were scored based on data obtained from the WHO, Report on The Global Tobacco Epidemic, 2021 and the Cigarettes and Other Tobacco Products Act 2003 and their amendments and the Tobacco India 2023 country profile. **Results:** The total score for the tobacco control scale placed India at 65 points, scoring highest with respect to 'large pictorial health warning labels', and lower with respect to 'spending on public information campaigns', 'illicit tobacco trade' and 'price of cigarettes'. **Conclusions:** Strong tobacco control legislation and its equally robust implementation is an affirmative step in achieving the vision of the WHO-FCTC and empowering the world towards being tobacco free.

Keywords: Good health- India- policy- tobacco control scale

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Introduction

One of the most vexing challenges to public health today is the menace of tobacco. An astounding 8.7 million people die from tobacco-related causes each year [1]. In the last few decades, compelling scientific evidence has emerged implicating tobacco as a risk factor for many types of diseases in humans [2-6]. Secondhand smoke is another cause of concern and has been shown to be associated with the risk of developing pulmonary disorders [7] and oral cancer [8]. Despite ample evidence indicating the vast scale of health hazards, tobacco use continues to be a major cause of preventable death worldwide. The number of users of tobacco products has experienced a massive surge in low- and middle-income countries [9].

A major reason for this increase is that tobacco companies undertake a plethora of measures to lure their users into buying these lethal products [10]. The tobacco industry invests billions of dollars in promoting obnoxious tobacco products that are responsible for killing millions of tobacco users [11]. These multifaceted ploys of the tobacco industry necessitate a multidimensional approach to address and eliminate the peril of the tobacco epidemic.

Considering these aspects, the Framework Convention on Tobacco Control (WHO-FCTC) was adopted by the World Health Assembly, which attempted to comprehensively address the various hurdles posed in tackling the menace of tobacco [12]. The WHO-FCTC has been one of the most successful international treaties on health, with 181 countries ratifying it, [13] and provides uniform regulations and guidelines for implementation [14,15]. Countries have adapted tobacco control laws to suit their cultural and social contexts [16] and the strict enforcement of these laws can impact the number of users of tobacco and the associated mortality [17].

India led the bastion of anti-tobacco measures by being one of the earliest countries to ratify the WHO-FCTC while also enacting its own Cigarettes and Other Tobacco Products Act [18]. The Government of India further launched the National Tobacco Control Program (NTCP), which holistically responds to anti-tobacco interventions [19].

Despite all these provisions, tobacco-related deaths and disability in India are staggering [20]. Hence, there

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is an ardent need to identify areas in existing policies that need changes and modifications and one way of doing this is through quantifying the laws and grading them to assess their progress and challenges. The Tobacco Control Scale (TCS) [21] is one such measure proposed to assess and quantify the tobacco control policy of various countries. Over the years, the TCS has been used in different parts of the world [21-24] and has been reported to increase the capacity to pinpoint areas that require improvement and enable comparison with other nations.

This is the first study of its kind to be conducted in India with the objective of quantifying the progress and challenges of the tobacco control policy of India using the Tobacco Control Scale.

Materials and Methods

The Tobacco Control Scale (TCS) [21] comprised of 6 components, which was later modified into a 9 component scale [22] with a maximum score of 100 as shown in Table 1.

Sources of data

The components of the TCS for India were scored based on data obtained from the WHO, Report on The Global Tobacco Epidemic, 2021 [25] and the Tobacco India 2023 country profile [26]. The average price of cigarettes in international dollars was sourced from the WHO metadata registry [27]. Data were also obtained from the Global Tobacco Industry Interference Index 2021 [28] and the Cigarettes and Other Tobacco Products Act (COTPA) 2003 [18] and their amendments [29-31].

Data handling

For the scoring, the methodology of the TCS published and validated in 2021 [21] was strictly adhered to. Two separate investigators (KC and AR) independently analysed the data from the abovementioned sources and separately scored each of the components of the scale. To minimize bias and ensure robust results, consensus was obtained between the investigators through discussion and the final score was obtained after adding up the scores obtained for each of the nine components.

Results

The present study examines nine distinct policy areas that are crucial in assessing the tobacco control policy of a country. The analysis for each of the nine components is given below.

Scale 1: Price of cigarettes

The price of cigarettes was calculated based on the weighted average price (WAP) for cigarettes, considering the purchasing power parity (PPP) expressed in international dollars.

According to Joossens and Raw [21], a country with 18 international dollars receives 30 points, which translates into 0.60 Int $ for one point. The price of the most sold brand of pack of 20 cigarettes in India [26] is INR190, which converts into 8.66 Int $. Table 2 shows that the weighted average price for cigarettes has been calculated to obtain a value of 14 points. When historical data was analyzed, the price of cigarettes showed an increasing trend with each successive year. The total taxes as a percentage of the price of cigarettes also showed an upward trend every year (Figure 1).

Scale 2: Smoke-free work and other public places

Scale 2 analyses legislation regarding smoke-free public and work spaces. In India, legislation diktats a complete ban on tobacco smoking in all workplaces, excluding cafes and restaurants. There is also a complete ban in educational, health, government and cultural places without exception. However, in hotels and restaurants with thirty rooms or with seating of 30 persons or more and at airports, an arrangement is provided in the legislation to have well ventilated and confined smoking areas or spaces.

With respect to public transport and other public places, there is a complete smoking ban on domestic trains without exception and on other public transport without exception. However, there is no explicit mention in the legislation of bans in private cars when minors or children are present. Thus, Table 2 shows that India scored 19 out of 22, with respect to the component "smoke-free work and other public places".

Scale 3: Spending on public information campaigns

To score this component, the TCS considered the national government's funding for mass media campaigns, tobacco control programmes, educational projects and the support provided to nongovernmental organisations. The available data showed that the government of India allocated a total INR of 5,74,57,00,000 to its annual budget for tobacco control activities [25]. The CDC has recommended that to be effective, 1-3$ (average of 2$) should be spent per capita on tobacco control [21].

The GDP per capita (for the US – 2018) was 62,823.3$, and the GDP per capita for India was $6590.9 (2018). For the GDP of the US if the CDC recommends $2 per capita expense for tobacco control, the proportional expense for tobacco control in India was calculated to be (2388.6X2)/62823.3 = 0.21$, which was 17.50 INR. Therefore, 10 points = 17.5 INR, 1 point = 1.75 INR, so the 4.2 INR is approximately 2 points. Table 2 shows that this component of the TCS for India therefore received a value of 2 points.

Scale 4: Comprehensive bans on advertising and promotion

The COTPA Act imposes bans on tobacco advertising on television, radio, print media and outdoor advertising. There is also a ban on indirect advertising of tobacco products [18]. However, the law has no provision prohibiting the display and advertising of tobacco products at the point of sale. This pitfall caused the points for India to subside to 9 out of a maximum of 13 for this component as shown in Table 2.

Scale 5: Large pictorial health warning labels

India complies strictly with the recommendations of the WHO-FCTC and enforces tobacco packaging that

Table 1. Components of the Tobacco Control Scale

Scale	Description
Scale 1: Price of cigarettes	The Weighted Average Price for cigarettes
	The price of the Weighted Average Price (WAP) for cigarettes, taking into account the Purchasing Power Parity expressed in international dollars as used by the World Health Organisation in its report 2021.
Scale 2: Smoke free public and work places	Workplaces excluding cafes and restaurants - one only of
	* Complete ban without exceptions (no smoking rooms); enforced (10)
	* Complete ban, but with closed, ventilated, designated smoking rooms under very strict rules; enforced (8)
	* Complete ban, but with closed, ventilated, designated smoking rooms (not areas or places); enforced (at least 75% of the workplaces are smoke free) (6)
	* Meaningful restrictions; enforced (more than 50% of the workplaces are smoke free) (4)
	* Legislative restrictions, but not enforced (less than 50% of the workplaces are smoke free) (2)
	Cafes and restaurants – one only of
	* Complete ban; enforced (8)
	* Complete ban, but with closed, ventilated, designated smoking rooms (not areas or places); enforced (6)
	* Meaningful restrictions; enforced (50% of bars and restaurants are smoke free) (4)
	* Legislative restrictions, but not enforced (less than 50% of the bars and restaurants are smoke free) (2)
	Public transport and other public places and private cars– additive
	* Complete ban in trains without exceptions (1)
	* Complete ban in other public transport without exceptions (1)
	* Ban in private cars when minors or children are present (1)
	* Complete ban in educational, health, government and cultural places (1)
Scale 3: Spending on public information campaigns	Tobacco control spending per capita by the government, expressed in Power Purchasing Standards (PPS). A country that spends 2 euro per capita, based on the EU average GDP per capita expressed in PPP receives 10 points.
Scale 4: Comprehensive bans on advertising and promotion -	Additive for each type of ban
	* Complete ban on tobacco advertising on television and radio (2)
	* Complete ban on outdoor advertising (e.g., posters) (2)
	* Complete ban on advertising in print media (e.g., newspapers and magazines) (1.5)
	* Complete ban on indirect advertising (e.g. cigarette branded clothes, watches, etc.) (1)
	* Ban on display of tobacco products at the point of sale (2)
	* Ban on point of sale advertising (2)
	* Ban on cinema advertising (1)
	* Ban on sponsorship (1)
	* Ban on internet advertising (0.5)
Scale 5: Large pictorial health warning labels	Plain packaging (the removal of trademarks, logos, colours and graphics, except for the government health warning, and brand name presented in a standardised typeface) in combination with pictorial health warnings on the front and on the back of the tobacco product package (4)
	Size of warning – one only of
	* 50% or less of the packet (1)
	* 51–79% of the packet (2)
	* 80% or more of the packet (3)
	Pictorial health warnings – additive
	* Pictorial health warnings on cigarette packs(2)
	* Pictorial health warning on hand rolling tobacco(1)
Scale 6: Treatment to help smokers stop	Recording of smoking status in medical notes
	* Legal or financial incentive to record smoking status in all medical notes or patient files(1)
	Brief advice in primary care
	* Family doctors reimbursed for providing brief advice (1)
	Quitline – additive
	* National Quitline or quitlines in all major regions of country (1)
	ADDITIONAL POINT FOR
	* Quitline counsellors answering at least 30 hours a week (not recorded messages) (1)
	Network of smoking cessation support and its reimbursement – one only of
	* Cessation support network covering whole country, free (4)
	* Cessation support network but only in selected areas, e.g., major cities; free (3)
	* Cessation support network covering whole country, partially or not free (3)
	* Cessation support network but only in selected areas, e.g., major cities, partially or not free (2)

Table 1. Continued

Scale	Description
Scale 6: Treatment to help smokers stop	Reimbursement of medications – one only of
	* Medications totally reimbursed or free to users (2)
	* Medications partially reimbursed (1)
Scale 7: Illicit tobacco trade	Ratification of the WHO FCTC Illicit Trade Protocol
	* Track and trace system for tobacco products, fully WHO FCTC Protocol compliant (2)
	* Track and trace system for tobacco products, but not fully WHO FCTC Protocol compliant (1)
Scale 8: Tobacco Industry Interference	A whole range of measures, well enforced, to restrict tobacco industry interference (2)
	Some measures, well enforced, to restrict tobacco industry interference (1)
Scale 9: Ratifying the WHO FCTC	Not ratifying the WHO Framework Convention on Tobacco Control (new) (- 1)

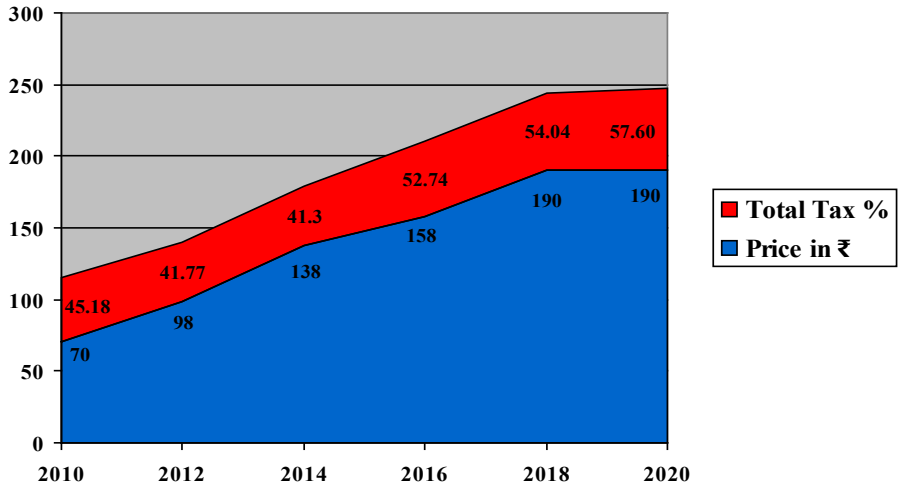

Figure 1. Trends in Price and Percentage Tax of Cigarettes in India (2010-2020)

ensures that 85% of the front and back of the package are covered with pictorial warnings depicting the health hazards of tobacco products [32]. India ranks among the top ten nations that impose stringent labelling norms for tobacco products [33]. Table 2 shows that India scored 10 points on this scale, which is the maximum score for the large pictorial health warning label component.

Scale 6: Treatment to help smokers stop

The mainstay of tobacco cessation treatment is an easily accessible, scientifically sound helpline that can aid tobacco users in overcoming the menace of tobacco. Quitlines, as they are prominently known, can effectively help tobacco users cease their habits through various services, such as professional counselling, information on how to quit, referral services and guidance to go about with self-help.

India possesses a 24X7 national toll-free quitline dedicated to assisting with quitting tobacco habits and addressing related queries. The quitlines are open from 8 am to 8 pm, with Monday as the weekly holiday. However, there is no legal or financial incentive to record smoking status in medical notes or patient files, and family doctors are also not reimbursed for providing brief advice. Since nicotine replacement drugs are now included in the essential medicine list, reimbursement is possible through

Table 2. Tobacco Control Scale Scores for India

Scale	Description	Max score	Score obtained	Percentage achieved
1	Price of cigarettes	30	14	46
2	Smoke free public and work places	22	19	86
3	Spending on public information campaigns	10	2	20
4	Comprehensive bans on advertising and promotion	13	9	69
5	Large pictorial health warning labels	10	10	100
6	Treatment to help smokers stop	10	9	90
7	Illicit tobacco trade	3	1	33
8	Tobacco industry interference	2	1	50
9	Not ratifying the WHO FCTC	-1	0	-
	SCORE	100	65	65

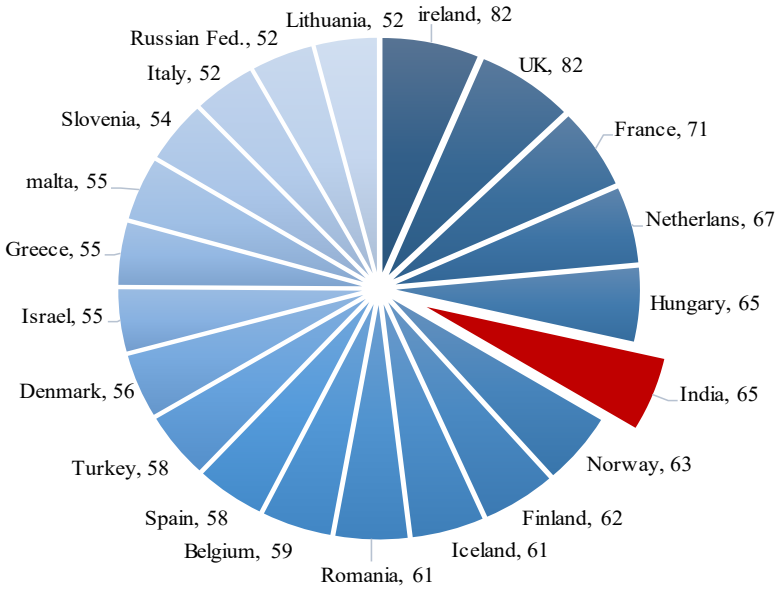

Figure 2. Tobacco Control Scale Scores for Different Countries

insurance providers [34]. Table 2 shows that all these elements ensured that India scored 8 out of 10 with respect to this component.

Scale 7: Illicit tobacco trade

Tobacco tracking and tracing is the technique of locating the production location of a tobacco product and following it all the way to the point of sale. To enable tracking from the time of manufacture until the point at which all taxes have been paid, products are identified with a secure, unique ID. This ID will not only help in tracking illicit tobacco but also determine the exact location from where they wound up on the black market.

India has accessioned the WHO FCTC illicit trade protocol (ITP) on 5 June 2018 [35] to eliminate illicit trade in tobacco products and is in the process of planning to track tobacco products and to curb the illicit trade of tobacco. However, since no track and trace systems for tobacco products are presently in place, India scored only one point out of 3 in this component.

Scale 8: Tobacco Industry Interference

According to the Global Tobacco Industry Interference Index (GGTC index) [36], India stood at 57 in 2021 with respect to the country ranking showing tobacco industry interference, where a score near zero indicates less interference and a score closer to 100 indicates greater interference.

In 2023, India stood at 40 out of 90 countries in the Tobacco industry interference as per the Global center for good governance in tobacco control [37] Because the Indian Health Ministry has adopted a code of conduct restricting the collaboration of officials with tobacco industries and 13 Indian states have made it mandatory to disclose records of interaction with the industry, [28] India scored 1 point in this component.

Scale 9: Ratifying the WHO FCTC

India has ratified the WHO FCTC [12] and therefore did not lose a point in the total score of TCS.

Tobacco control scale score for India

The total score in the TCS places India at 65 points. Table 2 shows that the highest score was achieved with respect to 'large pictorial health warning labels', and lower scores were achieved with respect to 'spending on public information campaigns', 'illicit tobacco trade' and 'price of cigarettes'. Figure 2 shows that the total TCS score of 65 for India can be considered good when compared with the TCS scores of other countries.

Discussion

This study is the first of its kind to quantify the tobacco control policies of India. One of the cornerstones of India's tobacco control policies has been the steady increase in taxation on tobacco products. In India, the total tax on bidis and cigarettes increased from 45.18% in 2010 to 57.6% in 2020, and owing to this consequent increase in taxation, the price of cigarettes in India has also consistently increased [25]. However, a score of 14 with respect to the "price of cigarettes" shows that only 46% of targets have been achieved in this category, hinting at a need for a sharp increase in the price of cigarettes to make them less affordable. Heydari et al. [23] in their report on 21 Eastern Mediterranean (EMR) countries, stated that a total of 8 countries scored more than 14 out of 30 for the "price of cigarettes" and Ponce-Hernandez et al. [24] reported that in Mexico, in 2003, the score achieved for the "price of cigarettes" was 9 points, whereas in 2017, the score increased to 13 because of the substantial price for cigarettes in Mexico.

Joossens et al. [22] in 2022 reported that among 37 European countries, 19 countries scored 14 or more, and the UK, which obtained a score of 30 in 2003, scored 27 in 2021 with respect to the "price of cigarettes". Tobacco taxes are considered effective policy tools for reducing tobacco consumption; however, they are often blamed for the economic burden on low-income households [38]. In

addition, Bafunno et al. [39] in their systematic review, concluded that although the price of cigarettes had a deterrent effect on the initiation of smoking behaviour, it did not play a role in the cessation of the habit. Increasing the price of tobacco products could help prevent young adults from starting the habit.

Article 8 of the WHO Framework Convention on Tobacco Control (WHO-FCTC) requires the complete elimination of tobacco smoke from indoor spaces for the creation of a 100% smoke-free environment [12]. The WHO-FCTC denounces the creation of designated smoking spaces as being ineffective in reducing the harm of secondhand smoke [12]. For these reasons, the TCS also has a maximum score of 22 for total restrictions on smoking in public places, workplaces, cafes, public transport and private vehicles. In 2021, Joossens et al. [22] reported that a complete ban on smoking in public places was imposed in Ireland, Norway, Italy, Malta and Sweden, and both Ireland and the UK achieved high scores of 22.

Heydari et al. [23] reported that among Eastern Mediterranean region countries, Oman and the Islamic Republic of Iran scored higher than other countries for regulations related to smoke free public and work places, with a score of above 10. In 2003, Ponce-Hernandez et al[24] reported that in Mexico, the number of points scored for the component "smoke-free public and work places" was 4 when some restrictions were present regarding smoking in public places. However, over the years, with the added legislation of smoke free comprehensive ban on smoking indoors, at places of work, schools, bars and restaurants, and public transportation, Mexico scored 16 points in 2017 [24].

Although section 4 of the Indian tobacco control policy, COTPA, prohibits smoking in public, it allows smoking in designated spaces or "smoking areas" of certain public places such as restaurants, hotels, and airports [18]. India scored 19 points on this component, and to obtain a maximum score of 22 points, more needs to be done in terms of a complete ban on smoking in public places including in hotels and airports. The provision for a designated, enclosed smoking room under very strict conditions in certain public places [29] does little in promoting a 100% smoke-free indoor space requirement.

India has a full-fledged national-level mass media campaign dedicated to tobacco control. The media campaign is part of the National Tobacco Control Program (NTCP) of India, which was launched in 2007-08 [19] This campaign was reinforced by research that evaluated and pretested it on the target audience. One of the pitfalls of this seemingly successful campaign was that not enough information was available and this could explain why India scored only 2 out of 10 in this component.

In 2021, Joossens et al. [22] reported that although data about spending on public information campaigns were not available for 10 European countries, all the remaining European countries scored 3 or fewer points on this scale, with the exception of Iceland, which scored 8 points. Heydari et al. [23] reported that among the countries in the Eastern Mediterranean Region, the Islamic Republic of Iran had the highest score in relation to budgeting for tobacco control activities, followed by Saudi Arabia and Pakistan, and data were not available for 8 countries.

Ponce-Hernandez et al. [24] reported that in Mexico, public spending on information campaigns scored zero points because no formal evaluation was performed about the tobacco campaigns since essential information was not available. This was a common drawback in most of the studies. Therefore, it is important to plan an evaluation strategy for obtaining data about public spending on information campaigns for tobacco control. An integrated review [39] summarising the impact of mass media campaigns has shown that these campaigns reduce tobacco use, especially when there is sufficient population exposure to the campaign. Studies [40, 41] have reported that mass media campaigns using multiple communication channels had a positive effect on attempts to quit among smokers if carried over for a long period of time.

The Cigarettes and other tobacco products act of India completely prohibits advertisements of tobacco products on television and radio [18]. Additionally, the law also prescribes that an anti-tobacco message or image be presented during or after broadcasting of any visual media product or programme that shows use of tobacco products. The government of India proactively monitors the promotion of tobacco products, which is evident from its recent amendment to the COTPA Act that mandates that health spots, messages and disclaimers showing anti-tobacco warnings be displayed in online curated contents of tobacco products by the publishers of the content [31].

Joossens et al. [22] reported that 22 European countries scored 10 or more whereas among the countries of the EMR [23], 5 countries scored more than 10 and 7 countries scored zero with respect to "comprehensive bans on advertising and promotion". Ponce-Hernandez et al[24] reported that in Mexico, in 2003, there was a partial ban on the radio and television advertising of tobacco products, and the score for this scale was 2 points, whereas with the renewed legislation mandating the complete banning of tobacco advertisements on radio and televisions, bans on sponsorship and indirect advertising and the display of billboards near schools, this scale received a score of 11 points in 2017.

Saffer and Chaloupka [42] have shown that a comprehensive set of tobacco advertising prohibitions could lower tobacco use, whereas a restricted set of prohibitions would have little or no impact. India, scoring 9 points out of a maximum of 13 points, needs to focus on banning the display and advertising of tobacco products at the point of sale. However, sponsorships and contributions by tobacco companies to activities and public events are not restricted in India, providing these companies with the ability to establish a positive public perception [25]. The law is also not clear with respect to surrogate marketing and brand stretching for tobacco products and strong legislation to address these problems is currently essential.

The guidelines for article 11 of the WHO Framework Convention on Tobacco Control (FCTC) [12] uphold well-designed package warnings as an effective means to spread awareness of the adverse effects of tobacco. Studies have shown that stringent health warnings on tobacco products serve as a firm deterrent for new users taking up tobacco products and discourage existing users

from continuing use [43,44]. India's score of 10 on 10 in the TCS score for the "large pictorial health warning labels" component is a remarkable step in the direction of tobacco control. On this scale, India fared way above other countries, as most European countries had a score of 9 for this component [22]. Among the 21 countries of the EMR [23], 13 scored zero and Mexico[24] scored 5 points with respect to warning labels on cigarette packets.

The stringent labelling policy of India has continued to evolve even to this day, with the warning image being changed every 12 months [30]. Although India enforces 85% pictorial coverage on the front and back of the cigarette packaging, the benchmark in this aspect remains set by countries such as Timor-Leste and Turkey, which have the largest warning labels in the world at 92.5% on average of the package front and back [33].

While India scored a relatively high score of 8 on 10 for the component "treatment to help smokers stop", the score for the European countries varied. Countries such as Norway, Estonia, Serbia, and Portugal scored poorly on this front due to scarce assistance for smokers willing to quit [22]. However, among the countries of the EMR [23], the Syrian Arab Republic, Tunisia and Kuwait scored 9 on 10, while Pakistan, Saudi Arabia, Somalia and Yemen scored zero. Mexico [24] scored 10 points on this scale due to the establishment of a national free telephone helpline network, public tobacco cessation units in primary care settings, the addition of clinical units in youth integration centers, the provision of free tobacco cessation programs for young and adult smokers and the addition of cognitive–behavioral therapy to help smokers quit. However, in their study among European countries in 2022, Joossens et al. [22] reported that 16 of the 37 countries scored less than 5 points for the component "treatment to help smokers stop".

Although India provides fully funded nicotine replacement therapy and other medical support to help smokers stop smoking, its availability is limited to only some health centres and hospitals in India. Studies [45-46] have shown that interventions at medical and dental hospitals have immensely helped those trying to quit the tobacco habit. Therefore, for an all-inclusive support to those willing to quit, India needs to uniformly apply the smoking cessation support system across all primary health centres and hospitals.

India scored only one point out of 3 in the component, "illicit tobacco trade", since no track and trace systems for tobacco products were in place. Joossens et al. [22] reported that none of the European countries scored 3 full points with respect to policies targeting the illicit tobacco trade. On the TCS score, most European countries fared poorly for the component "tobacco industry interference" [22]. In India, although there was no national-level policy for restricting interactions with the tobacco industry, the Ministry of Health and Family Welfare introduced a code of conduct for curbing the interference of the tobacco industry in all the departments within its ambit in the year 2020. In addition, 13 Indian states had made it mandatory to disclose records of interactions with the tobacco industry [28]. More efforts need to be directed towards eliminating the interference of the tobacco industry in policy making and limiting its involvement in social projects that portray an ostensibly glorified image of such companies.

Although the WHO FCTC was adopted by the World Health Assembly on 21 May 2003 and entered into force on 27 February 2005, seven countries have not ratified the treaty [47]. India ratified the WHO Framework Convention on Tobacco Control (WHO FCTC) in 2004 and organised the Seventh Session of the Conference of Parties (COP7) in 2016 [48]. India is also a party[35] to the Protocol to Eliminate Illicit Trade in Tobacco Products [15]. In the study by Joossens et al. [22] among the 37 European countries, all except Switzerland, ratified the WHO FCTC, and 22 countries even ratified the Protocol to Eliminate the Illicit Trade in Tobacco Products [22].

Joossens et al. [22] reported that nine countries in Europe had scored a TCS score of 60 points or more, and Ponce-Hernandez et al. [24] reported that Mexico's overall TCS score increased from 24 to 55 between 2003 and 2017. Heydari et al. [23] reported that among the countries of the EMR, three countries scored higher than 50 points. A score of 65 out of 100 was obtained for India's tobacco control policies on the TCS revealing areas of policy development that need evaluation and improvements. Although India fared well on most of the scales, areas such as the price of cigarettes, spending on public information campaigns and the illicit tobacco trade need greater scrutiny for effective tobacco control.

In conclusion, despite the potential biases that might result due the dependence on reports from government sources, this study showed that, with a total TCS score of 65 points, India might be adopting the right path towards tobacco control, although much still needs to be done. There is need for a sharp increase in the price of cigarettes to make them less affordable and a complete elimination of tobacco smoke from indoor spaces by creation of a 100% smoke-free environment. India also needs to make data about public spending on information campaigns for tobacco control available and accessible and focus on banning the display and advertising of tobacco products at the point of sale.

Sponsorships and contributions by tobacco companies to activities and public events needs to be restricted and strong legislation enacted to counter surrogate marketing and brand stretching for tobacco products. In addition, smoking cessation support systems should be applied across all primary health centres and hospitals. Finally, illicit tobacco trade needs to be tackled rigorously by effective track and trace systems for tobacco products and the interference of the tobacco industry in policy making needs to be totally eliminated. This study attempted to provide evidence for policy-makers about the progress and challenges of the tobacco control policy of India. These scores help in determining the status of legislation and their improvements and can act as a stimulus for positive change, thus making the tobacco control policy more robust and effective. Strong tobacco control legislation and its equally robust implementation is an affirmative step in achieving the vision of the WHO-FCTC and empowering the world towards being tobacco free.

Author Contribution Statement

Kavery Chengappa, Ashwini Rao made substantial contributions to the conception or design of the work; Kavery Chengappa, Ashwini Rao, Ramya Shenoy contributed to the acquisition, analysis, and interpretation of data; Kavery Chengappa, Ashwini Rao drafted the work and Ramya Shenoy , Mithun Pai BH, Praveen Jodalli, Avinash BR revised it critically for important intellectual content; All authors approved the version to be published and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

Acknowledgements

Approval

It was approved by the Research Committee of the institution and is not a part of an approved student thesis.

Data availability

Availability of data has been mentioned in the materials and methods section of this article under sources of data.

Registration of the study

The study has not been registered in any registering dataset, since it is secondary research.

Conflict of interest

The authors declare no conflicts of interest.

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