A comparative study of tobacco control scale score in the Eastern Mediterranean Region countries

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Abstract

Background: The tobacco control scale (TCS) score is used widely in European countries to evaluate the adoption of anti-tobacco policies by countries, however, data on the adoption of tobacco control programmes in the Eastern Mediterranean Region (EMR) are limited to a 2009 survey.

Aim: To compare the TCS score for measuring national tobacco control programmes in the EMR countries in 2009 and 2021.

Methods: This cross-sectional survey compared data from 21 EMR countries on 6 major indicators, including the price of cigarettes, tobacco smoke-free public places, national budget for tobacco control activities, ban on tobacco advertising, health warning labels on tobacco packets, and support for treatment of tobacco dependence. The TCS scores at the country level in 2009 were extracted from a previous study. We then calculated the TCS score in 2021 for the same countries using the WHO report on the global tobacco epidemic 2021 and the World Bank data for 2020.

Results: The average TCS score (standard deviation) for EMR countries increased from 29.7 (16.8) in 2009 to 40.7 (17.3) in 2021. The highest TCS score (83.0) was reported in Islamic Republic of Iran, followed by Yemen (72.8) and Lebanon (62.0). Five countries (Djibouti, Syrian Arab Republic, Tunisia, Bahrain, and Oman) scored less than 30. Health warning labels, smoke-free public places, and tobacco control budgets as a percentage of Gross Domestic Product per capita had all increased, but tobacco prices and cessation treatments did not improve over the past decade.

Conclusion: Tobacco control policies have been implemented and improved in most EMR countries, but there is room for further improvement. Tobacco pricing and taxation, national tobacco control program budgets, and cessation treatments require more attention.

Keywords: Tobacco, tobacco control scale, tobacco advertising, cigarette, smoke-free, Eastern Mediterranean Region

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Introduction

Tobacco smoking is a significant public health issue globally, causing millions of deaths annually and imposing a massive financial burden on healthcare systems (*1,2*). The problem is particularly acute in the Middle East, where the popularity of traditional tobacco products like water-pipes and the prevalence of new tobacco products, such as e-cigarettes, have intensified the tobacco epidemic (*3,4*). In response, several initiatives, including the World Health Organization Framework Convention on Tobacco Control, have been established to combat the problem in the Eastern Mediterranean Region (EMR) (*5*). However, emergencies such as civil wars, economic crises and political reforms have reduced the priority given to tobacco control programmes for decision-makers in some EMR countries (*6,7*).

Despite the political and economic challenges, most EMR countries have adopted regional strategies to reduce tobacco use, and according to the WHO report 2019, 70% of people in the EMR are protected by at least 2 MPOWER measures (*8,9*). However, to ensure effective implementation of tobacco control policies, national action plans and routine evaluation of tobacco control programmes are essential (*5*). The tobacco control scale (TCS) score is a valuable tool for evaluating the adoption of anti-tobacco policies, including tobacco price and affordability, tobacco advertisement bans, smoke-free public places, health warning labels on cigarette packets, smoking cessation treatment availability, and national tobacco control budgets (*10*).

Although the TCS is widely used in European countries, data on the adoption of tobacco control programmes in the EMR are limited to a 2009 survey (*11*). This study aimed to update the previous report and highlight the adoption of tobacco control programmes in the EMR at the national and regional levels over the past decade.

Material and methods

We performed a cross-sectional study to compare the adoption of tobacco control policies in 21 EMR countries in 2009 and 2021. We used the TCS score designed by Jossens and Raw as the proxy for the tobacco control programme (*10*). The TCS questionnaire consists of 50 items that assess 6 major indicators of tobacco control policies, including the prices of cigarettes, tobacco smoke-free public places, the national budget for tobacco control activities, a ban on tobacco advertising, health warning labels on tobacco packets, and support for the treatment of tobacco dependence. The TCS score ranges from 0 to 100, and the questionnaire was validated in European countries in 2005 (*10*). The TCS score at the country level in 2009 was extracted from a previously published study (*11*). We also calculated the TCS score in 2021 for the same countries using data from the WHO report on the global tobacco epidemic 2021 (*1*), World Bank data (2020) (*12*) and the same approach as Heydari et al (*11*). We described calculation and maximum score of each indicator as follows:

- *Price of cigarette (Max score = 30):* The researchers extracted the prices of a packet of 20 Marlboro® brand cigarettes and 20 most popular local brand cigarettes, then divided the prices by the Gross Domestic Product (GDP) per capita (Price of 20 cigarettes/GDP per capita × 10 000). The country with the highest price ratio received 15, followed by 14, 13, 12, etc.
- *Tobacco smoke-free public places (Max score = 22):* The score of legislation for tobacco smoke-free public places, including workplaces, cafes, restaurants, and other public places, was multiplied by the degree of enforcement of these regulations in a specific country. If the enforcement factor for a given country was more than 8, the country received the highest score in that subdomain. If there was a partial commitment, the country was categorized as having meaningful restrictions but with enforcement scores less than 8. If the enforcement score was zero, the country was categorized in the group of having legislation but not enforced. We assigned a score of 0 to all countries that had no legislation in any subdomains of the smoke-free public places policy.
- *National budget for tobacco control (Max score = 15):* The national budget allocated for tobacco control was divided by the GDP per capita at the national level. The country with the highest ratio was awarded 15 points, followed by 14 for the next country, and so on.
- *Ban on tobacco advertisement (Max score = 13):* The overall score for each EMR country regarding a ban on tobacco advertisement on television, outdoor advertising, print media, indirect advertising, point of sale advertising, cinema advertising, sponsorship, internet advertising, and radio advertising was multiplied by the degree of enforcement of this legislation in that country.
- *Health warning labels on tobacco products (Max score = 10):* EMR countries were scored regarding this policy based on the size, rotation, colour, and picture of warning labels on tobacco products.
- *Support for the treatment of tobacco dependence (Max score = 10):* Countries were scored based on the availability of nicotine substitutes, Bupropion, tobacco cessation primary care, smoking hospitals, smoking cessation support available from health professionals, and tobacco cessation communities.

Statistical analysis

Statistical analysis was performed using Microsoft Excel (Ver 2016). The TCS score for each country in EMR in 2021 was calculated as the sum of their scores in the 6 investigated policies. The scores for each policy were also calculated for each country and compared to their scores in 2009. No further statistical analysis was reported in the methods section.

Results

The average TCS score (SD) for the EMR countries in 2009 was 29.7 (16.8) and it increased to 40.7 (17.3) in 2021 (Table 1). The highest TCS score was observed in the Islamic Republic of Iran (83.0), followed by Yemen (72.8) and Lebanon (62.0). The TCS score was less than 30 in 5 countries, including Tunisia (16.0), Djibouti (18.0), Syrian Arab Republic (18.0), Bahrain (26.6), and Oman (29.0). TCS score declined in 6 countries, including Tunisia (43.2 in 2009 versus 16.0 in 2021), Syrian Arab Republic (48.0 in 2009 versus 18.0 in 2021), Djibouti (25.7 in 2009 versus 18.0 in 2021), Egypt (51.7 in 2009 versus 47.0 in 2021), and Kuwait (37.0 in 2009 versus 30.0 in 2021) while it increased in the other countries. The greatest improvement in TCS score was observed in Lebanon, where the overall TCS score increased by 44.0 points and reached 62.0 in 2021. Libya, Somalia, Yemen, Saudi Arabia, and United Arabic Emirates followed (Table 1) (Figure 1).

We also separately compared the 6 tobacco control policy indicators in all 21 countries in the EMR. The average price of a packet of cigarettes increased from US$ 1.7 in 2009 to US$ 4.6 in 2021, with Yemen, Somalia, Lebanon, and Sudan having the highest prices. However, high-income countries such as Qatar, Kuwait, Bahrain, UAE, and Saudi Arabia had the lowest prices per GDP. (Supplementary Table 1) (Table 1).

The adoption of smoke-free public places policy increased from an average score of 2.7 in 2009 to 6.6 in 2021, with Iran having the highest score, followed by Saudi Arabia, Lebanon, Libya, Yemen, and Pakistan. In 6 counties, including Bahrain, Oman, Qatar, Somalia, Sudan, and Tunisia, the score for this policy was zero in 2021, indicating no legislation in this regard (Supplementary Table 2) (Table 1).

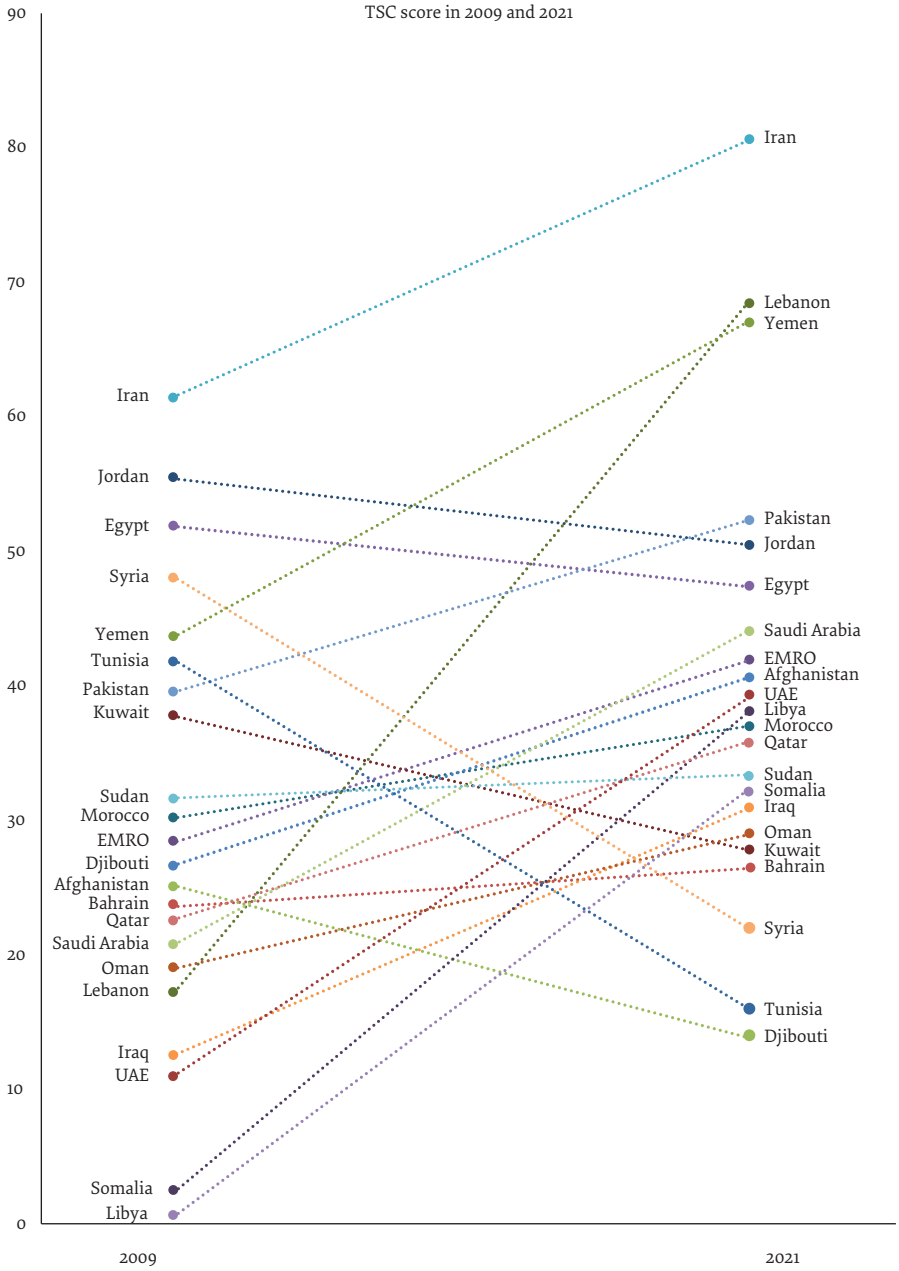
The average tobacco control budgets for the EMR countries increased from US$ 3659.5 in 2009 to US$ 4829.8 in 2021. Islamic Republic of Iran had the highest budget per GDP for tobacco control, followed by

Table1 Overall TCS score and its subdomains including prices of cigarette, tobacco smoke-free public places, national budget for tobacco control activities, ban on tobacco advertising, health warning labels on tobacco packets, and support for tobacco cessation service in EMR countries, 2009 and 2021

Country	Cigarette price		Smoke-free places		Tobacco control budgets		Ban on advertising		Health warning labels		Cessation service		TSC score	
	2009	2021	2009	2021	2009 (score)	2021 (score)	2009	2021	2009	2021	2009	2021	2009	2021
Afghanistan	26	23	0	10	–	–	0	12.0	0	1	1	1	26.0	47.0
Bahrain	13	3	4.2	0	–	–	1.2	9.6	0	10	5	4	23.4	26.6
Djibouti	–	0	0	4	233.7 (4)	85.0 (4)	11.7	0	8	10	2	0	**25.7**	**18.0**
Egypt	17	12	4.2	6	578.2 (9)	840.6 (8)	10.5	11.0	8	10	3	0	**51.7**	**47.0**
Islamic Republic of Iran	6	18	11.0	22	43478.3 (15)	61932.3 (15)	13.0	12.0	10	10	6	6	61.0	83.0
Iraq	11	4	0	1	–	–	0	11.5	0	9	1	3	12.0	28.5
Jordan	18	17	5.6	6	2592.0 (11)	2798.9 (11)	10.5	9.6	7	9	3	4	55.1	56.6
Kuwait	2	2	9.0	2	395.6 (8)	3192.1 (12)	9.0	0	0	10	9	4	**37.0**	**30.0**
Lebanon	7	25	0	9	289.2 (7)	645.3 (7)	0	13.0	0	6	4	2	18.0	62.0
Libya	–	16	1.4	10	–	–	0	12.0	0	5	0	1	1.4	44.0
Morocco	24	19	0	9	–	–	0	6.5	0	1	6	5	30.0	40.5
Oman	2	3	11.2	0	389.0 (6)	252.8 (5)	0	10.0	0	10	1	1	20.2	29.0
Pakistan	25	12	2.8	10	8091.0 (13)	1697.0 (10)	0	8.5	0	10	0	1	40.8	51.5
Qatar	2	2	0	0	104.0 (3)	1077.3 (9)	8.0	12.0	5	10	5	4	23.0	37.0
Saudi Arabia	4	5	0	17	13471.8 (14)	24167.1 (14)	3.5	0	0	10	0	6	21.5	51.0
Somalia	–	26	1.2	0	–	–	0	6.4	0	0	0	0	1.2	32.4
Sudan	24	22	0	0	290.5 (5)	371.1 (6)	0.9	0	0	4	1	1	30.9	33.0
Syrian Arab Republic	12	0	0	2	4829.8 (12)	59.7 (3)	12.0	11.0	3	2	9	0	**48.0**	**18.0**
Tunisia	24	7	0	0	–	–	9.6	1.0	1	3	9	5	**43.2**	**16.0**
UAE	2	2	4.2	6	–	–	4.0	6.5	0	10	1	6	11.2	30.5
Yemen	21	30	2.8	10	2134.9 (10)	4308.3 (13)	6.5	8.8	3	10	0	1	43.2	72.8
EMRO	11.4	11.8	2.7	6.6	3659.5	4829.8	4.8	7.7	2.1	7.1	3.1	2.6	29.7	40.7

The values in bold letters indicate the countries that reported a decline in TCS score during the past decade.
TCS subdomains: prices of cigarettes; tobacco-smoke-free public places; national budget for tobacco control activities; ban on tobacco advertising; health warning labels on tobacco packets; and support for treatment of tobacco dependence.
Abbreviations: TCS = Tobacco Control Scale; UAE = United Arab Emirates.

Figure 1 Tobacco Control Scale score in the EMRO region for each country in 2009 and 2021 (Each colour represents the TCS score of one specific country in 2009 and 2021).



Saudi Arabia and Yemen. Tobacco control budgets were increased in all other countries in 2021 compared with 2009 except in the Syrian Arab Republic and Djibouti. For 7 countries, including Afghanistan, Bahrain, Iraq, Libya, Morocco, Somalia, Tunisia, and UAE, there was no information on tobacco control budgets in 2021 and 2009 (Supplementary Table 3) (Table 1).

The ban on advertisement policy had a significant improvement, with the average score increasing from 4.6 in 2009 to 7.7 in 2021. Lebanon reported the maximum score for this policy. Islamic Republic of Iran (12.0), Libya (12.0), Qatar (12.0), Afghanistan (12.0), Iraq (11.5), Syrian Arab Republic (11.0), and Egypt (11.0) were the other countries with a high score on this policy. Kuwait, Saudi Arabia, Djibouti, and Sudan had the weakest performance in this regard (Supplementary Table 4) (Table 1).

There was a dramatic improvement in the health warning labels policy, with the average score increasing from 2.1 in 2009 to 7.1 in 2021. Eleven countries, including Bahrain, Djibouti, Egypt, Islamic Republic of Iran, Kuwait, Oman, Pakistan, Qatar, Saudi Arabia, UAE, and Yemen, adopted this policy entirely in 2021. Somalia, Afghanistan, Morocco, Syria Arab Republic, Tunisia, and Sudan had the worst performance. We observed improvements in this policy adoption in all EMR countries in 2021 except in the Syrian Arab Republic and Somalia (Supplementary Table 5) (Table 1).

Tobacco cessation treatment was the only policy with a downward trend during the study period, where

the policy score decreased from 3.1 in 2009 to 2.6 in 2021. Iran, Saudi Arabia, UAE, and Tunisia were the leading countries on this policy, attaining almost half the maximum score. Djibouti, Egypt, Somalia, and the Syrian Arab Republic scored zero. The highest reduction was observed in Syrian Arab Republic, where the policy score decreased to 9 and reached zero. Saudi Arabia had the most considerable improvement in this policy adoption. Iraq, Libya, Pakistan, UAE, and Yemen were the other countries with minor improvements (Supplementary Table 6) (Table 1).

Discussion

This study aimed to compare the TCS score as a measure of national tobacco control programmes in EMR countries in 2009 and 2021. We tried to highlight changes in the adoption of tobacco control policies on national and regional scales over the last decade and found considerable improvements in the adoption of tobacco control policies in the region. Lebanon, Somalia, Libya, UAE, Yemen, and Saudi Arabia had the most significant improvements in this regard. Tunisia, Syrian Arab Republic, Djibouti, Kuwait, and Egypt showed the worst performance, with decreased TCS scores over the study period. These findings are supported by a previous study that evaluated the trend of the MPOWER package score in EMR countries (*13*). The TCS score for 6 countries, including Pakistan, Lebanon, Jordan, Yemen, Saudi Arabia, and Iran, was over 50 in 2021, while only Islamic Republic of Iran had over 50 in the 2009 survey, indicating significant improvements in the adoption of anti-tobacco policies. However, there was a considerable gap compared to the reported values from European countries, where 22 countries scored over 50 points in 2019 (*14*). When compared with the latest TCS score report in Europe, we found that the TCS score in EMR countries was mostly comparable to eastern European countries like Ukraine (46), Bulgaria (44), Serbia (38), and Bosnia & Herzegovina (25) (*15*).

The most significant improvement was in health warning labels on cigarette packets; most countries in the region implemented them thoroughly. It is a fast and cheap policy for governments and has no cost to taxpayers (*16*). It imposes all direct and indirect costs on tobacco producers, and fewer monitoring procedures are required (16). Hillamo et al have argued that low- and middle-income countries with limited capacity are more likely to implement health warning labels (*17*). After South East Asia, the EMR is ranked as the second region in health warnings on cigarette packs (*18*).

Tobacco control budgets were the other policies that showed considerable improvements overall. In 8 of the 21 investigated countries, there was no information about anti-tobacco programme budgets, and in some of them, like Egypt, Lebanon and Sudan, the allocated financial resources were too little. A comparison of the allocated budgets for tobacco control in EMR and Europe showed a significant difference (*14*). The tobacco control budget in USA had reached US$ 720 in 2021 and it was significantly higher than the allocated national budgets for tobacco control in the EMR countries (*19*). Less development and lower health expenditure due to lower GDP, along with issues such as civil wars in some Middle Eastern countries, are possibly the main reasons that countries avoided spending more money on anti-tobacco activities (*5*). It is worth noting that such emergencies and political instability provided a unique opportunity for the tobacco industry to increase the illicit trade of tobacco and to oppose tobacco control policies (*20*).

Ban on tobacco advertisement and smoke-free public places had significant improvements, although compliance was low. In many countries, there were comprehensive rules and regulations regarding the ban on tobacco advertisements and tobacco smoking was already prohibited in public places (*13*). However, in most of the investigated countries, action on these rules is mostly lacking. The tobacco industry's new tactics, such as using influencers and social media should also be considered as tobacco industry interference to violate this rule. They have tried to influence the policymaking process by funding research and policy forums in some EMR countries such as Pakistan (*21*). According to the WHO report on the global tobacco epidemic 2021, compliance with tobacco smoke-free public places policy was zero in 10 countries, including Bahrain, Djibouti, Jordan, Kuwait, Oman, Qatar, Somalia, Sudan, Syrian Arab Republic, and Tunisia. Tobacco smoke-free public places were only written words (*1*), and in some pioneer countries like Islamic Republic of Iran, these rules were easily violated, and cigarettes and water-pipe are smoked in public places such as cafés or family gatherings (*22*).

Support for the treatment of tobacco dependence was the only policy that experienced no improvement over the past decade and its average score decreased. The overall score for this scale was 3.1 in 2009 and it decreased to 2.6 in 2021. The reported score for treatment in the EMR was pretty low in comparison with European countries (*23*). According to the WHO tobacco report, most EMR countries did not report any data regarding tobacco cessation support. There were limited financial resources to cover the costs of such treatments (only 6 countries had full financial coverage) in most of the EMR countries, and access to hospitals or health professionals was limited (*1*). Establishing and developing tobacco dependence cessation centres requires financial resources and trained healthcare staff. Allocated budgets for tobacco control in the EMR countries were too little and did not allow countries and policymakers to establish such money and time-consuming interventions.

Poor development of community-based smoking cessation programmes should be noted as one of the other neglected parts of tobacco cessation services in the EMR countries (*1*) although there was enough evidence regarding the effectiveness of community-based approaches in tobacco control and tobacco cessation (*24*).

The most disappointing situation in tobacco control policies is the cigarette prices which have remained

almost constant during the study period. Although increasing taxes and the prices of tobacco products is the most cost-effective way to reduce the tobacco use, especially among low-income groups and youth, cigarette price per GDP per capita had increased over the past decade in only five countries (Bahrain, Iran, Oman, Sudan, and Yemen). Cigarette prices in the EMR countries are lower than in high-income European countries and the USA (*25*). In such countries, an increase in cigarette price is due to increased cigarette taxation, whereas in some Middle Eastern countries such as the Islamic Republic of Iran, price increases were due to economic crises and declining GDP per capita.

As already indicated, higher cigarette prices are associated with decreased cigarette smoking (*25*). However, the experience of countries like Islamic Republic of Iran showed that implementation of tobacco taxation programmes was unsuccessful (*11*). In 2015 Islamic Republic of Iran implemented a 14.0% tobacco tax increase and the tax on the retail price of the most widely sold brands of cigarettes reached 20% (*26*). However, this was still lower than the 70% tax on the retail price of tobacco in developed countries. Inefficient formula for calculating tobacco tax, the inability of the tax administration to collect tobacco tax, and tobacco smuggling were the main reasons for the inefficient tobacco taxation policies in Islamic Republic of Iran (*27*).

Our findings illustrate a significant opportunity to increase the effectiveness of anti-tobacco activities in all EMR countries by applying more vigorous policies on the net prices of cigarettes and tobacco taxation. However, it is important to highlight the role of the tobacco industry in delaying taxation; there is some evidence regarding their efforts to postpone tobacco taxation increase in some Gulf Cooperation Council countries (*28*).

There are also several reports of political lobbying by the tobacco industry to make some EMR countries to send non-health professionals as representatives to the WHO Framework Convention on Tobacco Control (FCTC) Conference of Parities (*29*). The main purpose of the tobacco industry is to represent tobacco as a business with a huge financial impact and benefits rather than a health hazard (*30*). Corporate social responsibility is their leading strategy to contact senior officials in the EMR and it has been successful in several countries (*30*). However, there are promising examples from Islamic Republic of Iran and Saudi Arabia as the leading countries in the region adhering to the WHO FCTC Article 5.3 guideline that prohibits tobacco companies from participating in social responsibility activities or issued regulations restricting such communication between local officials and tobacco industry (*31*).

Strengths and limitations of the study

This study provides valuable information about the performance of EMR countries in adopting tobacco control policies during the past decade. Using a valid tool, it shows the strengths and limitations of anti-tobacco activities at national and regional levels. However, some limitations must be considered in interpreting our data. Incomplete data, especially data regarding national budgets and cigarette prices in some countries like Afghanistan, Syrian Arab Republic, Somalia, and Sudan was the main limitation of the study. Also, TCS could not measure the implementation of tobacco control policies in the real world and is only a proxy of tobacco control policy adoption in country legislation.

Conclusion

The adoption of tobacco control policies has improved over the past decade, however, there is still room for further improvements. Neglected policies in the tobacco control programmes of EMR countries include tobacco product prices and taxes, budget allocation for national tobacco control programmes, and treatment for tobacco cessation. Vigorous monitoring intervention is necessary regarding other MPOWER policies, such as prohibition of tobacco advertisements and establishment of smoke-free public places, that suffer from low compliance. Such interventions could lead to greater improvements in the implementation and effectiveness of tobacco control policies in the region.

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Étude comparative du score sur l'échelle de lutte antitabac dans les pays de la Région de la Méditerranée orientale

Résumé

Contexte : Le score sur l'échelle de lutte antitabac est un indicateur largement utilisé dans les pays européens pour évaluer la mise en œuvre de politiques dans ce domaine. Cependant, les données sur l'adoption de tels programmes dans les pays de la Région de la Méditerranée orientale se limitent à une enquête datant de 2009.

Objectif : Comparer les scores sur l'échelle de lutte antitabac afin d'évaluer les programmes nationaux dans les pays de la Région de la Méditerranée orientale en 2009 et 2021.

Méthodes : La présente enquête transversale a comparé les données provenant de 21 pays de la Région de la Méditerranée orientale pour six indicateurs principaux, dont le prix des cigarettes, les espaces publics non-fumeurs, le budget national consacré aux mesures de lutte antitabac, l'interdiction de la publicité en faveur du tabac, les mises en garde sanitaires illustrées sur les paquets de cigarettes et l'appui au traitement de la dépendance au tabac. Les scores sur l'échelle de lutte antitabac au niveau national pour l'année 2009 ont été extraits d'une précédente étude. Nous avons ensuite calculé le score sur l'année 2021 pour les mêmes pays en utilisant le rapport de l'OMS sur l'épidémie mondiale de tabagisme paru en 2021 et les données de la Banque mondiale pour 2020.

Résultats : En 2009, le score moyen sur l'échelle (écart type) dans les pays de la Région de la Méditerranée orientale a augmenté passant de 29,7 (16,8) en 2009 à 40,7 (17,3) en 2021. Le score le plus élevé a été signalé en République islamique d'Iran (83,0), suivi du Yémen (72,8) et du Liban (62,0). Il était inférieur à 30 dans cinq pays, à savoir Bahreïn, Djibouti, Oman, la République arabe syrienne et la Tunisie. Le nombre de mises en garde sanitaires au sein des espaces publics non-fumeurs et les budgets consacrés à la lutte antitabac en pourcentage du produit intérieur brut par habitant ont tous augmenté, alors qu'aucune amélioration n'a été constatée concernant l'augmentation des prix du tabac et les traitements du sevrage tabagique au cours de la dernière décennie.

Conclusion : Les politiques relatives à lutte antitabac ont été mises en œuvre et améliorées dans la plupart des pays de la Région de la Méditerranée orientale, mais des améliorations sont encore possibles. La tarification et la taxation du tabac, les budgets consacrés aux programmes nationaux de lutte antitabac et aux traitements du sevrage tabagique doivent faire l'objet de davantage d'attention.

دراسة مقارنة للدرجات التي أحرزتها بلدان إقليم شرق المتوسط حسب مقياس مكافحة التبغ

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الخلاصة

الخلفية: تُستخدم درجة مقياس مكافحة التبغ على نطاق واسع في البلدان الأوروبية لتقييم اعتماد البلدان لسياسات مكافحة التبغ، غير أنَّ بيانات اعتماد برامج مكافحة التبغ في إقليم شرق المتوسط تقتصر على مسح أُجريَ في عام 2009.

الأهداف: هدفت هذه الدراسة الى المقارنة بين درجات مقياس مكافحة التبغ بهدف قياس البرامج الوطنية لمكافحة التبغ في بلدان إقليم شرق المتوسط بين عامَي 2009 و2021.

طرق البحث: قارن هذا المسح المقطعي بين البيانات الواردة من 21 بلدًا في إقليم شرق المتوسط بشأن 6 مؤشرات رئيسية، بما فيها أسعار السجائر، والأماكن العامة الخالية من دخان التبغ، والميزانية الوطنية لأنشطة مكافحة التبغ، وحظر الإعلان عن التبغ، ووضع الملصقات التحذيرية الصحية على عبوات التبغ، ودعم علاج الاعتماد على التبغ. واستُخرجت درجات مقياس مكافحة التبغ على المستوى القُطري في عام 2009 من دراسة سابقة. ثم حسبنا درجة مقياس مكافحة التبغ في عام 2021 للبلدان نفسها باستخدام تقرير منظمة الصحة العالمية عن وباء التبغ العالمي لعام 2021 وبيانات البنك الدولي لعام 2020.

النتائج: بلغ متوسط درجات مقياس مكافحة التبغ (الانحراف المعياري) في بلدان إقليم شرق المتوسط 29.7 (16.8) في عام 2009. وارتفع إلى 40.7 (17.3) في عام 2021. ورُصِدت أعلى درجة لمقياس مكافحة التبغ في إيران (83.0)، يليها اليمن (72.8) و لبنان (62.0). وكانت الدرجة أقل من 30 في 5 بلدان، منها البحرين وجيبوتي وعُمان وسوريا وتونس. وزادت خلال هذه المدة الملصقات التحذيرية الصحية على عبوات السجائر والأماكن العامة الخالية من دخان التبغ وميزانية مكافحة التبغ لكل نصيب فردي من الناتج المحلي الإجمالي، في حين لم يحدث أي تحسُّن في زيادة أسعار التبغ وعلاج الإقلاع عن تعاطي التبغ على مدار العقد الماضي.

الاستنتاجات: لقد تم تطبيق وتحسن سياسات مكافحة التبغ في معظم بلدان اقليم شرق المتوسط ولكن هناك مجال لمزيد من التحسن. ان الأسعار والضرائب على التبغ وميزانيات برامج مكافحة التبغ وعلاجات التوقف عن التدخين تستحق مزيدا من الاهتمام

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Supplementary Table 1 Average retail prices for premium and the cheapest 20-cigarette packs in the EMR by country, 2021

Country	Price (US$)		GDP per capita	Points		Price score		Total score
	Premium	Cheapest		Premium	Cheapest	Premium	Cheapest	
Afghanistan	2.21	0.26	516.700	42.8	5.0	14	9	23
Bahrain	6.12	2.13	22,232.000	2.8	1.0	1	2	3
Djibouti	No data	No data	3,425.700	–	–	0	0	0
Egypt	2.7	1.04	3,876.000	7.0	2.7	6	6	12
Iran	4.76	1.19	2,756.700	17.3	4.3	10	8	18
Iraq	2.54	0.42	5,048.400	5.0	0.8	3	1	4
Jordan	3.38	2.25	4,405.800	7.7	5.1	7	10	17
Kuwait	2.78	0.98	24.811.800	1.1	0.4	1	1	2
Lebanon	6.3	1.66	4.670.400	23.6	6.2	13	12	25
Libya	12.28	1.45	6,018.400	20.4	2.4	11	5	16
Morocco	3.95	2.03	3,496.800	11.3	5.8	8	11	19
Oman	5.72	1.17	16,439.300	3.5	0.7	2	1	3
Pakistan	1.07	0.48	1,537.900	7.0	3.1	5	7	12
Qatar	6.04	2.47	61,276.000	1.0	0.4	1	1	2
Saudi Arabia	7.47	4.0	23,585.900	3.2	1.7	1	4	5
Somalia	0.99	0.49	445.800	22.2	11.0	12	14	26
Sudan	1.27	0.55	764.300	16.6	7.2	9	13	22
Syria	No data	No data	1,256.600	–	–	0	0	0
Tunisia	2.66	0.62	3,924.300	6.8	1.6	4	3	7
UAE	5.72	2.31	36.284	1.6	0.6	1	1	2
Yemen	9.59	1.4	690.800	138.8	20.3	15	15	30
Max score	–	–	–	–	–	15	15	30

Price of packet of 20 Marlboro® brand cigarettes and 20 most popular local brand cigarettes. Source: Gross domestic product (GDP) per capita. Source: World Bank, 2021. Price of 20 cigarettes/GDP per capita × 10 000. Country with highest price ratio receives 15, followed by 14, 13, 12, etc. Prices are in US$ at 2020 official exchange rates.

Supplementary Table 2 Public places with smoke-free legislation in the EMR by country, 2021

Country	Workplaces			Cafes and restaurants			Educational and governmental places			Public transport			Total
	Policy	Enforcement	Score	Policy	Enforcement	Score	Policy	Enforcement	Score	Policy	Enforcement	Score	
Afghanistan	Yes	5	4	Yes	5	4	Yes	3	1	Yes	7	1	10
Bahrain	No	0	0	No	0	0	No	0	0	No	0	0	0
Djibouti	Yes	0	2	Yes	0	2	Yes	0	0	Yes	0	0	4
Egypt	Yes	0	2	Yes	0	2	Yes	3	1	Yes	7	1	6
Iran	Yes	10	10	Yes	10	8	Yes	10	2	Yes	10	2	22
Iraq	No	0	0	No	0	0	No	0	0	Yes	3	1	1
Jordan	Yes	0	2	Yes	0	2	Yes	5	1	Yes	3	1	6
Kuwait	Yes	0	2	No	0	0	Yes	0	0	Yes	0	0	2
Lebanon	Yes	5	4	Yes	5	4	Yes	9	2	Yes	0	0	9
Libya	Yes	3	4	Yes	3	4	Yes	7	1	Yes	2	1	10
Morocco	Yes	5	4	Yes	5	4	Yes	5	1	No	0	0	9
Oman	No	0	0	No	0	0	No	0	0	No	0	0	0
Pakistan	Yes	5	4	Yes	5	4	Yes	5	1	Yes	3	1	10
Qatar	No	0	0	No	0	0	No	0	0	No	0	0	0
Saudi Arabia	Yes	8	10	Yes	8	4	Yes	8	2	Yes	5	1	17
Somalia	No	0	0	No	0	0	No	0	0	No	0	0	0
Sudan	No	0	0	No	0	0	No	0	0	No	0	0	0
Syria	No	0	0	No	0	0	Yes	4	1	Yes	7	1	2
Tunisia	No	0	0	No	0	0	No	0	0	No	0	0	0
UAE	Yes	0	2	Yes	0	2	Yes	9	2	Yes	0	0	6
Yemen	Yes	4	4	Yes	5	4	Yes	5	1	Yes	3	1	10
Max score	Yes	10	10	Yes	10	8	Yes	10	2	Yes	10	2	22.0

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 ventilated, designated smoking rooms, enforced = 6; meaningful restrictions, enforced = 4; legislation, but not enforced = 2. Cafes and restaurants (one only of): complete ban, enforced = 8; complete ban, but with closed, ventilated, designated smoking rooms, enforced = 6; meaningful restrictions, enforced = 4; legislation, but not enforced = 2. Public transport and other public places (additive): complete ban in domestic trains, without exceptions = 1; complete ban in other public transport, without exceptions = 1; complete ban in educational, health, government and cultural places, without exceptions = 2 OR ban in educational, health, government and cultural places, but with designated smoking areas or rooms = 1.

Full number for full compliance, Partial compliance categorized as meaningful restrictions, No compliance categorized as legislation, but not enforced, and No legislation scored zero.

Total = Sum of domain scores: WHO report on the global tobacco epidemic 2021

Supplementary Table 3 National budgets for tobacco control activities in the EMR by country, 2021

Country	National budget (US$)	GDP per capita (US$)	Points	Total score
Afghanistan	–	516.700	0	0
Bahrain	–	22,232.000	0	0
Djibouti	2,912	3,425.700	85.0	3
Egypt	30,000	3,876.000	773.9	8
Iran	1,500,000	2,756.700	54,412.8	15
Iraq	–	5,048.400	0	0
Jordan	119,850	4,405.800	2,720.2	11
Kuwait	792,000	24.811.800	3,192.1	12
Lebanon	30,000	4.670.400	642.3	7
Libya	–	6,018.400	0	0
Morocco	–	3,496.800	0	0
Oman	32,000	16,439.300	194.6	5
Pakistan	20,160	1,537.900	1,310.8	10
Qatar	540,000	61,276.000	8,81.2	9
Saudi Arabia	4,860,000	23,585.900	20,605.5	14
Somalia	–	445.800	0	0
Sudan	2,208	764.300	288.9	6
Syria	796.0	1,256.600	63.3	3
Tunisia	–	3,924.300	0	0
UAE	–	36.284	0	0
Yemen	35,500	690.800	5,138.9	13
Max score	–	–	–	15

Tobacco control spending by the government. Source: MPOWER, 2021. bGross domestic product (GDP) per capita. Source: World Bank, 2021 . cGDP per capita × 100. dCountry with highest points receives 15, followed by 14, 13, 12, etc. Prices are in US$ at 2009 official exchange rates. Dash (–) indicates data unavailable.

Supplementary Table 4 Comprehensive ban on tobacco advertising in EMR by country, 2021

Country	TV	Outdoors	Magazines	Indirect	Point of sale	Cinema	Sponsor	Internet	Radio	Enforcement	Score
Afghanistan	3	2	2	2	1	1	0	0,5	0,5	1	12
Bahrain	3	2	2	1	1	1	1	0,5	0,5	0.8	9.6
Djibouti	3	2	2	2	1	1	1	0,5	0,5	0	0
Egypt	3	2	2	1	1	1	0	0,5	0,5	1	11
Iran	3	2	2	1	1	1	1	0,5	0,5	1	12
Iraq	3	2	2	2	0	1	1	0	0,5	1	11.5
Jordan	3	2	2	1	1	1	1	0,5	0,5	0.8	9.6
Kuwait	3	2	2	2	1	1	0	0,5	0,5	0	0
Lebanon	3	2	2	2	1	1	1	0,5	0,5	1	13
Libya	3	2	2	1	1	1	1	0,5	0,5	1	12
Morocco	3	0	2	0	0	1	0	0	0,5	1	6.5
Oman	3	2	2	0	1	1	0	0,5	0,5	1	10
Pakistan	3	2	2	0	0	1	0	0	0,5	1	8.5
Qatar	3	2	2	1	1	1	1	0,5	0,5	1	12
Saudi Arabia	0	0	0	2	0	0	0	0	0	0	0
Somalia	3	2	2	0	1	0	0	0	0	0.8	6.4
Sudan	3	2	2	1	1	1	0	0,5	0,5	0	0
Syria	3	2	2	1	1	1	0	0,5	0,5	1	11
Tunisia	3	2	2	1	0	1	0	0,5	0,5	0.1	1
UAE	3	2	2	2	1	1	1	0,5	0,5	0.5	6.5
Yemen	3	2	2	1	1	1	0	0,5	0,5	0.8	8.8

Points for each type of ban included (additive): Complete ban on tobacco advertising on television = 3. Complete ban on outdoor advertising (e.g. posters) = 2. Complete ban on advertising in print media (e.g. newspapers and magazines) = 2. Complete ban on indirect advertising (e.g. cigarette branded clothes, watches, etc) = 2. Ban on point of sale advertising = 1. Ban on cinema advertising = 1. Ban on sponsorship = 1. Ban on Internet advertising = 0.5. Ban on radio advertising = 0.5. Law enforcement factor. Total = score × enforcement factor. Source: WHO report on the global tobacco epidemic 2021

Supplementary Table 5 Health warning labels on cigarette packets in the EMR by country, 2021

Country	Size	Rotating	Colour	Picture	Total score
Bahrain	4	2	1	3	10
Djibouti	4	2	1	3	10
Egypt	4	2	1	3	10
Iran	4	2	1	3	10
Kuwait	4	2	1	3	10
Oman	4	2	1	3	10
Pakistan	4	2	1	3	10
Qatar	4	2	1	3	10
Saudi Arabia	4	2	1	3	10
UAE	4	2	1	3	10
Yemen	4	2	1	3	10
Iraq	3	2	1	3	9
Jordan	3	2	1	3	9
Lebanon	3	2	1	0	6
Libya	2	2	1	0	5
Sudan	2	2	0	0	4
Tunisia	3	0	0	0	3
Syria	2	0	0	0	2
Afghanistan	1	0	0	0	1
Morocco	1	0	0	0	1
Somalia	0	0	0	0	0

Large direct health warning labels: Size of warning (one only of): ≤ 10% of packet = 1, 11%–25% of packet = 2, 26%–40% of packet = 3, ≥ 41% or more of packet = 4. Rotating health warnings = 2. Contrasting colour (e.g. black lettering on white background) = 1. Picture =3. Source: WHO report on the global tobacco epidemic 2021

Supplementary Table 6 Treatment to help tobacco smokers stop in the EMR by country, 2021

Country	Nicotine availability	Buporopion	Primary care	Smoking hospitals	Health prof	Community	Total
Iran	1	1	1	1	1	1	6
Saudi Arabia	1	1	1	1	1	1	6
UAE	1	1	1	1	1	1	6
Morocco	1	1	1	1	1	0	5
Tunisia	1	1	1	1	1	0	5
Bahrain	1	1	1	1	0	0	4
Jordan	1	1	1	0	0	1	4
Kuwait	1	1	1	0	0	1	4
Qatar	1	1	1	1	0	0	4
Iraq	1	1	1	0	0	0	3
Lebanon	0	0	1	0	0	1	2
Oman	0	1	0	0	0	0	1
Afghanistan	0	0	1	0	0	0	1
Libya	0	0	1	0	0	0	1
Pakistan	0	0	0	0	0	1	1
Sudan	0	0	1	0	0	0	1
Yemen	0	0	0	0	0	1	1
Djibouti	0	0	0	0	0	0	0
Egypt	0	0	0	0	0	0	0
Somalia	0	0	0	0	0	0	0
Syria	0	0	0	0	0	0	0

Nicotine replacement available = 1. Bupropion available = 1. Smoking cessation support available in primary care facilities: no = 0, yes in some = 1, yes in most = 2. Smoking cessation support available in hospitals: no = 0, yes in some = 1, yes in most = 2. Smoking cessation support available from health professionals: no = 0, yes in some = 1, yes in most = 2. Smoking cessation support available in the community: no = 0, yes in some = 1, yes in most = 2. Source: WHO report on the global tobacco epidemic 2021.