Original Article

The Second Study on WHO MPOWER Tobacco Control Scores in Eastern Mediterranean Countries Based on the 2013 Report: Improvements over Two Years

Gholamreza Heydari MD MPH PhD[1], Arezoo Ebn Ahmady PhD•[2], Harry A. Lando PhD[3], Mohammad B. Shadmehr MD[4], Lida Fadaizadeh MD[5]

Abstract

Background: Following MPOWER's 2011 report, a study was conducted to quantify the implementation of MPOWER tobacco control policies in the Eastern Mediterranean Region (EMR) in 2013 to assess any possible change during the last two years.

Methods: In this cross sectional study, based on 10 categories mentioned in MPOWER 2013, a checklist was designed and its scoring was agreed upon by Iranian and international tobacco control specialists. Seven questions were scored from 0 – 4 and 3 from 0 – 3. The 22 countries were ranked by their total score on a scale of 0 to 37.

Results: Among the 22 countries in the EMR, Iran, Kuwait, Egypt, Lebanon, Gaza & West bank and Jordan were scored 31, 28, 28, 26, 25 and 25 respectively. 14 countries scored more than 50%, a small improvement; 5 countries have seen their scores fall, and three countries received the same score as last time. The highest overall improvement was attributed to the warning label, and the sharpest decline was observed in the consumption category.

Conclusion: There has been a slight overall improvement in tobacco control planning, although the desired levels have yet to be reached and some countries in the region have fared worse.

Keywords: Control, scores, tobacco.

Cite this article as: Heydari G, Ebn Ahmady A, Lando HA, Shadmehr MB, Fadaizadeh L. The second study on WHO MPOWER tobacco control scores in the Eastern Mediterranean Countries based on the 2013 report: improvements during two years. *Arch Iran Med.* 2014; **17(9):** 621 – 625.

Introduction

Currently, 1 out of 10 adults throughout the world lose their lives due to tobacco consumption, with tobacco related deaths claiming more than 5 million lives per year.[1,2] If the current trend continues, it is estimated that 500 million people alive today will eventually lose their lives due to tobacco consumption,[3,4] and in the 21st century, tobacco will cause a billion deaths worldwide.[5,6] It is beyond doubt that unless measures are taken to curb tobacco, the number of consumers worldwide is bound to increase.[7,8]

The WHO Framework Convention for Tobacco Control (FCTC), which has been ratified by 177 countries around the world, is a critical step in fighting tobacco use. This treaty demonstrates the potential for international agreements to play critical roles in preventing diseases and promoting health in societies. To accomplish the objectives of the FCTC, WHO has developed the MPOWER policy package which contains six important measures intended to advance tobacco control.

These six measures are as follows: Monitor tobacco use and prevention policies, Protect people from tobacco smoke, Offer help to quit tobacco use, Warn about the dangers of tobacco, Enforce bans on tobacco advertising, promotion and sponsorship, and Raise taxes on tobacco. Obviously complete implementation of these rules could substantially decrease the use of tobacco.[9]

International experience shows that implementing effective tobacco control programs can greatly reduce mortality from tobacco use.

Basu, et al. demonstrated that these tobacco control interventions could avert 25% of myocardial infarctions and strokes.[10] If we can define a measure for assessing tobacco control programs that allows assessment of country specific situations, this will be important in enabling follow up of these programs over time to determine the extent to which they have been useful.

The first such assessment was conducted by Joossens and colleagues in European countries.[11] Heydari, et al. subsequently undertook a study in Eastern Mediterranean Countries.[12] Then, another study by Heydari and colleagues based on the 2011 WHO MPOWER report, rated six recommended programs with Iran, Egypt and Jordan obtaining the highest scores indicating that these countries had acceptable tobacco control programs.[13]

The previous study[13] assigned ratings to tobacco control programs using common methods. These ratings could be used even many years later as a benchmark against which to compare subsequent performance measures. The necessity of rating this program was to have a general view of tobacco control program change over the two last years in each country based on the WHO report.

In the current study, we assessed changes in scores for tobacco

Authors' affiliations: [1]Tobacco Prevention and Control Research Center, National Research Institute of Tuberculosis and Lung Diseases, Shahid Beheshti University of Medical Sciences, Tehran, Iran, [2]Community Oral Health Department, School of Dentistry, Shahid Beheshti University of Medical Sciences, Tehran, Iran, [3]Division of Epidemiology and Community Health, School of Public Health, University of Minnesota, Minneapolis, USA, [4]Tracheal Diseases Research Center, National Research Institute of Tuberculosis and Lung Diseases, Shahid Beheshti University of Medical Sciences, Tehran, Iran, [5]Telemedicine Research Center, National Research Institute of Tuberculosis and Lung Diseases, Shahid Beheshti University of Medical Sciences, Tehran, Iran.

•Corresponding author and reprints: Arezoo Ebn Ahmady PhD, Community Oral Health Residency Program, Community Oral Health Department, School of Dentistry, Shahid Beheshti University of Medical Sciences, Daneshjoo Blvd., Evin, Tehran, I. R. of Iran, 1983963113. Telefax: +98-21-22421813. E-mail: aebnahmady@yahoo.com or a.ebnahmady@sbmu.ac.ir

Accepted for publication: 20 June 2014

control programs from 2011 to 2013 in the Eastern Mediterranean region, based on the six measures and WHO reports.

Materials and Methods

This was a cross sectional study with collection of information from the WHO program of tobacco prevention in the EMR countries found on pages 116 and 117 in the MPOWER 2013 report.

The same checklist as in the original study was used again for this purpose. The checklist was designed previously by Iranian and international tobacco control specialists and its cut-offs were set according to the scoring of key sections of the MPOWER 2011 report.[13] According to the measures reported in the 2013 report, there were 7 questions with 5 options ranging from minimum 0 to maximum 4 scores, and 3 questions ranging from minimum 0 to maximum 3 scores. Each point for which data was not available (NA), would be scored as 0. So, the total possible score was 37 (7*4 + 3*3) as shown in Table 1.

The scores were compiled by two raters separately, and compared and confirmed by a third person who acted as supervisor. Two raters administered the assessment, and the Intraclass Correlation Coefficient (ICC) was used to assess the agreement between the two raters. ICC values were sufficiently reliable between raters (ICC = 0.85). Data entry was done independently by the first selected rater and was checked by the second. At least two of these reports were selected randomly and observed in order to monitor their ratings against those made by the supervisor. The scores were summed and the rankings were computed. The checklist, with its scoring and scale, is shown in Table 1.

Table 1. WHO MPOWER score on tobacco control in Eastern Mediterranean countries based on WHO 2011 report

Indicator	Point scoring
Adult daily smoking prevalence	**(4)**
Estimates not available	0
30% or more	1
20%–29%	2
15%–19%	3
< 15%	4
Monitoring: prevalence data	**(3)**
No known data or no recent data or data that is neither recent nor representative	0
Recent and representative data for either adults or youth	1
Recent and representative data for both adults and youth	2
Recent, representative and periodic data for both adults and youth	3
Smoke-free policies	**(4)**
Data not reported	0
Up to 2 public places completely smoke-free	1
3-5 public places completely smoke-free	2
6–7 public places completely smoke-free	3
All public places completely smoke-free	4
Cessation programmes	**(4)**
Data not reported	0
None	1
NRT and/or some cessation services (neither cost-covered)	2
NRT and/or some cessation services (at least 1 cost-covered)	3
National quit line, and both NRT and some cessation services cost-covered	4
Health warning on cigarette packages	**(4)**
Data not reported	0
No warnings or small warnings	1
Medium-sized warnings missing some appropriate characteristics	2
Medium-sized warnings with all appropriate characteristics	3
Large warnings with all appropriate characteristics	4
Anti-tobacco mass media campaigns	**(4)**
Data not reported	0
No campaign conducted between January 2009 and August 2010	1
Campaign conducted with 1–4 appropriate characteristics	2
Campaign conducted with 5–6 appropriate characteristics	3
Campaign conducted with all appropriate characteristics	4
Advertising bans	**(4)**
Data not reported	0
Complete absence of ban in print media	1
Ban on national television, radio and print media only	2
Ban on national and some international television, radio and print media	3
Ban on all forms of direct and indirect advertising	4
Taxation	**(4)**
Data not reported	0
25% of retail price is tax	1
26%–50% of retail price is tax	2
51%–75% of retail price is tax	3
75% of retail price is tax	4
Compliance with bans on advertising	**(3)**
Complete compliance (8/10 to 10/10)	3
Moderate compliance (3/10 to 7/10)	2
Minimal compliance (0/10 to 2/10)	1
Not reported	0
Compliance with smoke-free policy	**(3)**
Complete compliance (8/10 to 10/10)	3
Moderate compliance (3/10 to 7/10)	2
Minimal compliance (0/10 to 2/10)	1
Not reported	0
Total score	**37**

Table 2. Eastern Mediterranean Region countries ranked by total WHO score on tobacco control in 2013

Country	*Adult Daily* Smoking Prevalence	Monitoring	Smoke-free Policies	Smoke-free Policy compliance	Cessation programs	Health warning on cigarette packages	Mass media campaigns	Advertising bans	Advertising bans compliance	Taxation	Total No. %
Iran (IR)	4	3	4	3	4	4	1	4	3	1	31
Egypt	2	3	2	2	3	4	4	3	2	3	28
Kuwait	3	1	3	2	4	3	4	4	3	1	28
Lebanon	1	2	4	3	3	2	3	3	3	2	26
Gaza & West bank	2	2	4	4	2	1	-	3	3	4	25
Jordan	2	3	2	2	3	2	1	3	3	4	25
Saudi Arabia	3	1	3	3	3	3	2	1	3	1	23
Bahrain	2	1	1	0	3	3	4	4	3	1	22
Libya	2	2	4	-	3	1	1	4	3	1	22
Morocco	3	1	2	2	2	1	1	3	3	3	21
Tunisia	1	1	1	0	3	1	4	3	3	4	21
Djibouti	0	1	3	2	2	4	1	4	3	1	21
Pakistan	3	1	4	1	2	3	1	1	2	3	21
Oman	4	3	0	3	2	3	1	1	3	1	21
Iraq	3	2	1	2	2	1	1	3	2	1	18
UAE	0	1	2	-	4	3	0	3	3	1	17
Qatar	0	2	1	0	3	3	1	3	3	1	17
Yemen	2	1	1	0	2	2	1	3	2	3	17
Syrian Arab Republic	0	1	3	-	3	1	3	3	-	3	17
Sudan	0	1	1	-	1	1	1	3	2	3	13
Afghanistan	0	0	2	1	2	1	1	3	2	1	13
Somalia	0	0	1	0	1	1	1	1	0	1	6
Total	**39**	**35**	**49**	**30**	**57**	**48**	**37**	**63**	**55**	**44**	-

Table 3. Comparison of WHO score on tobacco control in Eastern Mediterranean Region countries in 2011& 2013

Country	*Adult Daily Smoking Prevalence*		Monitoring		Smoke-free Policies		Smoke-free Policy compliance		Cessation programs		Health warning on cigarette packages		Mass media campaigns		Advertising bans		Advertising bans compliance		Taxation		Total	
	2011	2013	2011	2013	2011	2013	2011	2013	2011	2013	2011	2013	2011	2013	2011	2013	2011	2013	2011	2013	2011	2013
Iran (IR)	4	4	3	3	4	4	2	3	4	4	4	4	0	1	4	4	3	3	1	1	29	31
Egypt	3	2	2	3	3	2	1	2	3	3	4	4	4	4	3	3	2	2	3	3	28	28
Jordan	2	2	3	3	2	2	2	2	3	3	2	2	3	1	4	3	2	3	3	4	26	25
UAE	4	0	1	1	2	2	2	-	4	4	1	3	2	0	4	3	2	3	2	1	24	17
Bahrain	3	2	1	1	1	1	0	0	4	3	1	3	3	4	3	4	3	3	2	1	21	22
Kuwait	3	3	2	1	1	3	0	2	3	4	1	3	3	4	4	4	2	3	2	1	21	28
Libya	2	2	2	2	4	4	2	-	2	3	1	1	1	1	3	4	3	3	1	1	21	22
Pakistan	3	3	0	1	4	4	1	1	2	2	3	3	1	1	1	1	2	2	3	3	20	21
Gaza & West bank	0	2	0	2	3	4	3	4	2	2	1	1	1	-	3	3	3	3	4	4	20	25
Djibouti	0	0	3	1	3	3	0	2	2	2	4	4	1	1	4	4	0	3	2	1	19	21
Saudi Arabia	4	3	2	1	1	3	0	3	4	3	1	3	2	2	3	1	0	3	2	1	19	23
Sudan	4	0	1	1	1	1	0	-	1	1	1	1	2	1	4	3	2	2	3	3	19	13
Morocco	3	3	3	1	2	2	0	2	2	2	1	1	4	1	3	3	0	3	0	3	18	21
Syrian Arab Republic	0	0	1	1	3	3	2	-	3	3	1	1	0	3	4	3	2	-	2	3	18	17
Lebanon	1	1	3	2	2	4	1	3	2	3	1	2	4	3	1	3	0	3	2	2	17	26
Qatar	0	0	2	2	1	1	0	0	3	3	1	3	1	1	4	3	3	3	2	1	17	17
Tunisia	1	1	2	1	1	1	0	0	2	3	1	1	2	4	3	3	2	3	3	4	17	21
Yemen	2	2	1	1	1	1	0	0	1	2	2	2	2	1	3	3	2	2	3	3	17	17
Iraq	3	3	1	2	1	1	0	2	2	2	1	1	1	1	3	3	2	2	1	1	15	18
Oman	4	4	2	3	1	0	0	3	2	2	1	3	1	1	1	1	0	3	2	1	14	21
Afghanistan	0	0	0	0	2	2	0	1	2	2	1	1	0	1	3	3	0	2	1	1	9	13
Somalia	0	0	0	0	1	1	2	0	1	1	1	1	0	1	1	1	0	0	1	1	7	6
Total	**44**	**39**	**35**	**35**	**44**	**49**	**18**	**30**	**54**	**57**	**35**	**48**	**38**	**37**	**66**	**63**	**34**	**55**	**43**	**44**		

Results

We found changes in scores across EMR countries over these two years. The results are shown in Table 2. Countries are ranked by total score and the score obtained for each indicator for each activity. Fourteen countries (63%) achieved more than half of the total possible score. Despite its overall high score and two increased total scores, the Islamic Republic of Iran did not score well on tobacco taxation (this measure yielded one of the lowest scores across EMR countries). Three countries, Egypt, Yemen and Qatar, received the same score as last time (28, 17 and 17, respectively). Five countries, UAE, Sudan, Jordan, The Syrian Arab Republic, and Somalia, actually saw their scores fall (declined 7,6,1,1 and 1, respectively). 14 countries improved in their total scores, with the largest increase belonging to Lebanon with an increase of 9 points; Kuwait and Oman with an increase of 7; and Saudi Arabia with an increase of 4.

Considering the six main MPOWER measures, the following countries attained the highest scores: Iran and Oman on adult daily smoking prevalence; Iran, Egypt, Jordan, Oman on monitoring; Iran, Libya, Pakistan, Gaza & West bank, Lebanon on smoke free policies; Iran, Bahrain, Kuwait on cessation programs; Iran, Egypt, Djibouti on health warning labels on cigarette packages; Egypt, Bahrain, Tunisia on mass media campaigns; Iran, Bahrain, Kuwait, Libya and Djibouti on tobacco advertising bans; and Jordan, Gaza & West bank, Tunisia on taxation. The largest changes in scores for all 22 countries during 2011 – 2013 were attributable to smoking prevalence. Total scores declined from 44 to 39; monitoring program scores were unchanged at 35; smoke-free policy total score rose from 44 to 49; for cessation programs, the total score increased from 54 to 57; for warning health labels, the total score rose impressively from 35 to 48; in mass media campaign, the score decreased from 38 to 37; for ban on advertising, the score fell from 66 to 63; and for taxation, the increased from 43 to 44 (Table 3).

Discussion

This study found that after two years of implementation of the MPOWER package in EMR countries, tobacco control programs in Iran still compare very favorably with other EMR countries. Some countries such as Kuwait, Lebanon, Oman, Saudi Arabia and Gaza & West bank improved their status, but UAE and Sudan have seen a fall in their scores. The first study with the same methodology has been already done based on the MPOWER report 2011.[13] This study demonstrated that countries in the region need to take steps to build on their successes and should continue to work on strengthening their weak points. The 10 indicator set increased from 411 in 2011 to 475 in 2013. A major boost came from compliance-policed no smoking areas and banning advertising and increased health warnings.

Thus, there is the possibility that the overall situation has changed for the better. However, an important indicator of the prevalence of smoking has decreased by 5 points after 2 years, and in spite of the fact that the tobacco control program has been better implemented, tobacco consumption has increased. But we know that lack of reporting this indicator by the UAE and Sudan has caused this decline. This comparison across the EMR countries demonstrated a number of important points. For example, the Islamic Republic of Iran with two more points compared to 2011 and despite ranking first overall, had no improvement on taxation. Egypt had been in second place. However, Kuwait took over the second place with a 7-point improvement compared to no change in Egypt. Lebanon obtained third place with an increase of 9 points. Jordan saw a decline in points and now ranks fifth. Gaza & West bank improved and is now ranked sixth. Somalia and Afghanistan still scored the lowest.

This kind of comparison could create a stronger incentive for tobacco control concerned authorities in different countries to consider adopting more of the MPOWER package policy in the future. Levy, et al. concluded that putting tobacco control measures in place in 41 countries between 2007 and 2010 would prevent some 7.4 million premature deaths. The results of this study and those of a similar study indicate that the implementation of these programs can substantially reduce tobacco related mortality and morbidity.[10,14] In our study, cases of premature death have not been investigated, but this could be considered as a starting point for further and future studies. Our findings also showed better overall implementation of MPOWER policies across EMR countries, but there is still the main question of whether smoking complications and problems have been also reduced.

In conclusion, we can say that after two years of implementing MPOWER policy in EMR countries, tobacco control programs are getting better overall but also with some slippage and still far from the ideal situation. Encouragingly, Iran, Kuwait, Lebanon, Gaza & West bank, Oman, and Saudi Arabia have improved their status.

Reference

1. Mathers CD, Loncar D. Projections of global mortality and burden of disease from 2002 to 2030. *PLoS Medicine.* 2006; **3:** e442.
2. Peto R et al. Mortality from smoking worldwide. *British Medical Bulletin.* 1996; **52:** 12 – 21.
3. Levine R, Kinder M. *Millions saved: proven success in global health.* Washington DC, Routledge; 2006.
4. Peto R, Lopez AD. Future worldwide health effects of current smoking patterns. In: Koop CE, Pearson CE, Schwarz MR, eds. *Critical Issues in Global Health.* San Francisco: Wiley (Jossey-Bass); 2001: 154 – 161.
5. Benowitz NL. Pharmacology of nicotine: addiction and therapeutics. *Annual Review of Pharmacology and Toxicology.* 1996; **36:** 597 – 613.
6. Battling big tobacco: *Mike Wallace talks to the highest-ranking tobacco whistleblower*. CBS News, 2005. Available from: URL: www.cbsnews.com/2100-500164-162-666867.htlm. (Accessed Date: 5 December 2007).
7. Hendricks PS, Ditre JW, Drobes DJ, Brandon TH. The early time course of smoking withdrawal effects. *Psychopharmacology.* 2006; **187:** 385 – 396.
8. Guindon GE, Boisclair D. *Past, current and future trends in tobacco use*. Washington DC, World Bank, 2003.Available from: URL: www1.worldbank.org/tobacco/pdf/Guindon-Past, %20 current-%20whole.pdf. (Accessed Date: 5 December 2007).
9. WHO Report on the Global Tobacco Epidemic, 2008: *The MPOWER package*. Geneva, World Health Organization, 2008.
10. Basu S. Glantz S, Bitoon A, Millet C. The effect of tobacco control measures during a period of rising cardiovascular Disease Risk in India: A Mathematical Model of Myocardial Information and Stroke. *PloS Med.* 2013; **10:** e1001480. DOI:10.371/journal.pmed.1001480. (Epub 2013 Jul 9).
11. Joossens L, Raw M. The tobacco control scale: a new scale to measure country activity. *Tobacco Control.* 2006; **15:** 247 – 253.
12. Heydari G, Talischi F, Masjedi MR, Alguomani H, Joossens L, Ghafari M. Comparison of tobacco control Policies in the Eastern Mediterranean countries based on tobacco control scale score. *EMHJ.* 2012; **18:** 804 – 810.
13. Heydari G, Talischi F, Algouhmani H, Lando HA, Ahmady AE. WHO MPOWER tobacco control scores in the Eastern Mediterranean countries based on the 2011 report. *EMHJ.* 2013; **12:** 314 – 319
14. Levy D et al. Smoking related deaths averted due to three years of policy progress. *Bul WHO.* 2013; **91:** 509 – 518.