

King Saud University

Saudi Dental Journal

www.ksu.edu.sa



REVIEW ARTICLE

Accomplishments and challenges in tobacco control (endeavors – Report from the Gulf Cooperation Council countries



Kamran Habib Awan^{a,b,*}, Quratul Ann Hussain^a, Shahrukh Khan^c, Syed Wali Peeran^d, Magdy Khaled Hamam^a, Emad Al Hadlaq^a, Hamad Al Bagieh^a

^a Department of Oral Medicine & Diagnostic Sciences, College of Dentistry, King Saud University, Riyadh, Saudi Arabia

^b College of Dental Medicine, Roseman University of Health Sciences, South Jordan, UT, United States

^c Centre of Rural Health, Faculty of Health, University of Tasmania, Hobart, Tasmania, Australia

^d Department of Periodontics, Faculty of Dentistry, Sebha University, Sebha, Libya

Received 25 May 2017; revised 2 August 2017; accepted 3 August 2017 Available online 23 September 2017

KEYWORDS

Tobacco control; Public policy; GCC; Cessation; Surveillance and monitoring **Abstract** *Objectives:* To review the tobacco governance and national responsibility for control, and existing countering measures to reduce the tobacco use among the Gulf Cooperation Council (GCC) member states.

Methods: We reviewed the data in regards to tobacco control efforts and difficulties encountered during implementation of the policies for all the GCC member states from the respective country profile in the WHO report on the global tobacco epidemic. Also, we utilized the measures outlined in the FCTC's MPOWER package to not only assess the degree of national commitment, but also compare it against the level of significance that the legislatures give to this matter.

Results: We observed that there have been genuine advancements towards tobacco control in the GCC member states over the past few years. All the countries except Bahrain have national offices committed to tobacco control and 5 nations (excluding Oman) have dedicated support services for smoking cessation accessible to the general public. Similarly, majority of the member states have implemented a national-level ban on tobacco advertisement through national media cells as well as free dissemination of marketing material.

* Corresponding author at: College of Dental Medicine, Roseman University of Health Sciences, South Jordan, UT 84095, United States. E-mail address: kamranhabibawan@gmail.com (K.H. Awan).

Peer review under responsibility of King Saud University.



https://doi.org/10.1016/j.sdentj.2017.08.003

1013-9052 © 2017 The Authors. Production and hosting by Elsevier B.V. on behalf of King Saud University. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

Conclusion: Application and implementation of measures outline in the MPOWER package, formulation and enforcement of sturdy laws on tobacco control, and development of infrastructure and trained workforce are fundamental to manage and reinforce tobacco control measures in the GCC region.

@ 2017 The Authors. Production and hosting by Elsevier B.V. on behalf of King Saud University. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

Contents

1.	Introduction	14
2.	Methods	15
3.	Results	15
	3.1. Governments' actions in controlling the tobacco endemic	15
	3.2. Prevalence and tendency of tobacco use	15
4.	Discussion	16
5.	Conclusion	17
	Conflict of interest	17
	References	17

1. Introduction

Tobacco use is one of the most preventable causes of disease and premature death globally (US Department of Health and Human Services, 2004). The general and oral health related adverse effects of tobacco use are well documented (Awan, 2011; Warnakulasuriya, 2005; Warnakulasuriya et al., 2005; Palmer et al., 2005). In spite of the recent advances in diagnosis and treatment, tobacco-related morbidity and mortality is on the rise, accounting for nearly 6 million deaths annually from both direct and indirect use (Mackay and Eriksen, 2002). The best approach to control this threat is by concentrating efforts towards ending its use, by both educating users as well as healthcare professionals (Awan et al., 2015). The need to take the assertive measures towards tobacco cessation is reinforced by various studies that have shown numerous advantages of these measures (US Department of Health and Human Services, 1990; Wu and Sin, 2011).

Many countries are focusing on the fight against tobacco. In this paper, we present the efforts taken by the Gulf Cooperation Council (GCC) member states, a region that harbors tobacco-related mortality rates of 2% and 12% among females and males respectively (Tobacco free initiative [website], 2015). The GCC is a political and economic association of 6 member states, including Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates (UAE). All the GCC member states intrinsically rely upon expatriates for their workforce, with the share of foreign workers in some member states (Qatar and UAE) reaching as high as 80–90% (Integration, 2010). This has significant complications for the planning and implementation of an array of policies, including those related to general public health.

Tobacco is a menace that affects both the adults as well as the youth. Data from the Global Youth Tobacco Survey (GYTS) show alarmingly high percentages of adolescent current smokers in the GCC member states (Data, 2015). In the UAE (2005), 8% of young people were identified as smokers and 28.8% as utilizing other tobacco-related products. In Saudi Arabia (2007), while 6.7% of adolescents were smokers, a further 11.9% utilized other tobacco-related products. Almost similar figures have been reported among youths in Bahrain (2002), Qatar (2007) and Kuwait (2009), where the prevalence of cigarette smoking were 10.6%, 12.2%, 6.5% and 3.9% respectively, and of those currently using other tobacco products were 15.3%, 11.8%, 15.6% respectively. The minimum prevalence was reported in Oman (2010), where around 2% of youth were either using cigarettes (1.8%) or other tobacco-related products (2.2%) (Data, 2015).

In the GCC, tobacco control endeavors began in January 1979, when Saudi Arabia presented a preliminary scientific proposal at the 6th GCC Health Ministers' Council Conference on fighting smoking in the region. The WHO Framework Convention on Tobacco Control (FCTC) treaty (Framework Convention, 2015), has since been signed by the majority of the GCC member states (Kuwait, Qatar, Saudi Arabia and UAE), however, every single member state has endorsed it. Encouragingly, all member states now possess a nationallevel agency or specialized unit focused towards tobacco control (Data, 2015). In order to assist the member states in fulfilling their WHO FCTC commitments, the WHO in 2008 presented the MPOWER package of 6 evidence-based tobacco control measures that are demonstrated to decrease tobacco usage (Table 1). The MPOWER measures offer useful support to decrease the demand for tobacco through implementation of viable strategies at national level. Although the measures outlined in the MPOWER package mainly concentrate on reducing the demand, the WHO acknowledge the significance of supply-side and is fully committed in employing the relevant measures defined in the FCTC.

The aim of this review paper is to present an overview of the difficulties confronted by the GCC member states in implementing the tobacco-control measures. In addition, it also highlights the endeavors put to date by the GCC governments in controlling the tobacco epidemic. By doing so, it not only



 Table 1
 WHO MPOWER package of 6 evidence-based tobacco control measures.

addresses the accomplishments and disappointments, but also proposes a way forward for the GCC member states in their fight against tobacco.

2. Methods

Data was collected from all the six member states of the GCC in regards to their efforts towards tobacco control and difficulties encountered during implementation of the policies. Data for each individual GCC member state was obtained from the respective country profile in the WHO report on the global tobacco epidemic. (WHO report on the global tobacco epidemic, 2015) The WHO tobacco report was selected as the primary source because it has the most complete information on all countries in our analysis, with the most systematic categorization of tobacco control legislation status as of 2015. In addition, detailed automated online search of PubMed, Medline, EMBASE and ISI Web of Science was also performed using the following key words and Boolean operators; "tobacco"; "smoking"; "Gulf Cooperation Council". This was performed to ensure that the most recent information on any changes in tobacco legislation or control measures is recorded.

To explore the indices of national obligation towards safety of the general public and controlling the tobacco pandemic in the GCC member states, we utilized the measures outlined in the FCTC's MPOWER package to not only assess the degree of national commitment, but also compare it against the level of significance that the legislatures give to this matter.

3. Results

The GCC member states have shown a noteworthy governmental dedication towards tobacco control from an authoritative point of view, (Zain, 2012; Reini, 2009; Olayiwola, 2013; Khoja and Hussein, 2004) however, more is still required, especially towards educating the general public and establishing further state funded training and research centers. (Awaisu et al., 2013; Mahfoud et al., 2012) Maintaining such responsibility is critical to carry on the momentum that many of these nations are currently enjoying.

3.1. Governments' actions in controlling the tobacco endemic

Since 2010, each of the 6 GCC member states has a particular government objective with respect to tobacco control. Table 2

shows the summary of MPOWER measures taken by each GCC member states (extracted from WHO updated country profiles and published in the WHO report on the global tobacco epidemic, 2015).

All the countries except Bahrain have national offices committed to tobacco control and 5 nations (excluding Oman) have dedicated support services for smoking cessation accessible to the general public (with costs either in part or completely secured). The majority of the member states have implemented a national-level ban on tobacco advertisement through national media cells as well as free dissemination of marketing material. Moreover, a few countries (Saudi Arabia and UAE) have also banned smoking in some public places, including government, health-care and educational facilities.

In spite of the above-mentioned governmental progress, there are certain areas that show lack of dedication towards tobacco control or even relapse in them. One such example is the reduction in taxation on tobacco products; 4 of the GCC member states (Bahrain, Oman, Saudi Arabia and UAE) reduced the tax percentage on purchase of cigarettes by 2-3% between 2008 and 2010. It is vital for the government of these countries to understand the negative impact such arrangements may have on public accessibility to tobacco, and therefore efforts should be made to increase the taxation percentage as opposed to decreasing it, regardless of the supplementary tobacco control measure.

3.2. Prevalence and tendency of tobacco use

A wide range of research has been carried out in the GCC region looking into the prevalence, mortality and morbidity in relation to tobacco use. Our review of the published literature identified 19 studies, of which 6 studies were observed to be pertinent. (Al-Hamdan et al., 2009; Moh'd Al-Mulla et al., 2008; Hamadeh, 1998; Al-Hashel et al., 2012; Fahdil, 2007; Al-Amari, 2011) The excluded studies were either irretrievable (n = 2), irrelevant (n = 4) or duplicates (n = 7). Among pertinent studies, 3 focused on the tobacco related issues in the GCC member states collectively, (Al-Hamdan et al., 2009; Moh'd Al-Mullaet al., 2008; Hamadeh, 1998) while 2 studies addressed the relevant issues in Bahrain, (Al-Hashel et al., 2012; Fahdil, 2007) and only 1 study was carried out in the UAE (Al-Amari, 2011).

In a study, the authors investigated the prevalence of cancer from 1998 to 2001 in the GCC member states. (Al-Hamdan et al., 2009) They concluded that there is a plausible relation-

Table 2 Tobacco control related measures in the Gulf Cooperation Council countries14.

Programs	Bahrain	Kuwait	Oman	Qatar	Saudi Arabia	UAE
Specific government goals towards tobacco control at national level	Yes	Yes	Yes	Yes	Yes	Yes
Establishment of a national body to provide technical support WHO FTCT status (year)		Yes	Yes	Yes	Yes	Yes
Signed	No	Yes (2003)	No	Yes (2003)	Yes (2004)	Yes (2004)
Endorsed, or similar legislation	Yes (2007)	Yes (2006)	Yes (2005)	Yes (2004)	Yes (2005)	Yes (2005)
Public places with smoke-free legislation	No	No	No	No	Yes ^a	Yes ^b
National law requires fines for smoking	Yes	Yes	No	Yes	Yes	Yes
Legal requirement of tobacco products showing health	Yes	Yes	Yes	Yes	Yes	Yes
warnings						
Bans implemented on tobacco advertising, promotion and sponso	rship					
Electronic media cells (TV, radio)	Yes	Yes	No	Yes	Yes	Yes
Print media cells (newspapers, magazines)	Yes	Yes	No	Yes	Yes	Yes
Free distribution of promotional material and packages	Yes	Yes	No	Yes	Yes	Yes
Availability of smoking cessation services	Yes ^c	Yes ^d	No	Yes ^e	Yes ^f	Yes ^g
Provision of free of cost smoking cessation services		Fully ^h	No	Fully ⁱ	Partially	Partially
Total taxes on the most popular brand of cigarettes (% of retail price)		34	31	33	29	29

^a In government, health-care and educational facilities only.

^b In health-care and educational facilities only.

^c In most health clinics or primary-care facilities, in some hospitals, in some offices of health professionals but not in the community.

^d In most health clinics or primary-care facilities, in some hospitals, in some offices of health professionals and in the community.

^e In only some health clinics or primary-care facilities, in some hospitals, in some offices of health professionals but not in the community. ^f In only some health clinics or primary-care facilities, in some hospitals, in some part of the community, but not in offices of health

professionals.

^g In only some health clinics or primary-care facilities, in most hospitals, in some offices of health professionals and in some parts of the community.

^h Except in the community, where it is only partially covered by national insurance.

ⁱ Information on national financial coverage for smoking cessation support is only for hospitals (data not available for health clinics and primary-care facilities).

ship between an extended history of smoking in Bahrain and the higher prevalence of lung cancer in Bahrain than other GCC member states.

Waterpipe smoking is a growing concern in the GCC region. A study that evaluated tobacco utilization among GCC member states using Global Youth Tobacco Survey (GYTS) data reported a higher incidence of cigarette smoking with an even higher incidence of waterpipe smoking. (Moh'd Al-Mulla et al., 2008) They also reported that vulnerability to initiate waterpipe smoking was higher among never smokers group. These results are worrying as they indicate a likely increase in the prevalence of tobacco-related diseases and their associated mortality in the GCC member states. One should note that the amount of nicotine and tar found in one 'head' of waterpipe is almost equivalent to the amount found in 10 cigarettes (Rawaf et al., 2013; Shihadeh and Saleh, 2005).

Studying all the GCC member states collectively, Hamadeh insinuated the formerly stated hazard of increased incidence and potential issue of tobacco, (Hamadeh, 1998) and accentuated the admirable efforts implemented by the uniform body of the GCC Health Ministers' Council (Tobacco control program [website], 2015) and the early acknowledgment of the tobacco-related problem.

In a study in Bahrain, smoking practices and potential reasons for failure in smoking cessation were evaluated among 250 adult Bahrainis and non-Bahrainis (Al-Hashel et al., 2012). The authors reported that more than one-third of the smokers (33%) stated tobacco craving as the primary reason for their inability to quit smoking. Other reported reasons included satisfaction in smoking (24%) and nicotine with-drawal symptoms (11%). Fadhil in his review paper to highlight the efforts for tobacco control in Bahrain presented a distinct and comprehensive picture of tobacco control endeavors in the country (Fahdil, 2007). The author reported that lack of implementation of laws and decrees as the main barriers in the tobacco control efforts and highlighted the grave need for the development of smoking cessation programs as part of the primary health care setup.

A cross-sectional study carried out among 288 medical doctors from the Department of Health and Medical Services in Dubai, UAE, reported a lack of smoking-cessation skills among them (Al-Amari, 2011). The authors recommended that there is a need for the improvement of smoking-cessation specific skills among healthcare professionals along with the development of smoking cessation programs that ensure participation of the physicians to reduce tobacco usage among the general public.

4. Discussion

The paper reports a pragmatic evaluation of a multifaceted analysis of the present situation of tobacco use among the GCC member states; administration and national obligation towards tobacco control; and current mediation systems employed to lessen the utilization of tobacco among the community. Furthermore, it analyses organized policy-oriented measures in accordance with the FCTC's MPOWER package that symbolize government activities to reinforce, execute and oversee tobacco control programs and to address the developing endemic of tobacco use.

Regardless of the endeavors and triumphs in the field of tobacco control by the GCC member states, there still remain numerous obstacles that need to be crossed to achieve goals. These obstacles can be external in the form of lack of defiance to campaigning and pressure employed by the tobacco companies (Zain, 2012), or internal in the form of intermittent or lack of supervision of the tobacco-related legislation and partial execution of tobacco controlling endeavors (WHO report on the global tobacco epidemic., 2013). Considering the recent advancements in tobacco control by the GCC member states, it is quite evident that further efforts are needed particularly towards the implementation of legislation and management of current, well-organized strategies. Furthermore, development of human resources in terms of providing them training and infrastructure as well as commitment of policy makers towards public health is vital.

One type of tobacco use that has been overlooked so far, both in terms of policy making and generating public awareness despite its increasing popularity among youth is waterpipe smoking (WPS). Policies recommended by the FCTC were mainly based on evidence of controlling cigarette smoking, and may not be applicable on WPS due to the unique nature of the latter. In comparison to cigarettes, waterpipes come in different shapes and sizes, are unmovable and often shared. Most of the waterpipe tobacco products available in the GCC region either completely lack warning labeling practices or have misleading descriptors such as 0% nicotine, 0% tar (Nakkash and Khalil, 2010). Moreover, policy makers have been casual in implementing indoor smoking bans on waterpipe bars and cafes despite the evidence on emission of harmful compounds in WPS (Daher et al., 2010; Maziak et al., 2008; Awan et al., 2017; Awan et al., 2016).

From a practical perspective, a range of measures and responsibilities are available that these nations can initiate to fast track and amplify the incentive for commitment. For instance, the GCC member states may set up a national-level reference body that exclusively focuses on prevention of tobacco use and protection against tobacco-related health hazards. Moreover, and in accordance with the cumulative public health endeavors, a revised commitment may be directed towards empowering group activities and promotions, especially at work environments. This proposal may be further reinforced with the establishment of smoking cessation facilities. These facilities should not only train medical or paramedical staff, but also employ the aptitude of the general public and utilize them as smoking cessation councilors, henceforth increasing the workforce to help curtail tobacco usage.

5. Conclusion

Tobacco control in GCC member states has seen noticeable growth in recent years. However, there are certain areas that need overhauling; restructuring of delivery mechanism of the smoking cessation services and establishment of international standard smoking cessation facilities. Application and implementation of FCTC and development of powerful and effective tobacco control legislations are imperative to support and fortify tobacco control efforts in the region.

Conflict of interest

The authors declared that there is no conflict of interest.

References

- Al-Amari, E., 2011. Practice and attitude differences in physician cigarette use: a study of prevalence, physicians' role, and smoking policy awareness in Dubai, UAE". Texas Medical Center Dissertations (via ProQuest). Paper AAI3468469. http://digitalcommons.library.tmc.edu/dissertations/AAI3468469.
- Al-Hamdan, N., Ravichandran, K., Al-Sayyad, J., Al-Lawati, J., Khazal, Z., Al-Khateeb, F., et al, 2009. Incidence of cancer in Gulf Cooperation Council countries, 1998–2001. East Mediterr. Health J. 15 (3), 600–611.
- Al-Hashel, D., Mohammed, F., Jaffar, K., Selaiti, M., Neama, S., Mandeel, M., 2012. Barriers to quit smoking among adult smokers. Bahrain Med. Bull. 34 (4), 183–186.
- Awaisu, A., Hagi, A., Ashour, M., Kheir, N., 2013. Pictorial health warnings on cigarette packages in Qatar: pre-implementation awareness and perceptions of ever-smokers versus never-smokers. Nicotine Tob. Res. 15 (10), 1765–1772.
- Awan, K.H., 2011. Effects of tobacco use on oral health an overview. Ann. Dent Univ. Malaya 18, 18–23.
- Awan, K.H., Hammam, M.K., Warnakulasuriya, S., 2015. Knowledge and attitude of tobacco use and cessation among dental professionals. Saudi Dent. J. 27 (2), 99–104.
- Awan, K.H., Alrshedan, A., Al Kahtani, M., Patil, S., 2016. Waterpipe smoking among health sciences university students: Knowledge, attitude and patterns of use. Saudi Dent J 28 (4), 189–193.
- Awan, K.H., Siddiqi, K., Patil, S., Hussain, Q.A., 2017. Assessing the effect of waterpipe smoking on cancer outcome - a systematic review of current evidence. Asian Pac. J. Cancer Prev. 18 (2), 495– 502.
- Daher, N., Saleh, R., Jaroudi, E., Sheheitli, H., Badr, T., Sepetdjian, E., Al Rashidi, M., Saliba, N., Shihadeh, A., 2010. Comparison of carcinogen, carbon monoxide, and ultrafine particle emissions from narghile waterpipe and cigarette smoking: Sidestream smoke measurements and assessment of second-hand smoke emission factors. Atmos. Environ. 44 (1), 8–14.
- Economic Integration in the GCC, 2010. World Bank, Washington (DC). (http://siteresources.worldbank.org/INTMENA/Resources/ GCCStudyweb.pdf, accessed 8 June 2015).
- Fahdil, I., 2007. Tobacco control in Bahrain: an overview. East Mediterr Health J. 13 (3), 719–726.
- Global Tobacco Surveillance System Data (GTSS Data) [online database]. Centers for Disease Control and Prevention, Atlanta (GA) <<u>http://nccd.cdc.gov/GTSSData/default/default.aspx</u>> (accessed 8 June 2015).
- Hamadeh, R., 1998. Smoking in the Gulf Cooperation Council (GCC) countries. Bahrain Med. Bull. 20 (3), 91–94.
- Khoja, T., Hussein, M., 2004. Working Together for Better Health: Technical Cooperation among the Gulf States in the Field of Health through the Council of Health Ministers of GCC States. King Fahed National Library, Riyadh.
- Mackay, J., Eriksen, M. (2002) The tobacco atlas. Geneva: World Health Organization (http://whqlibdoc.who.int/publications/2002/ 9241562099.pdf, accessed 8 June 2015)
- Mahfoud, Z., Al Nabti, A.R., Ghazar, S., Oglat, A., El Taher, F., 2012. Exposure to second hand smoke among Qatari pregnant

women. In: Abstracts of the Qatar Foundation Annual Research Forum Proceedings [online journal]. QScience, Doha, <<u>http://</u> www.qscience.com/doi/pdf/10.5339/qfarf.2012.BMP22> (accessed 8 June 2015).

- Maziak, W., Ibrahim, I., Rastam, S., Ward, K.D., Eissenberg, T., 2008. Waterpipe-associated particulate matter emissions. Nicotine Tob. Res. 10, 519–523.
- Moh'd Al-Mulla, A., Abdou Helmy, S., Al-Lawati, J., Al Nasser, S., Ali Abdel Rahman, S., Almutawa, A., et al, 2008. Prevalence of tobacco use among students aged 13–15 years in Health Ministers' Council/Gulf Cooperation Council Member States, 2001–2004. J. Sch. Health 78 (6), 337–343.
- Nakkash, R., Khalil, J., 2010. Health warning labeling practices on narghile (shisha, hookah) waterpipe tobacco products and related accessories. Tobacco Control 19, 235–239.
- Olayiwola, N., 2013. Anti-smoking law to get more teeth in Qatar. Gulf Times. <<u>http://www.gulf-times.com/qatar/178/details/</u> 344510/anti-smoking-law-to-get-more-teeth-in-qatar> (accessed 8 June 2015).
- Palmer, R.M., Wilson, R.F., Hasan, A.S., Scott, D.A., 2005. Mechanisms of action of environmental factors-tobacco smoking. J. Clin. Periodontol. 32 (Suppl 6), 180–195.
- Rawaf, D., Elgindi, A., Ismail, S., 2013. Asking the shisha question. Br. J. Gen. Pract. 63 (608), 127.
- Reini, J., 2009. UAE leads region in ban on smoking. The National. <<u>http://www.thenational.ae/news/world/middle-east/uae-leads-region-in-ban-on-smoking</u>> (accessed 8 June 2015).
- Shihadeh, A., Saleh, R., 2005. Polycyclic aromatic hydrocarbons, carbon monoxide, "tar", and nicotine in the mainstream smoke aerosol of the narghile water pipe. Food Chem. Toxicol. 43 (5), 655–661.
- Tobacco control program [website]. Riyadh: Executive Board of Health Ministers' Council for GCC States <<u>http://sgh.org.sa/en-us/technicalprograms/noncommunicablediseases/tobaccocontrol/overview.aspx</u>> (accessed 8 June 2015).

- Tobacco free initiative [website]. World Health Organization, Geneva. <<u>http://www.who.int/tobacco/en/></u> (accessed 8 June 2015).
- US Department of Health and Human Services, 1990. The Health Benefits of Smoking Cessation: A Report of the Surgeon General. US Public Health Service, Office on Smoking and Health, Betheseda, MD.
- US Department of Health and Human Services, 2004. (Healthy People 2010, ed. US Department of Health & Human Services, National Centre for Chronic Diseases Prevention & Health Promotion. Office of Smoking and Health. Atlanta, GA: USDHHS.
- Warnakulasuriya, S., 2005. Bidi smokers at increased risk of oral cancer. Evid. Based Dent. 6 (1), 19.
- Warnakulasuriya, S., Sutherland, G., Scully, C., 2005. Tobacco, oral cancer, and treatment of dependence. Oral Oncol. 41 (3), 244–260.
- WHO Framework Convention on Tobacco Control [website], 2005. World Health Organization, Geneva. < http://whqlibdoc.who.int/ publications/2003/9241591013.pdf> (accessed 8 June 2015).
- WHO report on the global tobacco epidemic, 2015. Raising taxes on tobacco. World Health Organization, Geneva. < http://www.who. int/tobacco/surveillance/policy/country_profile/en/> (accessed 8 june, 2015).
- WHO report on the global tobacco epidemic, 2013. Enforcing bans on tobacco advertising, promotion and sponsorship. Geneva: World Health Organization, 2013. <<u>http://apps.who.int/iris/bitstream/</u> 10665/85380/1/9789241505871_eng.pdf> (accessed 8 June 2015).
- Wu, J., Sin, D.D., 2011. Improved patient outcome with smoking cessation: when is it too late? Int. J. COPD 6, 259–267.
- Zain, A.A., 2012. Stiff challenge to anti-tobacco. Khaleej Times. <http://www.khaleejtimes.com/article/20120607/ARTICLE/ 306079875/1002 > (accessed 8 June 2015).
- Zain, A.A., 2012. Shisha joints ban teens and pregnant women. Khaleej Times. < http://www.khaleejtimes.com/nation/uae-health/ shisha-joints-ban-teens-and-pregnant-women > (accessed 8 June 2015).