



ELSEVIER


<http://www.elsevier.com/locate/jegh>

Results of the Global Youth Tobacco Survey and implementation of the WHO Framework Convention on Tobacco Control in the WHO Eastern Mediterranean Region (EMR) countries

Gulnoza Usmanova ^{*}, Ali H. Mokdad

Institute for Health Metrics and Evaluation, 2301 5th Avenue, Suite 600, Seattle, WA 98121, United States

Received 31 May 2013; received in revised form 13 July 2013; accepted 17 July 2013
Available online 31 August 2013

KEYWORDS

Youth;
Tobacco;
FCTC;
WHO Eastern mediterranean region

Abstract We used Global Youth Tobacco Survey (GYTS) data collected over time to monitor articles of the World Health Organization Framework Convention on Tobacco Control (WHO FCTC) in WHO Eastern Mediterranean Region (EMR).

Methods: The GYTS is a school-based survey, conducted in 23 countries in WHO EMR countries from 1999–2008.

Results: The prevalence of current smokeless tobacco use was high compared to cigarette use in all countries. In general, the following changes were observed between baseline and repeated surveys: in five countries fewer youth supported a ban on smoking in public places. In four countries more youth saw actors smoking on TV and were exposed to second-hand smoke (SHS) outside of home. Fewer youth were offered free cigarettes in ten countries; in eight countries youth saw less advertisement on TV; in seven countries youth had fewer items with a tobacco logo, discussed more reasons for smoking and dangers of smoking, and were less exposed to SHS at home; in six countries youth saw less advertisement at sports events.

Conclusion: The GYTS data can be used for monitoring, evaluation of national tobacco control plans and defining future directions for tobacco control.

© 2013 Ministry of Health, Saudi Arabia. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

In 2011, tobacco use killed almost 6 million people, with nearly 80% of these deaths occurring in low-

and middle-income countries [1]. Every day an estimated 82,000–99,000 young people start smoking throughout the world; many are children under age 10, and most reside in low- or middle-income countries [2].

The World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC) was

^{*} Corresponding author.

E-mail addresses: gulnoza@uw.edu (G. Usmanova), mokdaa@uw.edu (A.H. Mokdad).

<http://dx.doi.org/10.1016/j.jegh.2013.07.001>

2210-6006/\$ - see front matter © 2013 Ministry of Health, Saudi Arabia. Published by Elsevier Ltd.

This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

developed in response to the globalization of the tobacco epidemic. It was adopted by the 56th World Health Assembly in May 2003 and became an international law in February 2005. The WHO FCTC is an evidence-based treaty that reaffirms the right of all people to receive the highest standards of health. Today, 176 countries covering 87% of the world's population embrace the treaty [3,4].

In December 1998, the WHO, the United States Centers for Disease Control and Prevention (CDC), and the Canadian Public Health Association (CPHA) developed the Global Tobacco Surveillance System (GTSS) to assist countries in establishing the tobacco control surveillance and monitoring programs [5,6]. The GTSS involves the collection of data via four surveys: the Global Youth Tobacco Survey (GYTS), the Global School Personnel Survey, the Global Health Professions Student Survey, and the Global Adult Tobacco Survey [7].

The Middle East has been targeted by transnational tobacco companies since the 1970s as a key emerging market because of its young and growing population. Between 1990 and 1997, tobacco consumption in the region grew by 24.3%, making it "one of the few growing markets in the world" [8]. Cigarette consumption in Western Europe declined by 26% between 1990 and 2009; however, it increased by 57% in the Middle East and Africa during the same period [1]. Another unique aspect of the tobacco epidemic in the Middle East is the use of other tobacco products called "nargileh," "waterpipes," "shisha," "shamma," and "nush-oog" [9–15].

During the last decades, there have been several attempts to understand and measure the rise in tobacco use among the youth in this part of the world using different methodologies [12,13,16–23]; however, no papers describing and linking changes in tobacco use over time in this region have been published as far as the researchers of this study are aware of.

The GYTS was conducted in 23 countries of the WHO Eastern Mediterranean Region (EMR) between 1999 and 2008. Table 1 provides a detailed description of the sample size, response rates, and date of FCTC ratification.

Previously, a paper was presented regarding implementation of the WHO FCTC in the former Soviet Union [24]. The purpose of this paper is to use the data that has been collected in the GYTS conducted in EMR countries to set the baseline and monitor changes in tobacco use among youth and monitor the WHO FCTC articles.

2. Methods

2.1. Sample design

Within each country, the GYTS standard sampling methodology was used as described in detail elsewhere [5–7]. Briefly, the GYTS standard sampling methodology uses a two-stage cluster sample design that generates samples composed of students in school grades corresponding to the ages 13–15 years.

STATA 12 software (StataCorp. 2011. *Stata Statistical Software: Release 12*. College Station, TX: StataCorp LP) was used for the analysis and to account for survey design.

Table A1 in Web Appendix A presents the indicators related to the WHO FCTC articles and corresponding questions from GYTS.

In Saudi Arabia, the GYTS for the year 2001 involved only males; however, in 2007, the survey was administered to both sexes. For this reason, comparison over time for Saudi Arabia was only conducted for males.

3. Results

3.1. Total prevalence of ever and current cigarette smoking, initiating smoking before age 10, susceptibility to initiate smoking in the next year, and smokeless tobacco use (Table 3; Web Appendix A, Table A2)

Overall, 3.7% of youth in Pakistan (2003) and 49.5% in the West Bank (2000) were ever smokers. The prevalence of current smoking varied between 0.6% in Pakistan (2003) and 18.6% in Somalia (2004). The most dramatic decrease in the prevalence of ever and current smokers was observed in Iraq, the Gaza Strip, and Somalia; it has increased substantially in Saudi Arabia and Syria, and decreased and then increased again in Pakistan and Jordan over time.

The likelihood of initiating smoking in the year following the survey was high (28.5%) in Yemen (2003) and low (2.5%) in Pakistan (Peshawar, 2004). Over time, this likelihood increased significantly in the Gaza Strip and decreased in Yemen; however, in Jordan and Pakistan, it fluctuated over time.

More than 50% of young individuals have initiated smoking before age 10 in Egypt (2001), Iran, and Somalia (2004). In general, the age of onset has decreased significantly in Egypt, Somalia, and Yemen, while increasing in the Gaza Strip over time.

Table 1 Date of GYTS data collection, population, and sample counts of schools, classes, and students and survey response rates in Eastern Mediterranean Region (Centers for Disease Control and Prevention).

#	Country	Date of FCTC ratification (DD/MM/YYYY)	Date of GYTS data collection	Number of students	Number of students (ages 13–15)	School response rate (%)	Class response rate (%)	Student response rate (%)	Overall response rate (%)
1	Afghanistan	13/08/2010	2004 ^{CC}	1498	331	96	100	71	68.2
2	Bahrain	20/03/2007	2001 ^N	2158	1596	100	100	95.2	95.2
3	Djibouti	31/07/2005	2003 ^N	1580	847	100	100	92.5	92.5
4	Egypt	25/02/2005	2001 ^N 2005 ^N	3792 2898	2215 2898	90.2 100	100 100	85.4 81.7	77.0 81.7
5	Gaza Strip	Not ratified	2000 ^N 2005 ^N	1940 2109	1940 1395	100 100	100 100	95.8 94.5	95.8 94.5
6	Iran	06/11/2005	2003 ^N 2007 ^N	3841 1153	3841 1153	92.2 92.3	100 100	95.4 93.1	87.9 85.9
7	Iraq	17/03/2008	2006 ^C 2008 ^{CC}	1989 3604	957 2182	100 100	100 100	95.6 94.0	95.6 94.0
8	Jordan	19/08/2004	1999 ^N 2003 ^N 2007 ^N	3912 6313 2250	2847 3683 1550	91 100 100	100 100 100	92.2 89.1 91.6	83.9 89.1 91.6
9	Kuwait	12/05/2006	2001 ^N 2005 ^N	6330 3935	4205 2636	100 100	100 100	94.8 88.7	94.8 88.7
10	Lebanon	07/12/2005	2001 ^N 2005 ^N	4951 3314	3017 2431	98 98	98 100	98.3 99.2	94.4 97.2
11	Libya	07/06/2005	2003 ^N 2007 ^N	1850 2028	1174 1243	98 100	100 100	99 94.1	97 94.1
12	Morocco	Not ratified	2001 ^N 2006 ^N	3147 3186	2008 1991	98 98	100 100	94.8 93.5	92.94 91.6
13	Oman	9/03/2005	2002 ^N	1962	1099	100	100	96.9	96.9
15	Pakistan	03/11/2004	2003 ^N 2004 ^C (Kasur) 2004 ^C (Quetta) 2004 ^C (Peshawar) 2008 ^{CC}	3812 2241 1804 2159 1402	2565 1386 911 1216 720	100 100 100 100 100	100 100 100 100 100	87.8 87.2 87.6 90.9 85.6	87.8 87.2 87.6 90.9 85.6
16	Qatar	23/07/2004	2004 ^N 2007 ^N	3240 1434	2229 943	92 96	100 100	91.9 90.9	84.5 87.3
17	Saudi Arabia	09/05/2005	2001 ^{CC*} 2007 ^N	1830 3829	1088 2574	100 94	100 100	87.5 87.4	87.5 82.1
18	Somalia	Not ratified	2004 ^N 2007 ^N	1563 1998	374 897	88 96	100 100	94.2 90.2	82.9 86.6
19	Sudan	31/10/2005	2001 ^N 2005 ^N	2783 4277	1734 2831	94 92	100 100	94.2 93.2	88.5 85.7
20	Syria	22/11/2004	2002 ^N 2007 ^N	4531 2039	3278 1621	100 100	100 100	98.3 83.7	98.3 83.7
21	Tunisia	07/06/2010	2001 ^N 2007 ^N	4282 2155	2942 1499	100 100	100 100	94.1 92.4	94.1 92.4
22	UAE	07/11/2005	2002 ^N 2005 ^N	4178 16,447	2285 10,821	100 100	100 100	95.1 93.1	95.1 93.1
23	West Bank	Not ratified	2000 ^N 2005 ^N	8374 2182	4387 1305	98.7 100	100 100	94.8 95.6	93.5 95.6
24	Yemen	22/02/2007	2003 ^N 2008 ^N	12,658 1219	9040 650	100 100	99.3 100	84.3 83.5	83.7 83.5

^N At the national level.^{CC} Capital city.^C City.

* Only boys included.

Table 2 Total prevalence of ever and current cigarette smoking, current smokeless tobacco, exposure to second hand smoking, information about dangers of smoking, being offered free cigarettes

Countries and areas	Ever smoked cigarettes % (95% CI)	Current cigarette smokers % (95% CI)	Current smokeless tobacco users % (95% CI)**	Exposed to smoke from others at home % (95% CI)	Think that smoking should be banned from public places % (95% CI)	Taught dangers of smoking % (95% CI)	Offered free cigarettes % (95% CI)
Afghanistan, 2004	22.7 (18.2–28.0)	4.8 (2.8–8.3)	5.8 (3.8–9.0)	38.8 (33.5–44.5)	83.9 (79.4–87.6)	21.0 (16.7–26.1)	10.5 (7.5–14.4)
Bahrain, 2001	23.9 (21.7–26.3)	10.6 (9.1–12.4)	15.3 (13.5–17.3)	38.7 (36.1–41.3)	82.7 (80.6–84.7)	41.8 (39.2–44.5)	8.7 (7.3–10.3)
Djibouti, 2003	12.5 (10.4–14.9)	6.1 (4.6–7.9)	11.3 (9.2–13.4)	39.5 (36.2–42.9)	72.1 (69.0–75.1)	44.1 (40.7–47.6)	14.9 (12.6–17.6)
Egypt, 2001	13.2 (11.6–15.3)	4.2 (3.1–5.5)	13.2 (11.6–15.1)	32.1 (29.5–34.8)	88.5 (86.8–90.0)	45.9 (43.1–48.7)	21.8 (19.9–24.1)
Egypt, 2005	13.3 (12.0–14.7)	4.0 (3.3–4.9)	10.1 (8.9–11.4)	38.6 (36.7–40.7)	87.5 (86.1–88.8)	57.7 (55.7–59.7)	10.4 (9.2–11.8)
Gaza Strip, 2000	35.5 (33.0–38.0)	9.0 (7.5–10.7)	6.9 (5.6–8.4)	50.9 (48.4–53.4)	85.4 (83.5–87.1)	74.5 (72.2–76.6)	32.1 (29.7–34.6)
Gaza Strip, 2005	21.4 (19.2–23.7)	6.6 (5.4–8.1)	11.7 (10.0–13.6)	47.5 (44.7–50.2)	79.8 (77.6–81.9)	60.5 (57.8–63.1)	8.6 (7.2–10.4)
Iran, 2003	14.2 (13.1–15.4)	2.0 (1.6–2.5)	Not asked	41.8 (40.2–43.3)	89.5 (88.5–90.4)	38.7 (37.1–40.2)	6.6 (5.8–7.4)
Iran, 2007	17.5 (15.3–19.9)	3.1 (2.2–4.3)	16.5 (14.2–19.0)	35.4 (32.4–38.5)	70.3 (67.2–73.2)	29.1 (26.3–32.1)	4.9 (3.7–6.6)
Iraq, 2006	27.1 (24.3–30.3)	11.9 (9.8–14.3)	11.4 (9.4–13.6)	46.5 (43.3–49.7)	78.1 (75.2–80.7)	45.4 (42.1–48.6)	7.4 (5.9–9.3)
Iraq, 2008	7.4 (6.3–8.7)	3.2 (2.5–4.1)	6.3 (5.3–7.4)	32.3 (30.3–34.3)	72.6 (70.6–74.5)	41.8 (39.7–43.9)	7.3 (6.2–8.5)
Jordan, 1999	34.3 (32.5–36.2)	16.6 (15.1–18.1)	9.5 (8.3–10.7)	67.4 (65.6–69.2)	78.3 (76.6–79.8)	52.5 (50.6–54.4)	24.8 (23.1–26.5)
Jordan, 2003	39.4 (37.5–41.4)	17.7 (16.2–19.4)	19.9 (18.4–21.6)	62.9 (61.0–64.9)	75.5 (73.7–77.2)	43.8 (41.9–45.8)	18.4 (16.9–20.0)
Jordan, 2007	26.6 (24.3–29.0)	10.3 (8.8–12.1)	21.6 (19.5–23.8)	66.0 (63.5–68.4)	82.6 (80.5–84.5)	41.8 (39.3–44.4)	13.5 (11.8–15.5)
Kuwait, 2001	22.8 (21.5–24.1)	10.0 (9.1–11.0)	16.2 (15.1–17.4)	42.9 (41.3–44.4)	83.2 (81.9–84.3)	26.8 (25.4–28.2)	20.6 (19.3–21.9)
Kuwait, 2005	25.9 (24.2–27.7)	10.8 (9.6–12.2)	14.5 (13.1–16.0)	44.4 (42.4–46.4)	83.9 (82.4–85.3)	26.8 (25.4–28.2)	9.9 (8.7–11.4)
Lebanon, 2001	27.3 (25.6–29.1)	7.5 (6.5–8.6)	33.4 (31.6–35.2)	77.3 (74.6–78.8)	85.8 (84.4–87.1)	53.6 (52.0–55.8)	11.5 (10.4–12.8)
Lebanon, 2005	26.9 (25.0–28.9)	8.6 (7.4–9.9)	33.8 (31.8–35.9)	78.4 (76.6–80.1)	85.2 (83.6–86.6)	50.9 (48.7–53.1)	10.4 (9.1–11.8)
Libya, 2003	12.3 (10.5–14.4)	4.1 (3.1–5.4)	9.8 (8.2–11.7)	40.4 (37.6–43.3)	77.3 (74.8–79.6)	51.5 (48.6–54.3)	8.2 (6.7–10.0)
Libya, 2007	13.1 (11.1–15.4)	4.6 (3.4–6.2)	7.2 (5.7–8.9)	37.8 (35.0–40.7)	77.1 (74.4–79.5)	48.7 (45.8–51.7)	8.6 (7.1–10.4)
Morocco, 2001	9.6 (8.4–11.0)	2.6 (1.9–3.4)	9.2 (8.0–10.6)	25.1 (23.2–27.1)	78.0 (76.1–79.8)	34.8 (32.7–37.0)	15.3 (13.8–17.0)
Morocco, 2006	9.5 (8.2–10.9)	3.5 (2.8–4.5)	9.0 (7.8–10.4)	27.1 (25.2–29.2)	81.7 (79.9–83.4)	49.6 (47.4–51.9)	5.1 (4.1–6.1)
Oman, 2002	14.4 (12.3–16.7)	6.8 (5.4–8.6)	5.5 (4.2–7.1)	21.0 (18.6–23.6)	88.0 (85.8–89.9)	41.8 (38.7–44.8)	10.1 (8.4–12.1)
Pakistan, 2003	3.7 (2.9–4.7)	0.6 (1.3–1.2)	4.4 (3.5–5.4)	22.8 (20.9–24.8)	96.6 (95.6–97.3)	59.6 (57.2–62.1)	18.4 (16.6–20.3)
Pakistan, 2004 (Kasur)	9.7 (8.2–11.4)	1.1 (0.6–1.8)	5.9 (4.7–7.3)	31.5 (29.0–34.1)	95.2 (93.9–96.3)	58.6 (55.9–61.3)	26.0 (23.7–28.5)
Pakistan, 2004 (Quetta)	12.0 (10.0–14.4)	0.9 (0.5–1.9)	10.9 (9.0–13.2)	33.5 (30.4–36.7)	93.4 (91.6–94.9)	44.6 (41.3–47.9)	18.7 (16.3–21.5)
Pakistan, 2004 (Peshawar)	8.6 (7.1–10.4)	1.0 (0.5–2.0)	5.0 (3.9–6.4)	13.5 (11.6–15.6)	95.4 (93.8)	47.6 (44.5–50.7)	12.4 (10.5–14.4)
Pakistan, 2008	7.6 (5.6–10.3)	2.0 (1.1–3.8)	0.9 (0.4–2.0)	16.1 (13.2–19.3)	87.6 (85.0–89.9)	Not asked	8.1 (6.0–10.7)
Qatar, 2004	22.4 (20.7–24.3)	6.4 (5.4–7.5)	13.7 (12.3–15.3)	30.2 (28.3–32.2)	84.8 (83.2–86.3)	18.7 (17.1–20.4)	8.9 (7.7–10.2)
Qatar, 2007	20.7 (18.1–23.6)	6.5 (5.1–8.3)	10.9 (9.0–13.2)	35.7 (32.6–39.0)	81.3 (78.5–83.8)	49.7 (46.3–53.1)	8.0 (6.3–10.0)
Saudi Arabia, 2001**	28.2 (25.4–31.0)	4.7 (3.6–6.2)	10.3 (8.6–12.3)	25.9 (23.4–28.7)	53.9 (50.7–56.9)	53.9 (50.7–56.9)	18.9 (16.6–21.5)
Saudi Arabia, 2007	26.1 (24.4–27.9)	6.7 (5.8–7.8)	6.8 (5.8–8.0)	27.9 (26.1–29.7)	73.2 (71.4–74.9)	58.8 (56.8–60.7)	7.9 (6.9–9.1)

Table 2 (continued)

Countries and areas	Ever smoked cigarettes % (95% CI)*	Current cigarette smokers % (95% CI)	Current smokeless tobacco users % (95% CI)**	Exposed to smoke from others at home % (95% CI)	Think that smoking should be banned from public places % (95% CI)	Taught dangers of smoking % (95% CI)	Offered free cigarettes % (95% CI)
Somalia, 2004	28.3 (23.5–33.7)	18.6 (14.4–23.6)	18.6 (14.7–23.4)	56.9 (51.6–62.0)	78.1 (73.1–82.3)	44.7 (39.2–50.3)	28.8 (23.7–34.5)
Somalia, 2007	12.6 (10.5–15.1)	5.8 (4.3–7.7)	12.5 (10.4–14.9)	29.1 (26.1–32.2)	75.4 (72.4–78.2)	47.3 (43.9–50.7)	17.8 (15.4–20.6)
Sudan, 2001	17.1 (15.2–19.2)	6.1 (4.9–7.7)	13.5 (11.8–15.4)	29.2 (27.0–31.5)	78.0 (75.8–80.0)	30.0 (27.8–32.3)	12.7 (11.0–14.5)
Sudan, 2005	19.3 (17.7–21.1)	6.0 (5.0–7.2)	2.8 (2.1–3.6)	27.5 (25.6–29.5)	83.8 (82.0–85.5)	31.6 (29.6–33.7)	8.9 (7.7–10.3)
Syria, 2002	11.0 (9.9–12.1)	6.3 (5.5–7.2)	0.5 (0.3–0.8)	54.5 (52.8–56.3)	80.0 (78.6–81.4)	54.6 (52.9–56.4)	7.4 (6.6–8.4)
Syria, 2007	27.4 (25.1–29.7)	12.3 (10.7–14.1)	24.9 (22.8–27.2)	60.1 (57.6–62.6)	77.4 (75.2–79.4)	60.5 (57.9–62.9)	11.8 (10.2–13.5)
Tunisia, 2001	23.0 (21.5–24.6)	11.1 (10.0–12.3)	7.2 (6.3–8.2)	62.4 (60.6–64.1)	87.0 (85.7–88.2)	31.7 (30.0–33.8)	5.5 (4.7–6.4)
Tunisia, 2007	24.6 (22.4–26.9)	8.3 (6.9–9.8)	4.5 (3.5–5.7)	51.9 (49.4–54.5)	85.3 (83.4–87.1)	43.2 (40.7–45.8)	4.8 (3.8–6.1)
UAE, 2002	18.3 (16.6–20.0)	6.8 (5.7–8.1)	8.3 (7.2–9.6)	30.8 (28.8–32.9)	72.1 (70.1–74.1)	44.5 (42.3–46.8)	9.5 (8.3–10.9)
UAE, 2005	22.6 (21.6–23.5)	8.0 (7.4–8.7)	23.6 (22.7–24.6)	25.3 (24.3–26.3)	71.2 (70.0–72.3)	42.8 (41.5–44.1)	9.1 (8.5–9.8)
West Bank, 2000	49.5 (47.9–51.1)	14.2 (13.0–15.4)	9.0 (8.4–9.6)	66.8 (65.3–68.2)	82.5 (81.2–83.7)	53.2 (51.6–54.8)	Not asked
West Bank, 2005	35.4 (32.8–38.1)	18.0 (15.9–20.3)	16.7 (14.7–18.8)	62.4 (59.6–65.1)	78.3 (75.9–80.6)	60.3 (57.5–63.1)	9.9 (8.3–11.7)
Yemen, 2003	15.3 (14.5–16.1)	5.3 (4.8–5.8)	14.6 (13.8–15.4)	44.0 (42.9–45.1)	78.1 (77.2–79.0)	42.7 (41.7–43.8)	19.6 (18.7–20.6)
Yemen, 2008	14.0 (11.2–17.4)	3.9 (2.6–6.0)	4.5 (2.9–6.8)	44.9 (40.9–49.1)	72.5 (68.7–76.0)	39.3 (35.3–43.4)	9.3 (7.1–12.0)

* Confidence interval.

** Only boys were included in the survey.

Table 3 Exposure to media and advertisement of tobacco products, smoking cessation and dependency.

Countries and areas	Saw actors smoking on TV, in videos, or in movies % (95% CI)	Saw ads for cigarettes on billboards in past month % (95% CI)	Current smokers who tried to stop during the past year % (95% CI)	Current smokers who have or feel like having a cigarette first thing in the morning % (95% CI)	Current smokers who usually buy their cigarettes in a store and were not refused purchase because of their age % (95% CI)
Afghanistan, 2004	83.1 (78.5–86.7)	65.4 (60.0–70.4)	50.0 (21.5–78.6)	28.0 (7.3–66.0)	33.8 (14.0–71.9)
Bahrain, 2001	93.2 (91.8–94.4)	78.8 (76.6–80.9)	39.9 (32.0–48.4)	44.1 (36.0–52.6)	43.2 (35.2–51.7)
Djibouti, 2003	76.9 (73.9–79.8)	73.4 (70.2–76.3)	44.8 (31.0–59.4)	39.1 (26.1–53.8)	46.3 (32.4–60.8)
Egypt, 2001	89.3 (87.4–91.0)	71.8 (69.1–74.4)	37.7 (25.0–52.3)	33.3 (21.4–47.8)	56.1 (41.7–69.6)
Egypt, 2005	89.5 (88.2–90.7)	57.6 (55.6–59.6)	43.3 (33.6–53.5)	30.6 (22.1–40.8)	44.3 (34.4–54.7)
Gaza Strip, 2000	88.1 (86.3–89.6)	71.5 (69.2–73.6)	45.1 (35.6–55.1)	23.1 (15.9–32.2)	55.4 (45.5–65.0)
Gaza Strip, 2005	79.9 (77.7–82.1)	72.7 (70.2–75.1)	38.2 (28.1–49.4)	10.3 (5.5–18.6)	49.1 (38.2–60.1)
Iran, 2003	90.4 (89.4–91.3)	53.3 (51.7–54.9)	34.7 (24.4–46.6)	24.3 (15.5–36.1)	54.8 (42.9–66.1)
Iran, 2007	91.4 (89.5–93.1)	55.8 (52.5–59.0)	36.4 (20.9–55.4)	20.1 (9.0–39.0)	50.6 (31.8–69.2)
Iraq, 2006	72.7 (69.7–75.6)	44.3 (41.1–47.6)	37.1 (27.7–47.7)	35.6 (26.3–46.1)	59.5 (49.1–69.1)
Iraq, 2008	76.1 (74.2–77.9)	67.9 (65.8–69.9)	34.3 (23.2–47.5)	13.4 (7.1–23.7)	48.9 (35.8–62.1)
Jordan, 1999	85.0 (83.6–86.3)	64.6 (62.8–66.4)	41.1 (36.3–46.1)	21.8 (17.9–26.3)	42.0 (37.1–47.2)
Jordan, 2003	83.2 (81.7–84.7)	73.4 (71.6–75.1)	39.6 (34.6–44.8)	37.3 (32.5–42.5)	54.6 (49.4–59.7)
Jordan, 2007	84.6 (82.6–86.4)	72.0 (69.6–74.3)	34.4 (26.5–43.2)	22.9 (16.4–31.0)	52.3 (43.6–60.8)
Kuwait, 2001	92.9 (92.1–93.7)	83.8 (82.6–84.9)	11.2 (8.3–15.0)	39.4 (34.5–44.6)	53.6 (48.4–58.7)
Kuwait, 2005	93.6 (92.6–94.5)	82.8 (81.2–84.2)	47.3 (41.0–53.7)	8.1 (5.2–12.5)	55.0 (48.5–61.3)
Lebanon, 2001	94.9 (94.1–95.7)	Not asked	32.3 (26.0–39.4)	25.5 (19.8–32.3)	58.1 (50.9–65.0)
Lebanon, 2005	97.0 (96.2–97.6)	88.4 (87.0–89.7)	32.7 (25.8–40.4)	22.9 (17.0–30.1)	44.0 (36.5–51.8)
Libya, 2003	82.5 (80.2–84.6)	54.6 (51.7–57.5)	47.3 (32.7–62.4)	2.1 (0.3–14.1)	34.7 (23.9–52.4)
Libya, 2007	80.6 (78.2–82.8)	63.3 (60.4–66.1)	30.7 (17.4–48.3)	30.1 (18.1–45.6)	45.8 (17.5–48.9)
Morocco, 2001	88.5 (87.0–89.8)	49.6 (47.4–51.8)	31.6 (19.6–46.6)	37.1 (23.9–52.5)	31.5 (19.5–46.6)
Morocco, 2006	90.0 (88.5–91.3)	58.1 (55.9–60.3)	24.9 (15.5–37.6)	24.1 (14.6–37.0)	48.1 (35.0–61.4)
Oman, 2002	84.8 (82.4–86.9)	62.8 (59.7–65.7)	28.5 (18.4–41.2)	41.5 (30.1–53.9)	60.1 (47.4–71.6)
Pakistan, 2003	80.6 (78.6–82.5)	80.5 (78.5–82.4)	61.6 (31.3–84.9)	3.2 (0.6–15.1)	52.4 (22.9–80.3)
Pakistan, 2004 (Kasur)	55.3 (52.6–57.9)	71.7 (69.2–74.2)	57.4 (30.5–80.5)	0	34.1 (13.4–63.4)
Pakistan, 2004 (Quetta)	72.7 (69.6–75.6)	71.3 (68.2–74.2)	34.6 (7.7–77.2)	0	24.9 (3.5–75.2)
Pakistan, 2004 (Peshawar)	64.4 (61.4–67.2)	65.1 (62.1–68.0)	44.3 (13.1–80.8)	46.5 (13.1–83.3)	46.4 (13.9–82.3)
Pakistan, 2008	75.8 (72.5–78.9)	57.3 (53.4–61.1)	59.4 (23.3–87.6)	14.5 (2.3–54.1)	73.2 (33.7–93.6)
Qatar, 2004	88.6 (87.2–89.9)	71.0 (69.1–72.9)	36.9 (29.0–45.6)	20.8 (14.6–28.7)	50.7 (41.9–59.3)
Qatar, 2007	88.5 (86.3–90.4)	70.2 (67.0–73.2)	32.6 (21.4–46.1)	15.3 (8.1–27.1)	58.1 (44.1–70.9)
Saudi Arabia, 2001**	80.2 (77.7–82.5)	63.6 (60.6–66.5)	49.3 (35.4–63.3)	26.0 (15.4–40.5)	55.5 (40.7–69.4)
Saudi Arabia, 2007	83.8 (82.3–85.2)	60.9 (58.9–62.8)	42.2 (34.5–50.2)	40.2 (32.6–48.3)	53.5 (45.5–61.3)
Somalia, 2004	53.0 (47.6–58.3)	80.0 (75.3–84.0)	33.8 (21.0–49.4)	23.4 (12.7–39.0)	15.9 (7.4–30.9)

Table 3 (continued)

Countries and areas	Saw actors smoking on TV, in videos, or in movies % (95% CI)	Saw ads for cigarettes on billboards in past month % (95% CI)	Current smokers who tried to stop during the past year % (95% CI)	Current smokers who have or feel like having a cigarette first thing in the morning % (95% CI)	Current smokers who usually buy their cigarettes in a store and were not refused purchase because of their age % (95% CI)
Somalia, 2007	57.0 (53.7–60.3)	76.0 (73.0–78.8)	30.2 (16.7–48.3)	18.4 (8.9–34.1)	30.9 (18.1–47.6)
Sudan, 2001	85.7 (83.9–87.4)	56.5 (53.9–58.9)	33.0 (22.7–45.2)	33.2 (22.7–45.6)	43.7 (31.9–56.3)
Sudan, 2005	86.3 (84.5–87.8)	51.5 (49.3–53.7)	33.0 (25.4–41.7)	23.4 (16.3–32.3)	29.7 (22.2–38.5)
Syria, 2002	88.0 (86.7–89.1)	63.0 (61.3–64.7)	45.1 (38.1–52.2)	25.6 (19.8–32.4)	43.1 (36.2–50.3)
Syria, 2007	90.6 (89.0–92.0)	59.2 (56.6–61.7)	34.2 (27.6–41.6)	25.8 (20.0–32.8)	36.7 (29.9–44.1)
Tunisia, 2001	94.6 (93.7–95.3)	61.8 (60.0–63.6)	36.5 (31.4–41.9)	10.8 (7.6–15.1)	58.0 (52.4–63.3)
Tunisia, 2007	95.1 (93.8–96.1)	64.5 (61.9–66.9)	40.0 (31.2–49.4)	1.7 (0.4–6.9)	48.5 (39.1–57.9)
UAE, 2002	86.2 (84.5–87.7)	75.7 (73.7–77.6)	36.0 (28.0–44.9)	26.8 (19.4–35.8)	46.4 (29.7–46.8)
UAE, 2005	89.8 (89.1–90.5)	69.2 (68.2–70.3)	36.7 (32.7–40.8)	29.1 (25.4–33.0)	34.9 (31.2–39.0)
West Bank, 2000	87.6 (86.5–88.6)	68.9 (67.4–70.3)	46.0 (41.5–50.6)	20.5 (17.1–24.4)	47.8 (43.3–52.4)
West Bank, 2005	87.5 (85.5–89.2)	70.6 (67.9–73.1)	40.5 (34.0–47.3)	9.6 (6.4–14.2)	44.1 (37.5–50.9)
Yemen, 2003	82.0 (81.2–82.9)	80.4 (79.5–81.3)	46.2 (41.0–51.5)	0.4 (0.1–2.5)	41.9 (36.9–47.1)
Yemen, 2008	63.8 (59.7–63.6)	61.5 (57.4–65.4)	26.1 (10.9–50.6)	0	37.0 (16.2–64.0)

** Only boys were included in the survey.

The prevalence of the use of smokeless tobacco ranged between 0.5% in Syria (2002) and 33.8% in Lebanon (2005). It has decreased dramatically in Libya, Sudan, and Yemen; increased substantially in Syria, Jordan, and the United Arab Emirates (UAE); and increased and decreased in Pakistan over time.

3.2. Exposure to SHS and information about dangers of tobacco (Table 2; Web Appendix A, Table A3)

The prevalence of exposure to SHS at home varied between 78.4% in Lebanon (2005) and 13.5% in Pakistan (Peshawar, 2004). It decreased dramatically in Iraq and Somalia; increased in Egypt, Qatar, and Syria; and decreased then increased in Jordan over time.

The prevalence of exposure to smoke from others in public places varied between 78.1% (Iraq, 2006) and 28.5% (Pakistan, 2003). It decreased dramatically in Iran and Iraq, increased in Lebanon and Syria, and increased then decreased in Pakistan over time.

The prevalence of thinking that smoking should be banned from public places varied between 96.6% (Pakistan, 2003) and 70.3% (Iran, 2007). It decreased dramatically in Iran, Pakistan, and Somalia; increased in Saudi Arabia; and decreased then increased again in Jordan over time.

The prevalence of classes on the dangers of smoking was 74.5% in the Gaza Strip (2000) and 18.7% in Qatar (2004). It decreased dramatically in Jordan and Pakistan and increased in Qatar over time.

Around 50% of the youth in the Gaza Strip (2000) and 20.1% in Yemen (2003) had previously discussed in school the reasons why people in their age group smoke. The prevalence of classes on the effects of smoking was 64.2% in the Gaza Strip (2000) and 17.4% in Qatar (2004). Overall, the prevalence of discussing why people of their age smoke and effects of smoking decreased dramatically in the Gaza Strip, Jordan, and Lebanon, and increased in Egypt, Qatar, Tunisia, and the West Bank over time.

3.3. Exposure to media and advertisement of tobacco products (Table 3; Web Appendix A, Table A4)

More than 90% of youth saw actors smoking on television, in videos, and in movies in the month before the survey in Bahrain (2001), Iran, Kuwait, Leba-

non, Syria (2007), and Tunisia. The effect of such media exposure has dramatically decreased in Yemen while increasing over time in Saudi Arabia and Somalia.

More than 80% of the young population was exposed to cigarette ads displayed on billboards in the past month prior to the survey in Kuwait, Lebanon (2005), Pakistan (2003), and Yemen (2003). Exposure dramatically decreased in Egypt and Lebanon and increased in Iraq over time.

Around 89% of the youth in Kuwait (2001) and 33.4% in Afghanistan saw ads for cigarettes in newspapers or magazines in the month before the survey. It dramatically decreased in Egypt and increased in Iraq, Lebanon, and Saudi Arabia over time.

More than 66% of adolescents in the Gaza Strip (2000), Lebanon (2001), and Sudan (2005) saw ads for cigarettes at a sporting event in the month prior to the start of the survey. This dramatically decreased in the Gaza Strip and increased in Sudan over time.

The ownership of objects with a cigarette-brand logo was found to be 33.1% in the West Bank (2000) and 9.2% in Saudi Arabia (2001). It dramatically decreased in the Gaza Strip and the West Bank and increased in Qatar and Sudan over time.

The prevalence of being offered free cigarettes varied between 32.1% (Gaza Strip, 2000) and 4.8% (Tunisia, 2007). It decreased dramatically in the Gaza Strip and increased and then decreased in Pakistan over time.

3.4. Smoking cessation and dependency and minors' access to tobacco products (Table 3; Web Appendix A, Table A5)

More than 50% of current smokers in Djibouti, Iraq (2006), Morocco (2001), Oman, Pakistan (Kasur, 2004), Tunisia, and Yemen (2003) have desired to stop smoking. This percentage has decreased dramatically in Iraq and increased in Egypt and Somalia over time.

Around 61% of current smokers in Pakistan (2003) and 11% in Kuwait (2001) have tried to stop smoking during the past year. This has dramatically decreased in Yemen, increased in Kuwait, and decreased and then increased in Jordan and Pakistan over time.

More than 90% of current smokers in Afghanistan, the Gaza Strip (2000), Kuwait (2001), Tunisia (2001), and Yemen have received prior help to stop smoking. It dramatically decreased in Somalia, increased in Iran, and increased and

then decreased in Pakistan and the West Bank over time.

More than 46% of current smokers in Pakistan (Peshawar, 2004) and 0.4% in Yemen (2003) have or feel like having a cigarette first thing in the morning. It dramatically decreased in Kuwait, increased in Libya, and increased and then decreased in Jordan over time.

More than 70% of current adolescent smokers in Pakistan (2008) and 15.9% in Somalia (2004) usually buy their cigarettes in a store and were not refused purchase because of their age. It significantly increased in Somalia, Morocco, Libya, and Pakistan, and decreased in Sudan over time.

A detailed description of gender differences can be found in Web Appendix A.

4. Discussion

To the best of the researchers' knowledge, this manuscript is the first to examine the WHO FCTC articles and GYTS data for each country in this region. These results show that there is a major problem with tobacco in these countries. In fact, four WHO EMR areas (Gaza Strip, Morocco, Somalia, and the West Bank) have not yet ratified the FCTC recommendations. The prevalence of ever smoking in the Gaza Strip (2000), Jordan (1999, 2003), and the West Bank was found to be higher than the average observed in the Western Pacific (30.3%), Southeast Asia (9.9%), Eastern Mediterranean (14.8%), and Africa regions (22.9%) [7]. Regardless, the overall prevalence of ever cigarette smoking was lower in the WHO EMR areas combined compared with the WHO regions of the Americas (49.4%) and Europe (44.1%). However, the prevalence of current cigarette smoking was higher in Jordan (1999, 2003), Somalia (2004), and the West Bank (2005) in comparison with the average estimated for the WHO regions of the European (19.2%), Americas (14.3%), Western Pacific (13.4%), Southeast Asia (5.9%), Eastern Mediterranean (4.9%), and Africa (8.0%) regions [7].

In 18 WHO EMR countries, the GYTS was conducted more than once, which allowed comparison between a baseline and repeated surveys. As a result, several urgent public health problems were identified in the repeated survey. First, current smokeless tobacco use was significantly higher than cigarette smoking. Second, in the Gaza Strip, Jordan, Lebanon, Pakistan, Syria, the United Arab Emirates and the West Bank, more adolescents may start to smoke within the next year. Third, in five countries of the EMR region, fewer youth

supported a ban on smoking in public places (Gaza Strip, Iran, Iraq, Pakistan and Yemen); in four countries, more youth saw actors smoking on television (Iraq, Jordan, Libya and Morocco) and were exposed to SHS outside their homes (Lebanon, Libya, Pakistan and Syria).

The following positive changes were identified in the repeated survey compared with the baseline survey: fewer youth were offered free cigarettes in 10 countries; in 8 countries they saw less advertisement on television; in 7 countries they had less items with a tobacco-brand logo and were able to discuss the reasons for smoking and its dangers, and were less exposed to SHS at home; and in 6 countries, the youth saw fewer advertisements at sports events.

This study has some limitations that are worth mentioning. First, smoking was self-reported and not validated using biomarkers such as salivary cotinine. Secondly, the GYTS is limited to students who are not representative of all young individuals aged 13–15 years. However, in the majority of countries in this region, school enrollment is over 90% [25]. Finally, the GYTS was conducted in different years and in different countries; some of the surveys are nationally representative and some were collected in the capital city. On the other hand, this study has the following strengths: first, all GYTS surveys use exactly the same sampling procedures, core questionnaire items, and trainings in field procedures. Secondly, the analysis of data is consistent and comparable across all survey sites and over time. Thirdly, the GYTS was designed in a way to help countries monitor some articles of the WHO FCTC. Finally, it has substantial implications for monitoring specific WHO FCTC articles and progress in implementing tobacco control programs among youth.

This study allows for examining the current tobacco burden in the EMR countries in relation to the current tobacco control policies reported within the WHO FCTC articles. The assessment of the six articles and their effect on tobacco use and knowledge are described in more detail below.

4.1. WHO FCTC Article 21: Reporting and exchange of information

All countries in this region followed the WHO recommendations on monitoring tobacco use in order to inform tobacco control policies as well as conducting the GYTS at least once.

Current cigarette smoking was higher among young males than among young females in all coun-

tries, which was comparable with the findings from other GYTS sites. Furthermore, the surveys have shown that the difference in current cigarette smoking between male and female youth is less than the difference between adult men and women [5,6,13]. This could be attributed to the fact that transnational tobacco companies are targeting young females and directing their initial marketing and distribution efforts to major cities [26,27].

At the same time, the specific role of smokeless tobacco in the regional tobacco epidemic should also be mentioned. This study has found that the prevalence of smokeless tobacco is in fact higher than cigarette smoking, which is consistent with the results from other studies [9,12,17,18,20,21]. Moreover, the prevalence of smokeless tobacco has been reported to be high specifically among young females in this region; for example, in Lebanon, 29.9% of young females used smokeless tobacco. This higher prevalence of smokeless tobacco in the region could be explained by local traditions, less stigma [20,21], cost [11], and the perception that it is less harmful than cigarettes [19,20]. Also, it is socially acceptable in the Middle East for a father to offer his teenage children a puff from a water pipe [17]. Recent studies have shown that smokeless tobacco is associated with many health outcomes including cancer, chronic obstructive pulmonary disease, and coronary artery diseases [11,28,29].

4.2. WHO FCTC Article 8: Protection from exposure to tobacco smoke

In the EMR countries, exposure to SHS is higher in public places than at home, except for the following areas: the Gaza Strip (2000, 2005), Iraq (2008), Jordan (1999, 2007), Lebanon, Libya (2003), Syria, the West Bank, and Yemen (2008).

All the WHO EMR countries have smoke-free policies that have been signed and approved [4,30]. However, the compliance level differs considerably between countries. For example, up to two places are smoke-free in Bahrain, Iraq, Kuwait, Oman, Qatar, Somalia, Sudan, Tunisia, and Yemen with no information about compliance levels; while three to five places are smoke-free in Afghanistan, Jordan, Lebanon, Morocco, Saudi Arabia, and UAE with moderate and minimal compliance; six to seven places are smoke-free with minimal compliance in Egypt, moderate compliance in Syria, and complete compliance in the West Bank and the Gaza Strip; all public places are completely smoke-free in Iran (complete compliance), Libya (moderate compliance), and Pakistan (minimal compliance). In Lebanon, however, a law exists

that allows hotels to allocate 20% of their available rooms for smokers [30,31].

4.3. WHO FCTC Article 12: Education, communication, training and public awareness

The present survey cannot assess the quality of educational classes on the dangers and the effects of smoking. While greater levels of teaching are positive for tobacco control, it is important that in each country the ministry of health and ministry of education work together in order to meet the objectives of Article 12 of the WHO FCTC on education, communication, training, and public awareness [3]. However, school programs alone cannot be an effective tobacco control strategy. A review of the effect of school-based tobacco prevention programs has shown that educational programs will be most successful if they occur after other tobacco control policies are in place, such as tax and price policies that aim at reducing tobacco consumption, producing a 100% smoke-free environment in all public places and workplaces, and comprehensively banning all tobacco advertisements, promotions, and sponsorships [32].

In Lebanon, the national curriculum includes classes on raising tobacco awareness [19], but the percentage of students who have actually had classes on smoking was reported to be around 50% and has decreased over the past years.

4.4. WHO FCTC Article 13: Tobacco advertising, promotion, and sponsorship

As the number of countries that have imposed bans on direct advertisements has increased, the tobacco industry has also increased its indirect advertising methods, such as sponsoring events, putting their logos on promotional items, brand stretching, giving away free samples at events popular with young people, and sponsoring entertainment events [33]. Regardless of these efforts, a substantial proportion of young individuals saw actors smoking on television; were exposed to tobacco advertisements on billboards, in newspapers or magazines, or at sporting events; had an object with a tobacco-brand logo on it; or were offered free cigarettes during the last month prior to the survey.

According to WHO FCTC recommendations, countries are required to "undertake a comprehensive ban on tobacco advertisement, promotion and sponsorship within 5 years of ratification." Even though Egypt, Libya, Oman, Pakistan, and Saudi Arabia had endorsed the WHO FCTC 5 years

ago and are subject to the banning regulations [4,31], there was no evident ban on all forms of direct and indirect advertisement, and the enforcement has been rather moderate. In Djibouti, Iran, Jordan, Kuwait, Qatar, Sudan, Syria, and the UAE, on the other hand, the compliance with the prohibition law has been moderate to complete. In Pakistan and Oman, this ban does not apply to the national television, radio, and print media. In September 2011, the Lebanese government approved a law that entails the complete ban on tobacco advertisement and promotion [31]. Moreover, little reduction has been observed in terms of seeing actors smoking on television or appearing in ads for cigarettes on billboards (except in Egypt and Yemen) and in newspapers and magazines. In addition, the attempts to reduce the cigarette promotion ads at sporting events, distribution of objects with a tobacco-brand logo on it, and offering free cigarettes have not been successful.

4.5. WHO FCTC Article 14: Demand reduction measures concerning tobacco dependence and cessation

In most of the countries examined, more current smokers have desired to stop smoking (except in Iraq, Libya, Morocco, Sudan, Syria, the UAE, and Yemen); however, in the Gaza Strip, Iraq, Libya, Morocco, Pakistan, Somalia, Syria, Tunisia, the West Bank and Yemen, the number of current smokers who have actually tried to stop during the past year has decreased. Also, in the Gaza Strip, Iraq, Kuwait, Lebanon, Libya, Qatar, Somalia, Sudan, Syria, Tunisia, the UAE, and Yemen, fewer smokers got advice on smoking cessation. It is not surprising to see no change or only a few changes in the smoking cessation patterns, because only four countries (Bahrain, Iran, Saudi Arabia, and the UAE) have national programs for people who want to quit smoking and cover the cost of both nicotine replacement therapy (NRT) and some cessation services; five countries (Egypt, Jordan, Kuwait, Qatar, and Syria) have NRT or some cessation services (at least one of which covers the cost); three countries (Yemen, Sudan, and Somalia) have no smoking cessation programs, and the rest of the countries have NRT or some cessation services (neither cost covered) [4,31]. Even if smoking cessation programs are available, it is not clear how easily accessible they are for the young individuals.

It is also noteworthy to mention that, over time, fewer young individuals feel like having a cigarette

first thing in the morning (except in Jordan, Libya, Pakistan, and the UAE).

4.6. WHO FCTC Article 16: Sales to and by minors

The WHO FCTC recommends that the sale of tobacco products should be prohibited to individuals under the age of 18. This survey showed that, in the majority of countries, more than 40% of the current 13- to 15-year-old smokers were not refused the purchase of cigarettes in stores. This is true despite the fact that all countries in this region have a law prohibiting the sale of tobacco products or individual cigarettes to minors [31].

5. Conclusion

The most recent available data has been used in this study; however, these findings call for newer data to be collected in the region to better inform policy and monitor success. Nevertheless, this study provides valuable information for policymakers and health professionals in the EMR countries. It is crucial that the data is used as a baseline point for decision-making concerning National Tobacco Control Action Plans. Extensive efforts to increase awareness about the harm of tobacco in this region are urgently needed. Programs and policies should aim to prevent smoking initiation among youth. Moreover, further efforts should target media and advertisement of tobacco products.

Conflict of interest

None declared.

Appendix A.

Comparison between female and male

- prevalence of ever smoking and current smoking
- initiation of smoking in the next year and before age 10, except for Djibouti and Egypt
- use of other tobacco products, except for Somalia (2004)
- being exposed to SHS in public places, except for Iraq (2008) and Lebanon (2005)
- classes about the dangers of smoking, except for the Gaza Strip (2000); Iraq (2008); Jordan (1999); Kuwait (2001); Libya (2003, 2007), Morocco (2001), Pakistan (2003), (2004, Kasur, Quetta); Sudan, 2001; Syria, 2002; Tunisia, 2007; and UAE, 2002
- discussion of reasons why people of their age smoke, except for the Gaza Strip, 2000; Jordan, 2003; Libya,

Table A1. Articles of WHO FCTC and GYTS related measures.

Articles of WHO FCTC	GYTS measures
<p><i>Article 21 Reporting and exchange of information</i> Each Party shall submit to the Conference of Parties, through secretariat periodic reports on its implementation of this Convention which should include the following: (d) Information on surveillance and research as specified in article 20 (research, surveillance and exchange of information) of this Convention.</p>	<p>Ever smoked cigarettes Current cigarette smoking Current smokeless tobacco users Initiating smoking before age 10 Likelihood of smoking initiation by never smokers during the next 12 months</p>
<p><i>Article 8 Protection from exposure to tobacco smoke</i> Each Party shall adopt and implement in areas of existing national jurisdiction as determined by national law and actively promote at other jurisdictional levels the adoption and implementation of effective legislative, executive, administrative and/or other measures, providing for protection from exposure to tobacco smoke in indoor workplaces, public transport, indoor public places and, as appropriate, other public places.</p>	<p>Exposure to SHS at home Exposure to SHS in public places Opinion about smoking ban in public places</p>
<p><i>Article 12 Education, communication, training and public awareness</i> Each Party shall promote and strengthen public awareness of tobacco control issues, using all available communication tools, as appropriate. Toward this end, each Party shall adopt and implement effective legislative, executive, administrative or other measures to promote: (f) Public awareness of and access to information regarding the adverse health, economic, and environmental consequences of tobacco production and consumption.</p>	<p>Taught about the dangers of smoking in school Taught about effects of smoking in school Discussed reasons why people of their age smoke in school</p>
<p><i>Article 13 Tobacco advertising, promotion and sponsorship</i> Each Party shall, in accordance with its constitution or constitutional principles, undertake a comprehensive ban of all tobacco advertising, promotion and sponsorship. This shall include, subject to the legal environment and technical means available to that Party, a comprehensive ban on cross-border advertising, promotion and sponsorship originating from its territory.</p>	<p>Saw actors smoking on TV, in videos, or in movies Saw ads for cigarettes on billboards in city Saw ads in newspapers or magazines Saw ads at sports events Owning an object with a cigarette brand logo on it Being offered a free cigarette by tobacco company</p>
<p><i>Article 14 Demand reduction measures concerning tobacco dependence and cessation</i> Each Party shall develop and disseminate appropriate, comprehensive and integrated guidelines based on scientific evidence and best practices, taking into account national circumstances and priorities, and shall take effective measures to promote cessation of tobacco use and adequate treatment for tobacco dependence.</p>	<p>Current smokers who desire to stop smoking Current smokers who tried to stop during the past year Current smokers who received help to stop smoking Current smokers who have or feel like having a cigarette first thing in the morning</p>
<p><i>Article 16 Sales to and by minors</i> Each Party shall adopt and implement effective legislative, executive, administrative or other measures at the appropriate government level to prohibit the sales of tobacco products to persons under the age set by domestic law, national law or eighteen.</p>	<p>Current smokers who were not refused purchase of cigarettes because of their age</p>

Table A3. Exposure to SES (article 8 of WHO FCTC) and information about dangers of tobacco (article 13 of WHO FCTC).

Countries	Exposed to smoke from others at home % (95% CI)				Think that smoking should be banned from public places % (95% CI)				Tough dangers of smoking % (95% CI)				Discussed reasons people their age smoke % (95% CI)				Tough about the effects of smoking % (95% CI)			
	Total	Boy	Girl	Total	Boy	Girl	Total	Boy	Girl	Total	Boy	Girl	Total	Boy	Girl	Total	Boy	Girl		
Algerian, 2004	38.8 (35.4-44.5)	46.3 (39.5-57.4)	60.2 (52.4-65.6)	23.6 (22.0-31.4)	83.9 (79.4-87.6)	83.2 (76.7-88.2)	68.4 (77.8-89.8)	120.6 (109.2-131.8)	67.8 (65.4-69.2)	67.8 (65.4-69.2)	120.6 (109.2-131.8)	39.4 (35.4-43.9)	23.0 (18.7-28.1)	26.6 (20.0-33.9)	41.8 (28.2-55.8)	26.6 (20.0-33.9)	41.8 (28.2-55.8)			
Algerian, 2007	38.8 (35.4-44.5)	46.3 (39.5-57.4)	60.2 (52.4-65.6)	23.6 (22.0-31.4)	83.9 (79.4-87.6)	83.2 (76.7-88.2)	68.4 (77.8-89.8)	120.6 (109.2-131.8)	67.8 (65.4-69.2)	67.8 (65.4-69.2)	120.6 (109.2-131.8)	39.4 (35.4-43.9)	23.0 (18.7-28.1)	26.6 (20.0-33.9)	41.8 (28.2-55.8)	26.6 (20.0-33.9)	41.8 (28.2-55.8)			
Algerian, 2008	38.8 (35.4-44.5)	46.3 (39.5-57.4)	60.2 (52.4-65.6)	23.6 (22.0-31.4)	83.9 (79.4-87.6)	83.2 (76.7-88.2)	68.4 (77.8-89.8)	120.6 (109.2-131.8)	67.8 (65.4-69.2)	67.8 (65.4-69.2)	120.6 (109.2-131.8)	39.4 (35.4-43.9)	23.0 (18.7-28.1)	26.6 (20.0-33.9)	41.8 (28.2-55.8)	26.6 (20.0-33.9)	41.8 (28.2-55.8)			
Algerian, 2009	38.8 (35.4-44.5)	46.3 (39.5-57.4)	60.2 (52.4-65.6)	23.6 (22.0-31.4)	83.9 (79.4-87.6)	83.2 (76.7-88.2)	68.4 (77.8-89.8)	120.6 (109.2-131.8)	67.8 (65.4-69.2)	67.8 (65.4-69.2)	120.6 (109.2-131.8)	39.4 (35.4-43.9)	23.0 (18.7-28.1)	26.6 (20.0-33.9)	41.8 (28.2-55.8)	26.6 (20.0-33.9)	41.8 (28.2-55.8)			
Algerian, 2010	38.8 (35.4-44.5)	46.3 (39.5-57.4)	60.2 (52.4-65.6)	23.6 (22.0-31.4)	83.9 (79.4-87.6)	83.2 (76.7-88.2)	68.4 (77.8-89.8)	120.6 (109.2-131.8)	67.8 (65.4-69.2)	67.8 (65.4-69.2)	120.6 (109.2-131.8)	39.4 (35.4-43.9)	23.0 (18.7-28.1)	26.6 (20.0-33.9)	41.8 (28.2-55.8)	26.6 (20.0-33.9)	41.8 (28.2-55.8)			
Algerian, 2011	38.8 (35.4-44.5)	46.3 (39.5-57.4)	60.2 (52.4-65.6)	23.6 (22.0-31.4)	83.9 (79.4-87.6)	83.2 (76.7-88.2)	68.4 (77.8-89.8)	120.6 (109.2-131.8)	67.8 (65.4-69.2)	67.8 (65.4-69.2)	120.6 (109.2-131.8)	39.4 (35.4-43.9)	23.0 (18.7-28.1)	26.6 (20.0-33.9)	41.8 (28.2-55.8)	26.6 (20.0-33.9)	41.8 (28.2-55.8)			
Algerian, 2012	38.8 (35.4-44.5)	46.3 (39.5-57.4)	60.2 (52.4-65.6)	23.6 (22.0-31.4)	83.9 (79.4-87.6)	83.2 (76.7-88.2)	68.4 (77.8-89.8)	120.6 (109.2-131.8)	67.8 (65.4-69.2)	67.8 (65.4-69.2)	120.6 (109.2-131.8)	39.4 (35.4-43.9)	23.0 (18.7-28.1)	26.6 (20.0-33.9)	41.8 (28.2-55.8)	26.6 (20.0-33.9)	41.8 (28.2-55.8)			
Algerian, 2013	38.8 (35.4-44.5)	46.3 (39.5-57.4)	60.2 (52.4-65.6)	23.6 (22.0-31.4)	83.9 (79.4-87.6)	83.2 (76.7-88.2)	68.4 (77.8-89.8)	120.6 (109.2-131.8)	67.8 (65.4-69.2)	67.8 (65.4-69.2)	120.6 (109.2-131.8)	39.4 (35.4-43.9)	23.0 (18.7-28.1)	26.6 (20.0-33.9)	41.8 (28.2-55.8)	26.6 (20.0-33.9)	41.8 (28.2-55.8)			
Algerian, 2014	38.8 (35.4-44.5)	46.3 (39.5-57.4)	60.2 (52.4-65.6)	23.6 (22.0-31.4)	83.9 (79.4-87.6)	83.2 (76.7-88.2)	68.4 (77.8-89.8)	120.6 (109.2-131.8)	67.8 (65.4-69.2)	67.8 (65.4-69.2)	120.6 (109.2-131.8)	39.4 (35.4-43.9)	23.0 (18.7-28.1)	26.6 (20.0-33.9)	41.8 (28.2-55.8)	26.6 (20.0-33.9)	41.8 (28.2-55.8)			
Algerian, 2015	38.8 (35.4-44.5)	46.3 (39.5-57.4)	60.2 (52.4-65.6)	23.6 (22.0-31.4)	83.9 (79.4-87.6)	83.2 (76.7-88.2)	68.4 (77.8-89.8)	120.6 (109.2-131.8)	67.8 (65.4-69.2)	67.8 (65.4-69.2)	120.6 (109.2-131.8)	39.4 (35.4-43.9)	23.0 (18.7-28.1)	26.6 (20.0-33.9)	41.8 (28.2-55.8)	26.6 (20.0-33.9)	41.8 (28.2-55.8)			
Algerian, 2016	38.8 (35.4-44.5)	46.3 (39.5-57.4)	60.2 (52.4-65.6)	23.6 (22.0-31.4)	83.9 (79.4-87.6)	83.2 (76.7-88.2)	68.4 (77.8-89.8)	120.6 (109.2-131.8)	67.8 (65.4-69.2)	67.8 (65.4-69.2)	120.6 (109.2-131.8)	39.4 (35.4-43.9)	23.0 (18.7-28.1)	26.6 (20.0-33.9)	41.8 (28.2-55.8)	26.6 (20.0-33.9)	41.8 (28.2-55.8)			
Algerian, 2017	38.8 (35.4-44.5)	46.3 (39.5-57.4)	60.2 (52.4-65.6)	23.6 (22.0-31.4)	83.9 (79.4-87.6)	83.2 (76.7-88.2)	68.4 (77.8-89.8)	120.6 (109.2-131.8)	67.8 (65.4-69.2)	67.8 (65.4-69.2)	120.6 (109.2-131.8)	39.4 (35.4-43.9)	23.0 (18.7-28.1)	26.6 (20.0-33.9)	41.8 (28.2-55.8)	26.6 (20.0-33.9)	41.8 (28.2-55.8)			
Algerian, 2018	38.8 (35.4-44.5)	46.3 (39.5-57.4)	60.2 (52.4-65.6)	23.6 (22.0-31.4)	83.9 (79.4-87.6)	83.2 (76.7-88.2)	68.4 (77.8-89.8)	120.6 (109.2-131.8)	67.8 (65.4-69.2)	67.8 (65.4-69.2)	120.6 (109.2-131.8)	39.4 (35.4-43.9)	23.0 (18.7-28.1)	26.6 (20.0-33.9)	41.8 (28.2-55.8)	26.6 (20.0-33.9)	41.8 (28.2-55.8)			
Algerian, 2019	38.8 (35.4-44.5)	46.3 (39.5-57.4)	60.2 (52.4-65.6)	23.6 (22.0-31.4)	83.9 (79.4-87.6)	83.2 (76.7-88.2)	68.4 (77.8-89.8)	120.6 (109.2-131.8)	67.8 (65.4-69.2)	67.8 (65.4-69.2)	120.6 (109.2-131.8)	39.4 (35.4-43.9)	23.0 (18.7-28.1)	26.6 (20.0-33.9)	41.8 (28.2-55.8)	26.6 (20.0-33.9)	41.8 (28.2-55.8)			
Algerian, 2020	38.8 (35.4-44.5)	46.3 (39.5-57.4)	60.2 (52.4-65.6)	23.6 (22.0-31.4)	83.9 (79.4-87.6)	83.2 (76.7-88.2)	68.4 (77.8-89.8)	120.6 (109.2-131.8)	67.8 (65.4-69.2)	67.8 (65.4-69.2)	120.6 (109.2-131.8)	39.4 (35.4-43.9)	23.0 (18.7-28.1)	26.6 (20.0-33.9)	41.8 (28.2-55.8)	26.6 (20.0-33.9)	41.8 (28.2-55.8)			

Table A5. Smoking cessation and dependency (article 14 of WHO FCTC) and minor's access and availability (article 16 of WHO FCTC).

Countries	Current smokers who desire to stop smoking % (95% CI)				Current smokers who tried to stop during the past year % (95% CI)				Current smokers who received help to stop smoking % (95% CI)				Current smokers who have or feel like having a cigarette first thing in the morning % (95% CI)				Current smokers who usually buy their cigarettes in a store and were not refused purchase because of their age % (95% CI)			
	Total	Boy	Girl	Total	Boy	Girl	Total	Boy	Girl	Total	Boy	Girl	Total	Boy	Girl	Total	Boy	Girl		
Afghanistan, 2004	39.2 (14.0-71.9)	39.2 (14.0-74.3)	0	50.0 (21.5-78.6)	46.6 (18.0-77.7)	0	19.4 (7.8-40.7)	19.4 (7.8-40.7)	93.6 (58.0-99.4)	93.6 (58.0-99.4)	0	28.0 (7.3-66.0)	28.0 (7.3-66.0)	33.8 (14.0-71.9)	33.8 (14.0-71.9)	0	34.0 (12.5-68.9)	34.0 (12.5-68.9)		
Bahrain, 2001	47.3 (31.6-63.0)	47.3 (31.6-63.0)	0	39.9 (23.2-56.6)	39.9 (23.2-56.6)	0	27.7 (12.8-48.9)	27.7 (12.8-48.9)	77.1 (69.4-83.5)	77.1 (69.4-83.5)	0	45.4 (26.5-65.7)	45.4 (26.5-65.7)	48.4 (28.4-67.9)	48.4 (28.4-67.9)	0	47.3 (31.6-63.0)	47.3 (31.6-63.0)		
Djibouti, 2003	50.8 (36.4-65.0)	50.8 (36.4-65.0)	0	44.8 (31.6-58.0)	44.8 (31.6-58.0)	0	26.7 (13.3-43.8)	26.7 (13.3-43.8)	74.7 (59.7-86.8)	74.7 (59.7-86.8)	0	59.9 (39.8-79.2)	59.9 (39.8-79.2)	53.8 (44.4-72.2)	53.8 (44.4-72.2)	0	50.8 (36.4-65.0)	50.8 (36.4-65.0)		
Egypt, 2005	29.1 (18.7-42.3)	29.1 (18.7-42.3)	0	37.7 (25.0-52.3)	37.7 (25.0-52.3)	0	22.8 (11.1-38.5)	22.8 (11.1-38.5)	67.0 (52.6-79.2)	67.0 (52.6-79.2)	0	33.1 (21.4-47.8)	33.1 (21.4-47.8)	36.1 (21.7-60.6)	36.1 (21.7-60.6)	0	29.1 (18.7-42.3)	29.1 (18.7-42.3)		
Ghana, 2005	46.4 (36.5-56.6)	46.4 (36.5-56.6)	0	43.3 (33.5-53.1)	43.3 (33.5-53.1)	0	44.6 (33.9-55.8)	44.6 (33.9-55.8)	77.0 (68.4-85.1)	77.0 (68.4-85.1)	0	68.0 (52.8-78.8)	68.0 (52.8-78.8)	44.1 (34.4-57.7)	44.1 (34.4-57.7)	0	46.4 (36.5-56.6)	46.4 (36.5-56.6)		
Ghana, 2006	44.3 (33.5-55.5)	44.3 (33.5-55.5)	0	39.2 (28.4-50.0)	39.2 (28.4-50.0)	0	31.9 (20.8-43.1)	31.9 (20.8-43.1)	75.6 (66.8-84.4)	75.6 (66.8-84.4)	0	71.5 (64.4-78.9)	71.5 (64.4-78.9)	49.1 (38.2-61.0)	49.1 (38.2-61.0)	0	44.3 (33.5-55.5)	44.3 (33.5-55.5)		
Iran, 2003	37.7 (22.1-60.7)	37.7 (22.1-60.7)	0	34.2 (23.4-45.0)	34.2 (23.4-45.0)	0	17.8 (5.2-40.5)	17.8 (5.2-40.5)	50.0 (39.2-62.9)	50.0 (39.2-62.9)	0	37.8 (18.4-62.0)	37.8 (18.4-62.0)	54.8 (42.9-66.1)	54.8 (42.9-66.1)	0	37.7 (22.1-60.7)	37.7 (22.1-60.7)		
Iran, 2006	41.0 (24.2-62.3)	41.0 (24.2-62.3)	0	42.3 (28.4-56.1)	42.3 (28.4-56.1)	0	42.4 (28.4-56.1)	42.4 (28.4-56.1)	76.2 (56.2-89.9)	76.2 (56.2-89.9)	0	20.1 (9.2-39.0)	20.1 (9.2-39.0)	29.7 (16.6-46.1)	29.7 (16.6-46.1)	0	41.0 (24.2-62.3)	41.0 (24.2-62.3)		
Iraq, 2008	53.2 (42.8-63.4)	53.2 (42.8-63.4)	0	33.9 (23.1-46.6)	33.9 (23.1-46.6)	0	6.8 (0.6-49.8)	6.8 (0.6-49.8)	83.8 (74.5-90.2)	83.8 (74.5-90.2)	0	35.6 (26.3-46.1)	35.6 (26.3-46.1)	20.3 (9.9-41.8)	20.3 (9.9-41.8)	0	53.2 (42.8-63.4)	53.2 (42.8-63.4)		
Jordan, 1999	29.6 (18.2-42.8)	29.6 (18.2-42.8)	0	31.3 (14.6-59.6)	31.3 (14.6-59.6)	0	44.3 (27.6-62.4)	44.3 (27.6-62.4)	70.0 (56.4-80.8)	70.0 (56.4-80.8)	0	66.3 (42.7-84.3)	66.3 (42.7-84.3)	44.3 (27.6-62.4)	44.3 (27.6-62.4)	0	29.6 (18.2-42.8)	29.6 (18.2-42.8)		
Jordan, 2007	34.2 (23.6-44.7)	34.2 (23.6-44.7)	0	30.1 (22.4-37.3)	30.1 (22.4-37.3)	0	33.2 (25.8-41.3)	33.2 (25.8-41.3)	76.0 (72.1-80.6)	76.0 (72.1-80.6)	0	21.8 (17.9-26.3)	21.8 (17.9-26.3)	12.1 (7.7-18.4)	12.1 (7.7-18.4)	0	34.2 (23.6-44.7)	34.2 (23.6-44.7)		
Jordan, 2008	38.5 (26.6-50.4)	38.5 (26.6-50.4)	0	34.4 (23.8-44.8)	34.4 (23.8-44.8)	0	47.0 (32.5-61.5)	47.0 (32.5-61.5)	72.0 (67.7-76.8)	72.0 (67.7-76.8)	0	68.3 (57.8-79.7)	68.3 (57.8-79.7)	54.6 (49.4-59.7)	54.6 (49.4-59.7)	0	38.5 (26.6-50.4)	38.5 (26.6-50.4)		
Kuwait, 2005	43.5 (33.1-53.4)	43.5 (33.1-53.4)	0	47.2 (35.1-59.1)	47.2 (35.1-59.1)	0	35.7 (24.8-46.7)	35.7 (24.8-46.7)	74.8 (66.6-81.6)	74.8 (66.6-81.6)	0	69.8 (57.4-79.9)	69.8 (57.4-79.9)	22.9 (13.2-34.5)	22.9 (13.2-34.5)	0	43.5 (33.1-53.4)	43.5 (33.1-53.4)		
Kuwait, 2006	42.4 (32.4-52.4)	42.4 (32.4-52.4)	0	45.3 (32.4-58.2)	45.3 (32.4-58.2)	0	48.0 (36.5-60.5)	48.0 (36.5-60.5)	77.2 (72.0-82.3)	77.2 (72.0-82.3)	0	81.1 (75.2-87.1)	81.1 (75.2-87.1)	50.0 (48.5-51.5)	50.0 (48.5-51.5)	0	42.4 (32.4-52.4)	42.4 (32.4-52.4)		
Lebanon, 2001	26.4 (20.5-33.2)	26.4 (20.5-33.2)	0	32.3 (23.6-41.0)	32.3 (23.6-41.0)	0	41.1 (29.9-52.3)	41.1 (29.9-52.3)	88.1 (82.5-93.8)	88.1 (82.5-93.8)	0	91.7 (83.7-95.9)	91.7 (83.7-95.9)	24.5 (18.1-33.4)	24.5 (18.1-33.4)	0	26.4 (20.5-33.2)	26.4 (20.5-33.2)		
Lebanon, 2005	33.1 (28.4-40.5)	33.1 (28.4-40.5)	0	28.1 (19.4-41.1)	28.1 (19.4-41.1)	0	33.9 (24.9-44.2)	33.9 (24.9-44.2)	56.5 (48.6-64.2)	56.5 (48.6-64.2)	0	55.8 (43.5-63.9)	55.8 (43.5-63.9)	25.6 (17.8-35.6)	25.6 (17.8-35.6)	0	33.1 (28.4-40.5)	33.1 (28.4-40.5)		
Libya, 2003	45.7 (31.5-60.7)	45.7 (31.5-60.7)	0	47.3 (32.7-62.4)	47.3 (32.7-62.4)	0	50.5 (44.3-56.6)	50.5 (44.3-56.6)	87.0 (73.1-94.2)	87.0 (73.1-94.2)	0	78.9 (70.7-86.4)	78.9 (70.7-86.4)	46.8 (33.9-61.8)	46.8 (33.9-61.8)	0	45.7 (31.5-60.7)	45.7 (31.5-60.7)		
Libya, 2007	37.5 (23.1-54.5)	37.5 (23.1-54.5)	0	30.7 (17.4-48.3)	30.7 (17.4-48.3)	0	33.7 (18.0-54.9)	33.7 (18.0-54.9)	82.0 (70.5-91.8)	82.0 (70.5-91.8)	0	30.1 (18.1-45.6)	30.1 (18.1-45.6)	20.7 (10.3-37.3)	20.7 (10.3-37.3)	0	37.5 (23.1-54.5)	37.5 (23.1-54.5)		
Morocco, 2001	51.8 (37.3-66.0)	51.8 (37.3-66.0)	0	34.9 (27.7-41.9)	34.9 (27.7-41.9)	0	31.6 (19.6-46.6)	31.6 (19.6-46.6)	70.2 (55.6-81.7)	70.2 (55.6-81.7)	0	44.9 (33.5-56.9)	44.9 (33.5-56.9)	44.8 (33.5-56.9)	44.8 (33.5-56.9)	0	51.8 (37.3-66.0)	51.8 (37.3-66.0)		
Morocco, 2006	34.1 (22.9-47.5)	34.1 (22.9-47.5)	0	24.9 (15.9-37.6)	24.9 (15.9-37.6)	0	24.9 (15.9-37.6)	24.9 (15.9-37.6)	82.2 (70.2-90.2)	82.2 (70.2-90.2)	0	37.1 (23.8-52.5)	37.1 (23.8-52.5)	31.5 (19.5-46.6)	31.5 (19.5-46.6)	0	34.1 (22.9-47.5)	34.1 (22.9-47.5)		
Oman, 2002	54.8 (42.2-66.5)	54.8 (42.2-66.5)	0	48.3 (34.9-61.2)	48.3 (34.9-61.2)	0	27.5 (17.0-41.3)	27.5 (17.0-41.3)	86.7 (78.9-93.3)	86.7 (78.9-93.3)	0	61.7 (51.0-71.5)	61.7 (51.0-71.5)	48.1 (37.4-61.6)	48.1 (37.4-61.6)	0	54.8 (42.2-66.5)	54.8 (42.2-66.5)		
Oman, 2005	48.9 (38.3-59.4)	48.9 (38.3-59.4)	0	44.0 (32.4-55.6)	44.0 (32.4-55.6)	0	48.0 (36.5-60.5)	48.0 (36.5-60.5)	75.1 (62.8-82.3)	75.1 (62.8-82.3)	0	42.2 (31.6-52.8)	42.2 (31.6-52.8)	26.7 (15.1-41.1)	26.7 (15.1-41.1)	0	48.9 (38.3-59.4)	48.9 (38.3-59.4)		
Pakistan, 2004 (Kasur)	82.9 (53.3-95.4)	82.9 (53.3-95.4)	0	57.4 (33.5-80.5)	57.4 (33.5-80.5)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pakistan, 2004 (Kasur)	45.7 (32.3-63.4)	45.7 (32.3-63.4)	0	34.6 (27.7-42.2)	34.6 (27.7-42.2)	0	46.5 (35.0-60.4)	46.5 (35.0-60.4)	71.9 (64.4-79.3)	71.9 (64.4-79.3)	0	80.5 (55.9-96.9)	80.5 (55.9-96.9)	19.0 (11.3-30.4)	19.0 (11.3-30.4)	0	45.7 (32.3-63.4)	45.7 (32.3-63.4)		
Pakistan, 2004 (Peshawar)	30.3 (17.8-49.2)	30.3 (17.8-49.2)	0	44.3 (31.1-60.8)	44.3 (31.1-60.8)	0	63.6 (48.6-76.2)	63.6 (48.6-76.2)	86.9 (80.0-92.8)	86.9 (80.0-92.8)	0	75.1 (64.6-86.5)	75.1 (64.6-86.5)	46.4 (34.8-60.3)	46.4 (34.8-60.3)	0	30.3 (17.8-49.2)	30.3 (17.8-49.2)		
Pakistan, 2008	37.1 (27.3-49.3)	37.1 (27.3-49.3)	0	36.4 (24.8-50.1)	36.4 (24.8-50.1)	0	66.6 (53.9-79.7)	66.6 (53.9-79.7)	62.2 (52.0-70.4)	62.2 (52.0-70.4)	0	69.9 (62.6-76.3)	69.9 (62.6-76.3)	73.2 (63.7-82.7)	73.2 (63.7-82.7)	0	37.1 (27.3-49.3)	37.1 (27.3-49.3)		
Qatar, 2004	35.3 (27.5-43.9)	35.3 (27.5-43.9)	0	38.9 (29.0-49.6)	38.9 (29.0-49.6)	0	42.1 (32.4-52.4)	42.1 (32.4-52.4)	67.3 (59.1-75.0)	67.3 (59.1-75.0)	0	28.8 (14.6-48.4)	28.8 (14.6-48.4)	22.8 (10.6-42.4)	22.8 (10.6-42.4)	0	35.3 (27.5-43.9)	35.3 (27.5-43.9)		
Qatar, 2007	39.8 (27.6-53.5)	39.8 (27.6-53.5)	0	32.6 (21.1-46.1)	32.6 (21.1-46.1)	0	27.4 (17.4-44.1)	27.4 (17.4-44.1)	78.6 (66.2-87.3)	78.6 (66.2-87.3)	0	15.3 (8.1-27.1)	15.3 (8.1-27.1)	10.7 (1.0-38.3)	10.7 (1.0-38.3)	0	39.8 (27.6-53.5)	39.8 (27.6-53.5)		
Saudi Arabia, 2001	45.8 (38.0-53.8)	45.8 (38.0-53.8)	0	42.2 (32.9-52.6)	42.2 (32.9-52.6)	0	45.2 (35.4-55.3)	45.2 (35.4-55.3)	82.8 (72.9-92.7)	82.8 (72.9-92.7)	0	52.2 (44.5-60.9)	52.2 (44.5-60.9)	35.1 (20.5-53.2)	35.1 (20.5-53.2)	0	45.8 (38.0-53.8)	45.8 (38.0-53.8)		
Saudi Arabia, 2007	44.7 (35.5-54.0)	44.7 (35.5-54.0)	0	40.9 (31.6-50.2)	40.9 (31.6-50.2)	0	33.7 (24.8-42.6)	33.7 (24.8-42.6)	83.7 (75.6-90.0)	83.7 (75.6-90.0)	0	48.0 (40.1-56.0)	48.0 (40.1-56.0)	32.0 (22.2-42.1)	32.0 (22.2-42.1)	0	44.7 (35.5-54.0)	44.7 (35.5-54.0)		
South Africa, 2007	44.7 (35.5-54.0)	44.7 (35.5-54.0)	0	40.9 (31.6-50.2)	40.9 (31.6-50.2)	0	33.7 (24.8-42.6)	33.7 (24.8-42.6)	83.7 (75.6-90.0)	83.7 (75.6-90.0)	0	48.0 (40.1-56.0)	48.0 (40.1-56.0)	32.0 (22.2-42.1)	32.0 (22.2-42.1)	0	44.7 (35.5-54.0)	44.7 (35.5-54.0)		
Sudan, 2005	43.6 (32.1-55.8)	43.6 (32.1-55.8)	0	46.0 (34.1-57.9)	46.0 (34.1-57.9)	0	33.0 (21.3-47.4)	33.0 (21.3-47.4)	77.1 (65.3-85.8)	77.1 (65.3-85.8)	0	79.2 (53.4-92.7)	79.2 (53.4-92.7)	33.1 (21.2-47.7)	33.1 (21.2-47.7)	0	43.6 (32.1-55.8)	43.6 (32.1-55.8)		
Sudan, 2007	27.4 (20.0-36.2)	27.4 (20.0-36.2)	0	30.6 (22.1-40.8)	30.6 (22.1-40.8)	0	36.2 (27.3-46.1)	36.2 (27.3-46.1)	62.2 (50.0-72.1)	62.2 (50.0-72.1)	0	56.8 (44.9-76.3)	56.8 (44.9-76.3)	29.7 (22.2-36.5)	29.7 (22.2-36.5)	0	27.4 (20.0-36.2)	27.4 (20.0-36.2)		
Syria, 2002	41.2 (34.3-48.5)	41.2 (34.3-48.5)	0	42.6 (34.5-51.1)	42.6 (34.5-51.1)	0	37.5 (27.7-53.7)	37.5 (27.7-53.7)	79.3 (72.0-84.7)	79.3 (72.0-84.7)	0	23.6 (19.8-32.4)	23.6 (19.8-32.4)	29.4 (16.9-45.9)	29.4 (16.9-45.9)	0	41.2 (34.3-48.5)	41.2 (34.3-48.5)		
Syria, 2007	37.1 (28.3-46.3)	37.1 (28.3-46.3)	0	34.2 (27.6-41.6)	34.2 (27.6-41.6)	0	30.4 (17.5-47.3)	30.4 (17.5-47.3)	71.3 (64.3-77.4)	71.3 (64.3-77.4)	0	10.8 (7.6-15.1)	10.8 (7.6-15.1)	36.7 (29.9-46.1)	36.7 (29.9-46.1)	0	37.1 (28.3-46.3)	37.1 (28.3-46.3)		
Tunisia, 2001	50.2 (40.7-59.7)	50.2 (40.7-59.7)	0	48.0 (31.2-64.9)	48.0 (31.2-64.9)	0	38.2 (29.1-48.2)	38.2 (29.1-48.2)	95.2 (92.2-98.0)	95.2 (92.2-98.0)	0	91.0 (79.6-96.3)	91.0 (79.6-96.3)	6.0 (2.2-15.4)	6.0 (2.2-15.4)	0	50.2 (40.7-59.7)	50.2 (40.7-59.7)		
Tunisia, 2007	52.2 (41.0-63.5)	52.2 (41.0-63.5)	0	40.0 (31.2-49.1)	40.0 (31.2-49.1)	0	48.0 (38.2-57.8)	48.0 (38.2-57.8)	85.0 (77.2-90.5)	85.0 (77.2-90.5)	0	73.3 (65								

- 2007; Pakistan, 2004 (Kasur); Somalia, Sudan, 2001; Syria, 2002; Tunisia, UAE, 2002; and Yemen, 2003
- classes about the effects of smoking, except for the Gaza Strip (2000, 2005), Jordan (1999, 2003), Libya, Morocco (2001), Pakistan (2003, 2004), Qatar (2007), Sudan, and Syria (2002)
 - seeing advertisements of cigarettes on billboards in the past month, except for Egypt (2005), Iraq (2008), Jordan (2007), Pakistan (2003), Pakistan (2004, Kasur, Quetta), and Qatar (2007)
 - seeing advertisements of cigarettes in newspapers or magazines in the past month, except for Bahrain, Djibouti, Iran, Iraq (2008), Jordan (2007), Libya (2003), Morocco (2001), Pakistan (2008), Qatar, Sudan, Syria (2002), and Tunisia (2007)
 - seeing advertisements for cigarettes at sporting events, except for Somalia (2004)
 - ownership of objects with a tobacco logo, except for Djibouti, Jordan (1999, 2003), and Pakistan (2003, 2004, Kasur)
 - being offered free cigarettes and desire to stop smoking, except for Yemen (2008)
 - current smokers trying to quit smoking, except for Qatar (2004), Somalia, Sudan (2001), and Yemen (2008)
 - tried to quit smoking in the past year, except for Sudan (2001), Tunisia (2007), and Yemen (2008)
 - received help to stop smoking, except for Djibouti, Kuwait (2001), Lebanon (2001), Saudi Arabia (2007), and Somalia (2007).

A significantly high number of current female smokers in Libya (2007), Morocco (2001), and Sudan (2005) have or feel like having a cigarette first thing in the morning; buy their cigarettes in a store, and were not refused purchase because of their age in Somalia (2004) and Yemen (2008).

Young females in the Gaza Strip (2001), Iraq (2008), Jordan (2003, 2007), Kuwait, Lebanon, Libya (2003), Morocco (2006), Qatar (2004), Syria, West Bank (2005), and Yemen (2003) were more exposed to SHS at home compared to outside.

In general, females were in favor of banning smoking in public places compared to males in all countries, except for Egypt (2005), Iran (2007), Jordan (2007), Kuwait (2001), Saudi Arabia (2007), Somalia (2004), Sudan (2005), and Yemen (2008). More females saw actors smoking on TV, in videos, or in movies in the past month, except those who lived in Saudi Arabia (2007) and Somalia (2007).

References

- [1] Eriksen M, Mackay J, Ross H. *The tobacco atlas*. 4th ed. Atlanta, GA; New York, NY: American Cancer Society; World Lung Foundation; 2012.
- [2] Lando HA, Hipple BJ, Muramoto M, Klein J, Prokhorov AV, Ossip DR, et al. Tobacco is a global pediatric concern. *Bull World Health Organ* 2010;88, 2–2.
- [3] World Health Organization. Framework convention on tobacco control. World Health Organization. Available at <<http://www.who.int/fctc/publications/en/>>; 2003 [accessed 01.10.12].
- [4] World Health Organization. Report on the global tobacco epidemic, 2013: enforcing bans on tobacco advertising, promotion and sponsorship. World Health Organization. Available at <http://www.who.int/tobacco/global_report/2013/report.pdf>; 2013 [accessed 10.07.13].
- [5] The Global Tobacco Surveillance System Collaborating Group. The global tobacco surveillance system (GTSS): purpose, production and potential. *J Sch Health* 2005;75:15–24.
- [6] Warren CW, Jones NR, Eriksen MP, Asma S. Patterns of global tobacco use in young people and implications for future chronic disease burden in adults. *Lancet* 2006;367:749–53.
- [7] Centers for Disease Control and Prevention. Global Youth Tobacco Surveillance, 2000–2007. *Morb Mortal Wkly Rep* 2008;57:1–21.
- [8] Nakkash R, Lee K. Smuggling as the ‘key to a combined market’: British American Tobacco in Lebanon. *Tob Control* 2008;17:324–31.
- [9] Al Agili DE, Park HK. The prevalence and determinants of tobacco use among adolescents in Saudi Arabia. *J Sch Health* 2012;82:131–8.
- [10] Musaiger AO, Al-Hazzaa HM. Prevalence and risk factors associated with nutrition-related non-communicable diseases in the Eastern Mediterranean Region. *Int J Gen Med* 2012;5:199–217.
- [11] Dar-Odeh NS, Abu-Hammad OA. The changing trends in tobacco smoking for young Arab women; narghile, an old habit with a liberal attitude. *Harm Reduction J* 2011;8:24.
- [12] Amin TT, Amr MAM, Zaza BO, Kaliyadan F. Predictors of waterpipe smoking among secondary school adolescents in Al Hassa, Saudi Arabia. *Int J Behav Med* 2012;19:324–35.
- [13] El-Awa F, Warren CW, Jones NR. Changes in tobacco use among 13–15-year-olds between 1999 and 2007: findings from the Eastern Mediterranean Region. *East Mediterr Health J* 2010;16:266–73.
- [14] Nakkash R, Khalil J. Health warning labeling practices on narghile (shisha, hookah) water pipe tobacco products and related accessories. *Tob Control* 2010;19:235–9.
- [15] Khattab A, Javaid A, Iraqi G, Alzaabi A, Kheder AB, Koniski ML, et al. Smoking habits in the Middle East and North Africa: results of the BREATHE study. *Respir Med* 2012;106:S16–24.
- [16] Al Ghobain MO, Al Moamary MS, Al Shehri SN, Al Hajjaj MS. Prevalence and characteristics of cigarette smoking among 16- to 18-year-old boys and girls in Saudi Arabia. *Ann Thoracic Med* 2011;6:137–40.
- [17] El-Roueiheb Z, Tamim H, Kanj M, Jabbour S, Alayan I, Musharrafieh U. Cigarette and waterpipe smoking among Lebanese adolescents, a cross-sectional study, 2003–2004. *Nicotine Tob Res* 2008;10:309–14.
- [18] Al-Mulla AM, Helmy SA, Al-Lawati J, Al Nasser S, Rahman SAA, Al Mutawa A, et al. Prevalence of tobacco use among students aged 13–15 years in Health Ministers’ Council/Gulf Cooperation Council Member States, 2001–2004. *J Sch Health* 2008;78:337–43.
- [19] Saade G, Abou Jaoude S, Afifi R, Warren CW, Jones NR. Patterns of tobacco use: results from the 2005 Global Youth Tobacco Survey in Lebanon. *East Mediterr Health J* 2005;2008(14):1280–9.

- [20] Tami H, Al-Saha B, Akkar G, Ghane M, Tami M, El Roueihe Z, et al. Cigarette and nargileh smoking practices among school students in Beirut, Lebanon. *Am J Health Behav* 2007;31:56–63.
- [21] Kelishadi R, Mokhtari MR, Tavasoli AA, Khosravi A, Ahangar-Nazari I, Sabet B, et al. Determinants of tobacco use among youth in Isfahan, Iran. *Int J Public Health* 2007;52:173–9.
- [22] Roohafza H, Sadeghi M, Shahnam M, Bahonar A, Sarafzadegan N. Perceived factors related to cigarette and waterpipe (ghelyan) initiation and maintenance in University students of Iran. *Int J Public Health* 2011;56:175–80.
- [23] Nejari C, Benjelloun MC, Berraho M, Rhazi K, Tachfouti N, Elfakir S, et al. Prevalence and demographic factors of smoking in Morocco. *Int J Public Health* 2009;54:447–51.
- [24] Usmanova G, Mokdad A. Results of the Global Youth Tobacco Survey and implementation of WHO Framework Convention on Tobacco Control in former Soviet Union countries. *Int J Public Health* 2013;58:217–26.
- [25] United Nations Children's Fund. The state of the World's children 2011. New York, NY: United Nations Children's Fund. Available at <http://www.unicef.org/publications/files/SOWC_2011_Main_Report_EN_02242011.pdf>; 2011 [accessed 28.07.13].
- [26] Perlman FJA, Bobak M, Gilmore AB, McKee M. Trends in the prevalence of smoking patterns in Russia during the transition to a market economy. *Tob Control* 2007;16:299–305.
- [27] Pomerleau J, Gilmore A, McKee M, Rose R, Haerpfer CW. Determinants of smoking in eight countries of the former Soviet Union: results from the Living Conditions, Life styles and Health study. *Addiction* 2004;99:1577–85.
- [28] Dar-Odeh NS, Abu-Hammad OA. Narghile smoking and its adverse health consequences: a literature review. *Br Dent J* 2009;206:571–3.
- [29] Rozi S, Akhtar S. Prevalence and predictors of smokeless tobacco use among high-school males in Karachi, Pakistan. *East Mediterr Health J* 2007;13:916–24.
- [30] World Health Organization. WHO report on the global tobacco epidemic, 2011: warning about the dangers of tobacco. World Health Organization. Available at <http://whqlibdoc.who.int/publications/2011/9789240687813_eng.pdf>; 2011 [accessed 28.07.13].
- [31] Campaign for Tobacco Free Kids. EMRO countries details Available at <<http://www.tobaccocontrol.org/>> [accessed 01.02.13].
- [32] Wiehe SE, Garrison MM, Christakis DA, Ebel BE, Rivara FP. A systematic review of school-based smoking prevention trials with long term follow-up. *J Adolesc Health* 2005;36:162–9.
- [33] Framework Convention Alliance for Tobacco Control. Tobacco advertising and promotion factsheet. Framework Convention Alliance for Tobacco Control; 2006.

Available online at www.sciencedirect.com

ScienceDirect