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Review of Global and Regional Perspective of Tobacco and Smoking Control Related Policies and Strategies

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Abstract

Tobacco smoking is a major worldwide cause of morbidity and mortality from various diseases, including urologic diseases. The study have reviewed, global and regional levels of the prevalence and trends of tobacco smoking and legislative and regulatory efforts around tobacco control. Study also provided information about electronic cigarette (e-cigarette) use. Smoking prevalence has been decreasing globally, although trends in smoking vary substantially across countries by gender. Among men, smoking prevalence in most high-income countries started to decrease in the mid-1990s, followed after a few decades by generally smaller decreases in some Low- and Middle-Income Countries (LMICs). However, there is no change, or any improvement, in smoking prevalence in many other LMICs. Most countries with the highest smoking prevalence in women are in Europe. Countries which have implemented the best practices for tobacco control, including monitoring, smoke-free policies, cessation programs, health warnings, advertising bans, and taxation, have been able to reduce smoking rates and related harms. Use of E-cigarette has been rapidly increased since its introduction to the market. Health care providers should advise smoking patients about quitting smoking. Countries must improve the implementation and enforcement of tobacco control policies. Particular attention should be paid to preventing an increase in smoking among women in LMICs. The study reviewed the smoking prevalence and tobacco control policies in various regions. Countries with more effective tobacco control programs have seen higher reductions in smoking prevalence and, smoking-related mortality.

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Introduction

The epidemic of tobacco-related diseases is the first worldwide epidemic created by humans. Tobacco use killed100 million people globally in the 20th century and will kill1 billion in the 21st century if current patterns persist (Asma and Song, 2014). Tobacco use is also a burden on global economic development. In the United States, the estimated economic cost related to tobacco consumption is $289 billion per year (Eriksen *et,al*, 2015). Beside tobacco use is a known risk factor of cancer and other diseases in a number of organs. Although tobacco use has some short-term health effects, tobacco-related mortality usually peaks a few decades after smoking (USDHHS, 2014). Therefore, knowing patterns of tobacco smoking not only helps to understand the current epidemiology of smoking-related diseases but also can provide valuable information about the epidemiology of these diseases in the future. Although, the main focus of this review is smoking in adults, The study used data from the Global Youth Tobacco Survey, an international survey on youth tobacco use (GTSS, 2014), to show data on youth tobacco use. The study also briefly discuss smokeless tobacco use even though its associations with urologic diseases are not well established, because it is the most common form of tobacco use in certain countries. Throughout this article, tobacco smoking refers to smoking of any tobacco product (cigarette, cigar, cigarillo, hookah, bidi, or any other product), unless stated otherwise. To combine data and show trends of smoking prevalence from 1980 to 2012 and current coverage of tobacco policies by continents, we used the United Nations (UN) list of countries in each continent (World Bank, 2014). This list is slightly different from some commonly used lists: Armenia, Azerbaijan Cyprus, Georgia, and Turkey are considered. West Asian rather than European countries. Nevertheless, study used this official UN list, and this difference did not substantially change the trends/ coverage in continents. The only exception to using the UN list was when we showed smoking rates for individual countries. From the above West Asian countries in the UN list, smoking rates were shown for Cyprus and Turkey, both of which are listed among European countries are listed (Table). The study used the World Bank databases to obtain countries' populations and income groups (World Bank, 2014). Income groups were defined by annual gross national income per capita as low, $1045; lower middle, $1046-$4125; upper middle, $4126-$12 745; and high, $12 746.

Evidence Synthesis

Global Patterns of Tobacco Smoking: Recent estimates suggest that in 2012, 928 million men and 207 million women were current smokers of any tobacco product globally, and the majority (807 million menand 160 million women) were daily smokers (Ng *et,al*., 2014). Most countries with the highest male smoking prevalence are in East Asia, South east Asia, and Eastern Europe. The highest female smoking rates are mostly in European countries.

Tobacco Epidemic: Trends in smoking prevalence in most high-income countries have followed a pattern that is commonly termed the tobacco epidemic or the cigarette epidemic (Lopez *et,al*., 1994). In this model, smoking prevalence first increases among men, followed by an increase in women. Smoking-related cancer mortality starts to increase substantially after approximately three to five decades (Fig. 1) (Agaku *et,al*, 2014).

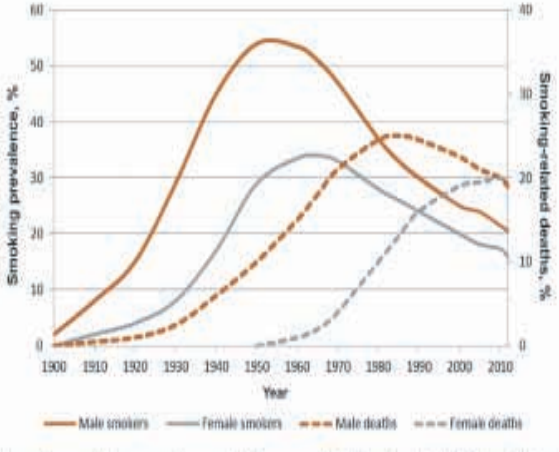

Fig. 1 – Estimated cigarette smoking prevalence and tobacco-related deaths in the United States, 1900–2012

The estimated age-standardized smoking prevalence in men and women has been decreasing on all continents (Fig. 2).

by women in Africa and Asia has been traditionally low (chiefly <5%) and changed little from 1980 to 2012. As male smoking in many African countries and female smoking in many low- and middle-income countries (LMICs) have not yet followed the tobacco epidemic pattern, a major priority for health authorities in LMICs must be to prevent a surge in smoking similar to whath appened in high-income countries.

Duration and Intensity of Smoking : Increased harm from smoking is associated with longer duration of smoking, higher smoking intensity (Bach et al., 2003), and greater nicotine dependency (measured by time to first cigaretteafter waking). When smoking prevalence is high, the mean initiation age is generally <20 yr (Gu *et.al*, 2014). Those who start smoking at earlier ages are generally exposed to smoke for longer duration, unless they quit early. Before the tobacco epidemic starts in a population, the mean age of initiation is usually higher than after theepidemic is established; in the United States, for example, the mean initiation age was 35 yr among women born in1900 and <20 yr in women born in 1940 and afterward. Smoking initiation in earlier ages, an increase in smoking intensity, or a combination of both can substantially increase the magnitude of associations between smoking and diseases in a population over time. For example, the relative risk of lung cancer in women associated with current smoking in the United State sincreased from 2.7 to 12.7 to 25.7 in cohorts in the 1960s,1980s, and 2000s, respectively (Thun *et,al*, 2013).

Patterns of smoking intensity vary across countries. In some Latin American countries, including Chile and Bolivia, smoking intensity has remained relatively low (average<10 cigarettes per day) despite high smoking prevalence in those countries. In contrast, average smoking intensity increased dramatically in China, from 15 cigarettes per day in 1980 to 22 cigarettes per day in 2012. The later pattern might be seen more commonly in LMICs as a result of increasing in income and/or broader cigarette affordability. In some countries that have managed to reduce smoking prevalence through successful tobacco control polices, such as Canada, Denmark, Iceland, New Zealand, and Uruguay, persons who continue to smoke are usually heavy smokers (Warren *et,al*, 2009). These intense tobacco users, who are at a higher risk of smoking-related diseases, may need more sustained help rom health professionals to quit or at least reduce intensity of smoking.

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Socioeconomic status and smoking : Increases in smoking prevalence in both men and women in high-income countries started mainly in higher socioeconomic groups. Over time, high smoking prevalence shifted to lower socio economic groups as evidence about the health effects of smoking emerged in the 1950s and early 1960s. In the United States, for example, smoking prevalence in 1940 was 36% for those with less than a high school education and 40% of people with education levels is college and above; the corresponding rates were 35% and 13% in 2009-2010. Similar patterns of smoking prevalence by socio economic status have been reported in LMICs (Walque, 2014). When specific ethnic groups show high smoking prevalence, it is likely because they are disproportionately represented in lower socioeconomic groups. Differences among the coloured, white, black, and other South African populations in smoking-attributed mortality at ages 35-74 years: a case-control study of 481, 640 deaths. Lancet. 2013: 382: 685-693 (Sitas *et.al*, 2013).

Regional patterns of tobacco smoking : Smoking in Africa is substantially more common among men than women (Table 1). Africa updated information on tobacco smoking is limited, but similar to other LMICs, the slight decrease in prevalence of daily smoking from 1980 to 2012 was chiefly prominent in countries in which the tobacco epidemic started earlier andhad relatively higher smoking rates (eg, South Africa, Lesotho, Madagascar, and Algeria). In parallel with rapidly growing incomes, which often make cigarettes more affordable (Nturibi *et.al*, 2009), and without major tobacco control interventions, it has been projected that the prevalence of current smoking will increase from 15.8% in 2010 to 21.9% in 2030 in the WHO African region (Africa excluding Djibouti, Egypt, Libya, Morocco, Somalia, Sudan, and Tunisia) if current trends continue. Most of this increase is expected to be among men. The consequences of the tobacco epidemic in Africa will be exacerbated by rapid population growth, which although showing among the highest in the world. By current trends, the estimated population of Africa will in crease from 1.2 billion in 2015 to 1.7 billion in 2030 and to 4.2 billion (or 40% of the world's population) in 2010, withthe highest increase in East Africa and West Africa. Without appropriate tobacco control policies, including prevention strategies across the continent, Africa will lose many millions of lives in this century due to tobacco smoking (Hiscock, 2012).

Table 1 – Prevalence of current tobacco smoking in national surveys in selected countries by continent*

Country by continent	Population, millions, 2013	Income group	Year	Age group, yr	Male, %	Female, %	Total, %
AFRICA							
East Africa							
Kenya [6]	44.4	Low	2008–2009	15–54	20.0	–	–
Malawi [6]	16.4	Low	2009	25–64	25.9	2.9	14.1
Rwanda [6]	11.8	Low	2010	15–59[a]	16.1	3.6	–
Tanzania [9]	49.3	Low	2012	15–49	20.0	0.6	–
Uganda [6]	37.6	Low	2011	15–59[a]	15.7	2.8	–
North Africa							
Algeria [6]	39.2	Up-mid	2010	15–74	27.1	1.7	15.3
Egypt [5]	82.1	Lo-mid	2009	≥15	37.7	0.5	19.4
Libya [6]	6.2	Up-mid	2009	25–64	49.6	0.8	–
Morocco [6]	33.0	Lo-mid	2006	≥18	31.5	3.3	18.0
Central Africa							
Cameroon [6]	22.3	Lo-mid	2003	≥15	12.7	2.0	6.3
Chad [6]	12.8	Low	2008	25–64	20.2	1.2	11.2
Gabon [6]	1.7	Up-mid	2009	15–64	21.0	4.6	–
Sao Tome and Principe [6]	0.2	Lo-mid	2009	25–64	9.7	1.7	5.5
Southern Africa							
Botswana [6]	2.0	Up-mid	2007	25–64	32.8	7.8	19.7
South Africa [10]	53.0	Up-mid	2012	≥15	32.8[b]	10.1[b]	20.8[b]
Swaziland [6]	1.2	Lo-mid	2007	25–64	12.9	2.2	7.1
West Africa							
Benin [6]	10.3	Low	2008	25–64	15.8	1.7	8.7
Ivory Coast [6]	20.3	Lo-mid	2012	15–49	26.2	1.7	–
Ghana [6]	25.9	Lo-mid	2008	15–59[a]	8.2	0.4	4.2
Niger [6]	17.8	Low	2007	15–64	8.7	1.0	–
Nigeria [5]	173.6	Lo-mid	2010	≥15	10.0	1.1	5.6
Sierra Leone [6]	6.1	Low	2009	25–64	43.1	10.5	25.8
AMERICAS							
North America							
Canada [11]	35.2	High	2012	≥15	18.4	13.9	16.1
United States [8]	316.1	High	2012–2013	≥18	22.6	14.9	19.2
Caribbean							
Cuba [6]	11.3	Up-mid	2010	≥15	31.1	16.4	23.7
Dominican Republic [6]	10.4	Up-mid	2003	≥18	17.2	12.5	14.9
Jamaica [6]	2.7	Up-mid	2011	15–74	22.9[c]	7.5[c]	15.1[c]
Trinidad and Tobago [6]	1.3	High	2011	15–64	33.5[c]	9.4[c]	21.1[c]
Central America							
Costa Rica [6]	4.9	Up-mid	2010	18–70	18.6	5.8	12.8
El Salvador [6]	6.3	Lo-mid	2005	12–65	21.5	3.4	11.7
Mexico [5]	122.3	Up-mid	2009	≥15	24.8	7.8	15.9
Panama [5]	3.9	Up-mid	2013	≥15	9.4	2.8	6.1
South America							
Argentina [5]	41.4	Up-mid	2012	≥15	29.4	15.6	22.1
Brazil [5]	200.4	Up-mid	2008	≥15	21.6	13.1	17.2
Chile [6]	17.6	High	2010	≥15	44.2	37.1	40.6
Paraguay [6]	6.8	Lo-mid	2011	15–74	22.8	6.1	14.5
Uruguay [5]	3.4	High	2009	≥15	30.7	19.8	25.0
Venezuela [6]	30.4	Up-mid	2011	18–65	28.9	14.4	21.5
ASIA							
East Asia							
China [5]	1357.4	Up-mid	2010	≥15	52.9	2.4	28.1
Japan [6]	127.3	High	2011	≥20	32.4	9.7	20.1
Mongolia [6]	2.8	Lo-mid	2009	15–64	48.0	6.9	27.7
South Korea [6]	48.6	High	2011	≥20	47.3	6.8	27.0
Southeast Asia							
Cambodia [6]	15.1	Low	2011	≥15	39.1	3.4	19.5
Indonesia [5]	249.9	Lo-mid	2011	≥15	67.0	2.7	34.8
Malaysia [5]	29.7	Up-mid	2011	≥15	43.9	1.0	23.1
Philippines [5]	98.4	Lo-mid	2009	≥15	47.7	9.0	28.3
Singapore [6]	5.4	High	2012	18–69	27.9[c]	5.0[c]	16.3[c]
Thailand [5]	67.0	Up-mid	2011	≥15	46.6	2.6	24.0
Vietnam [5]	89.7	Lo-mid	2010	≥15	47.4	1.4	23.8
South and Central Asia							
Bangladesh [5]	156.6	Low	2009	≥15	44.7	1.5	23.0
India [5]	1252.1	Lo-mid	2009–2010	≥15	24.3	2.9	14.0
Kazakhstan [6]	17.0	Up-mid	2007	15–65	48.0	12.1	29.8
Kyrgyzstan [6]	5.7	Lo-mid	2005	≥15	45.0	1.6	21.8
Nepal [6]	27.8	Low	2011	15–49	51.9	13.3	–

The Americas : Smoking prevalence in Canada and the United States has decreased from >55% in men in the 1950s and >35% in women in the 1970s and 1980s to <20% in men and<15% in women in 2012 (Table 1). Also, the daily smoking prevalence decreased by approxi mately 60% in both menand women in Mexico from 1980 to 2012. Several Caribbean, Central American, and South American countries have reduced smoking rates, though to a lesser degree and chiefly in men. However, there has been no significant change in male smoking in a few countries, including Chile, Costa Rica, Jamaica, Peru, and Suriname (Muscat *et,al*, 2011). Smoking is generally less prevalent in Central America than in South America, particularly among women. The smoking prevalence in many South American countries is approxi mately 20-30% in men and 10-20% in women. The highest smoking prevalence in South America is in Chile: 44.2% inmen and 37.1% in women in 2010 (Table 1).

Asia : Approximately 60% of the world's current smokers in 2010 to 2012 lived in three Asian countries: China (317 million smokers), India (122 million smokers), and Indonesia (115 million smokers) (Jha and Peto, 2014). Chinese men smokene in every three cigarettes smoked worldwide . In onlya few Asian countries (eg, Kazakhstan, Lebanon, and Nepal)is the smoking prevalence in women >10% (Table 1). Incontrast, smoking is quite common among Asian men. The male smoking prevalence is >40% in western parts of the Middle East (e.g, Lebanon, Jordan, and Kuwait) but is lower(15-30%) in other West Asian countries (e.g, Iran, Qatar, andOman) and adjacent countries in South Asia and Central Asia (e.g, India, Pakistan, and Uzbekistan). Moving toward the north and east, this rate increases to >40% in other South Asian and Central Asian countries (e.g, Bangladesh, Kazakhstan, Kyrgyzstan, and Nepal).

Smoking prevalence in men is extremely high in many East Asian and South east Asian countries. The current smoking prevalence among men in 2010-2011 was 67% in Indonesia and 53% in China (Table.1). Some countries in East Asia and South east Asia have been able to reduce smokin grates. For example, male smoking rates halved in Hong Kong (China), Japan, and Singapore from 1980 to 2012 (Mackay *et al*., 2013). Current trends suggest that smoking will kill >50 million people between 2012 and 2050 in China alone.

Europe : Smoking rates have substantially decreased in several countries in

Western Europe and Northern Europe, notably in the United Kingdom and the Nordic countries. In the United Kingdom, smoking rates dropped from >80% in menin 1950 and approximately 40% in women in 1970 to approximately 20% in both sexes in 2012 (Table.1). Although smoking rates have also started to decrease inmany other European countries, the rates are still very highin Eastern Europe and Southern Europe (Table.1).

The tobacco epidemic started much earlier in Western Europe than in Eastern Europe. Following an earlier decline in male smoking prevalence, tobacco-related mortality inmen is decreasing in several Western European countries. A decline in smoking-related mortality in women has begun in countries with decreases in female smoking including the United Kingdom. High smoking-relate dmorbidity and mortality are expected for at least several decades more in the European countries that now have high smoking prevalence (Peto *et al*., 2000).

Oceania: Two of the wealthiest countries in Oceania, Australia and New Zealand, have been quite successfull in reducing smoking prevalence in both men and women, from >30%in the 1980s to <18% in 2013 in men and women combined. However, similar to the smoking pattern in Southeast Asia, the male smoking prevalence in most other countries on this continent (e.g, Papua-New Guinea andTonga) is high (Table.1) (Samanic *et.al*, 2006).

Blond and Black (dark) Tobacco : Blond tobacco is flue-cured tobacco that is high in sugar and produces a milder, more inhalable smoke compared with black (dark) tobacco. More than 90% of cigarettes smoked globally in 2013 were Virginia or American blended cigarettes, both of which are blond tobacco. Black tobacco is chiefly smoked in Latin America, Spain, and France and is processed with open-air curing orair curing in barns with no or limited artificial heat (Simanic *et al*., 2006). The strong varieties are usually used to make cigars, while light varieties are used in some cigarette blends in the countries above. With blond tobacco being more popular among smokers globally, black tobacco use is decreasing. For example, the share of black tobacco in the tobacco market in Peru decreased from 17.6% in 2000 to1.5% in 2009; the respective decrease in Spain was from23.5% to 9.2% (Maziak, 2013. However, the clinical significance of these differences is unclear.

Tobacco Products other than Cigarettes : Cigarettes are the most common smoking product worldwide. However, there are other tobacco products that

are relatively and commonly used in some populations. Water pipe (hokah) smoking has traditionally been common in the Middle East and North Africa and in some parts of South east Asia. Water pipe use has increased among young people, particularly college students, in Europe and North America (Aki et., 2011). In the United States, for example, 7-20% of college students and 5.4% of high school students reported past-year/current water pipe use. The use of bidi (tobacco flakes wrapped in a leaf of the tendu or temburnitree), a relatively inexpensive tobacco product, is common in South Asia, in particular in low-income groups (Grana *et al*., 2014). In India, bidi is the most commonly used smoking product (prevalence: 9.2%), followed by cigarettes (5.7%), waterpipes (0.9%), and other products (1%) (GTSS, 2014).

Global consumption of roll-your-own (RYO) tobacco increased by 45% from 2000 to 2013, with approximately101 billion RYO cigarettes smoked worldwide in 2013 (compared with nearly 6 trillion regular cigarettes). Approximately 86% of RYO cigarettes were smoked in the European Union, where RYO cigarettes were much cheaper than regular cigarettes. Global consumption of cigars and cigarillos (acigarillo is a smaller, narrower version of a cigar) has not changed since the late 2000s and is approximately 24 billion per year, nearly half of which are smoked in the United States . All smoking tobacco products are included in the smoking rates shown in this article, unless stated otherwise (Sureda, 2013).

Smokeless tobacco use is common in South Asia, Central Asia, the Nordic countries, and Africa (Table 1). For example, smokeless tobacco use in India is more common than smoking: 32.9% of men and 18.4% women are smokeless tobacco users. Among child aged 13-15 year in South Asia, Central Asia, the Middle East,and Africa, the use of tobacco products other than sigarettes is more common than cigarette smoking (Free *et al*, 2013).

Prevalence of Use: As E-cigarettes have been marketed recently, the irprevalence of use is generally much lower than cigarette smoke. A few countries, including Bahrain, Cyprus, Mauritius, South Africa, and United Arab Emirates, as wellas several states or provinces in Australia, Canada, and the United States, have banned smoking in vehicles carrying children, and several other countries are considering similar bans (Lancaster, 2004).

Offering Help to Quit Tobacco Use: Personalized advice from health

professionals and access to affordable nicotine replacement therapies help patients quit smoking. In many successful tobacco control strategies, cessation support by health care providers is accompanied by quit lines and other communication technologies such as appropriate text messaging, social networking and phone applications. These policies are best implementedin the wealthiest nations of 55 high-income countries in 2012, 47 countries fully covered at least one of the policies (cessation service or nicotine replacement therapy), and14 countries covered both policies (Free *et.al*, 2013).

Warning about the Dangers of Tobacco: A large share of the world's population still is not fully aware of the health risks associated with tobacco use: <40% of adults in China believe that smoking causes heart attacks, and <50% of adults inIndia believe that smoking causes strokes. Harms of tobacco can be communicated through anti tobacco campaigns and health warnings on tobacco product packages. Media campaigns can quickly reach large populations of both smokers and non-smokers. Health warning labels are most effective in the form of large pictures located on the upper part of both thefront and rear panels of each cigarette package. Middle income countries are the highest-achieving country groupin implementing large pictorial warning labels. The new EU Tobacco Products Directive makes using such labels mandatory in all EU member states by May 2016. Ithas been shown that tobacco warning labels work best when they elicit disgust, fear, or sadness (WHO, 2013).

Enforcing Bans on Tobacco Advertising, Promotion, and Sponsorship : Marketing bans protect people from alluring industry messages aimed at discouraging existing smokers from quitting and attracting new smokers, especially youth. There are now 127 countries (with 74% of the world' spopulation) that ban all or almost all forms of direct and indirect tobacco advertising. Low-income countries are the best group in implementing these policies. To limit the effect of appealing tobacco packages, an innovative plain packaging law was introduced in December 2012 in Australia to standardize the size, labeling, and shape of packages. For example, this law requires that brandand company names on all retail tobacco packs in Australia must be printed in a uniform, small-sized font, and packs must have a drab dark brown color (Blecher, 2008). Preliminary studies have reported a boost in the number of quit line calls following the introduction of this law and no increase in the availability of illicit tobacco, which contrasted

the tobacco industry's claims and arguments. In 2015, Ireland and the United Kingdom also passed plain packaging legislation (Scollo *et.al*, 2015).

Raising Tobacco Taxes: Tobacco excise tax increases thatresult in higher tobacco product prices are among the most effective tobacco control measures available, particularly to reduce smoking rates in youth and lower socioeconomic groups. Tax rates need to be regularly revised to increase the price of tobacco products at a rate above inflation and income growth, making tobacco products less affordable over time. With a successful cigarette tax harmonization and integration regimen in the European Union, the member states have the highest tobacco excise taxes in the world. In the United States, where tobacco taxes are partly set by states, the tobacco tax in North eastern States is higher and in Southern States is lower than the rest of the country; higher taxes are associated with lower smoking prevalence in states (Blecher and Walbeek, 2014). In addition to decreasing tobacco use prevalence and intensity, tobacco tax increases generating sizable revenues, which can be used to fund tobacco control and other public health initiatives. For example, Costa Rica and the Philippines use a major portion of their revenues from recent cigarette tax increases in health care, including the diagnosis, treatment, and prevention of tobacco-related diseases (Drope *et al*, 2014).

Need for Comprehensiveness in Tobacco Control Policies: Tobacco control policies need to be comprehensive and include all tobacco products. Otherwise, smokers may just substitute one product for another. In Poland, for example, following a cigarette excise tax increase in January 2004, sales of manufactured cigarettes declined while sales of tobacco for RYO cigarettes increased (from a cigarette quivalent of 3.4 billion in 2003 to 5.7 billion in 2004). When tax rates were increased on both manufactured and RYO cigarettes in January 2005, pipe tobacco sales increased from a cigarette equivalent of 0.2 billion in 2004 to 2.0 billion in 2005 and 3.3 billion in 2006 (Gruszczynski,2014).

Lobbying and litigation : More than 85% of all cigarettes smoked globally are being produced by only six transnational companies: China National Tobacco Corporation, Philip Morris International, British American Tobacco, Japan Tobacco International, Imperial Tobacco Group, and Altria Group. Each of these companies has a gross revenue that is comparable to the gross domestic product of a small country. The secompanies frequently lobby or

challenge tobacco control proposals legally to block or delay their implementation. Examples include a multimillion-dollar lobbying campaign to undermine the revision of the EU Tobacco Products Directive and a challenge to Australia's plain packaging regulations in domestic courts, at the World Trade Organization, and in international arbitration as part of a bilateral investment treaty. In contrast, governments, health organizations, and individuals inseveral countries have sued the tobacco industry forviolating tobacco control regulations and for the health and environmental consequences of their products and practices (Grana *et.al*, 2014).

Investing in Tobacco Control : Few public health investments provide greater dividend than tobacco control. Countries that have implemented the best practices reflected in the WHO FCTC are now benefiting from their actions. For example, since 1989, Brazil has reduced its smoking rates by close to half through several tobacco control initiatives. It is estimated that thos ecombined policiesa verted 420 000 deaths by 2010, more than half of which were because cigarette tax increases. The comprehensive tobacco control policies tha twere implemented globally from 2007 to 2010 alon eprevented an estimated 7.5 million smoking-related deaths (Levy *et al*, 2013).

Tobacco control interventions are relatively inexpensive to implement. WHO estimates that delivering four population-based tobacco control measures (tobacco tax increases, smoke-free policies, package warnings, and advertising bans) to all LMICs would cost only $600 million, or $0.11 perperson, annually. This amount includes the human resources and physical capital needed to plan, develop, implement, monitor, and enforce the policies. Currently, only $0.02 per person is spent annually on tobacco control in LMICs. Several tobacco control interventions have even proven to be cost saving, which means that for every dollar spent on these interventions was more than one dollar yielded in return in saved health care costs and human productivity (Reed, 2010). Data from national surveys were not available for all countries; or when available, the data might not be comparable in some cases because they were collecte dusing different methodologies or in different years, which might not reflect recent changes in smoking prevalence or tobacco control policies. Despite these limitations, the availability of data from several countries in each region would be sufficient to illustrate the smoking prevalence, trends, and tobacco control policies in all regions.

Tobacco and Smoking Situation and Policies in Bangladesh

Bangladesh became a Party to the WHO Framework Convention on Tobacco Control. Bangladesh is one of the largest tobacco consuming countries in the world. Among the population 63% are aged 15- 64 years. Bangladesh has one of the highest tobacco use prevalence in the world. 43.3% adult in Bangladesh currently use tobacco (Smoking and smokeless). The most common and traditionally, Bangladeshi men smoke cigarettes, biri and hokah, and smoke less form such as zarda, sadapata (chew tobacco leaf) with betel quid (pan), gul etc. The GATS report' 2009 of WHO says that current tobacco user (smoking and smoke less) among all adults is 43.3% (41.3 million). Among them 58% are males and female is 28.7%. 23% of adult aged 15 years or above currently smoke tobacco in Bangladesh, (for males 44.7% and for female 1.5%). The estimated number of current adult tobacco smokers is 21.9 million (21.2 million males and 0.7 million females). Among male current tobacco user, 54.6% only smoked tobacco , 23% used smokeless tobacco and 22.4% used both. Among female current users, 2.7% smoked tobacco, 94.7% used smokeless tobacco products and 2.6% used both. Among youth (age 13-15), 2% smoke cigarettes and 6% use tobacco products other than cigarettes (Banu, 2015). The cost of tobacco-related illnesses in Bangladesh attributable to tobacco usage was estimated at 50.9 billion taka, including 5.8 billion taka for illnesses resulting from second hand smoke exposure in 2004. On the other hand, the total annual product of the tobacco sector was estimated at 24.8 billion taka from tax revenue and wages. So the net loses from tobacco usage to the country is 26.1 billion taka in 2004 (equivalent to US$ 442 million). It is estimated that on average a tobacco user spends about 4.5% of the monthly expenditure for tobacco consumption. Treatment of 1.2 million people every year costing billions of taka and health costs more than double of the revenue collected from tobacco companies. For burning the tobacco leaves and tobacco cultivation Bangladesh lost 30% of forest which harm the environment, soil fertility also reducing due to tobacco cultivation. Aa a result of increasing diversion of crop land for tobacco cultivation the possible threat to food security is come up as a major issue (Banu, 2015)

Public Places: Certain public places may have outdoor designated smoking zones, but health care and educational facilities, among other public places, shall not have such zones. Smoking is prohibited in one room means of public transport, but public transport with two or more rooms may have

designated smoking zones. With respect to outdoor places, children's parks, fairs, and queues of passengers riding public vehicles are smoke free. Sub-national jurisdictions may enact smoke free laws that are more stringent than the national law.

Tobacco Advertising, Promotion and Sponsorship: Tobacco advertising is prohibited in all print and electronic media, including at the point-of-sale. Free and discounted tobacco products also are prohibited, but internet tobacco sales and tobacco products bearing non-tobacco brand names are allowed. Although sponsorship by the tobacco industry is not completely prohibited, publicity of the sponsorship is prohibited.

Tobacco Packaging and Labeling: The law requires pictorial health warnings to cover at least 50 percent of the main display areas of all tobacco products. One of nine warnings (seven warnings for smoked products and two warnings for smokeless products) must be rotated every three months. Misleading terms such as "light" and "low tar" are prohibited on tobacco packaging, but other misleading packaging (e.g., colors, numbers, and symbols) is not banned.

Roadmap to Tobacco Control Legislation: The Smoking and Tobacco Products Usage (Control) Act, 2005, as mended by the Smoking and Tobacco Products Usage (Control) (Amendment) Act, 2013, is the principal law governing tobacco control in Bangladesh. The Act is comprehensive and covers smoke free policies; tobacco advertising, promotion and sponsorship; and packaging and labeling of tobacco products, among other areas. The Smoking and Tobacco Products Usage (Control) Rules, 2015 are the implementing Rules of the Act and provide further details regarding many provisions of the law. A public notice was issued subsequently by the Ministry of Health & Family Welfare to clarify that although the Rules require placement of health warnings on the upper half of principal display areas, placement on the lower half would be permitted as an interim measure. The 2005 Act was passed after Bangladesh became a party to the WHO Framework Convention on Tobacco Control, and was enacted as an addition , not in derogation of existing laws, at least to the extent that there were no contradictory provisions. The non-exclusive list of existing legislation includes the Railways Act, 1890 (governing smoking in railway compartments). The Ministry of Health is the lead agency to enforce the Smoking and Tobacco Control Legislation.

The previous law did not include smokeless tobacco like jarda, gul, khoinee and sada pata in the definition of 'tobacco products' although the prevalence of use of these products is higher than smoking prevalence in Bangladesh. The amended law defines all types of smokeless tobacco as 'tobacco products'.

Conclusions

Smoking prevalence is decreasing globally because of heightened awareness about the health hazards of smoking and the implementation of effective tobacco control policies. However, smoking is still a common habit, particularly in Asia, Eastern Europe, southern Europe, and a number of other LMICs. Additionally, rapid population growth and the expected increase in smoking prevalence because of the adoption of Western lifestyles associated with economic development and urbanization which could lead tomany more smokers and tobacco-related diseases in parts of Africa and Latin America. Governments, in collaboration with the broader society, must implement effective tobacco control policies where they have lackings. Particular attention should be given to preventthe increase in smoking prevalence among women in LMICs. Although new nicotine delivery systems, such as e-cigarettes, may have the potential to help reduce tobacco-related harm by helping smokers to quit. Measures need to be in place to make sure that these systems do not lead to the maintenance of, or a new surge in tobacco use. Support and advice about quitting smoking should be apart of all health care practices, including urologic practices, because smoking not only cause diseases but also worsen the prognoses of other diseases by increasing commonalities including respiratory and cardio vascular problems.

References

Asma Y. , Song J. C, 2014. 'CDC grand rounds: global tobacco control', *MMWR*, Vol.63, pp. 277-280.

Bau N, 2015 'Making Local Government Institution Smoke Free: A Practical Experiences', *Social Change*. Vol. 5, pp. 48-71

Eriksen J., Mackay N., Schluger F., Islami J., Drope., 2015. *'The Tobacco Atlas'*. 5th ed. (American Cancer Society, Atlanta,).

USDHHS, 2014. *'The health consequences of smoking-50 years of progress: a report of the surgeon general'*. Centers for Disease Control and Prevention, Atlanta, GA, United States Department of Health and Humanities Services.

Hiscock, L. Bauld, A. Amos, J.A. Fidler, M. Munafo, 2012. 'Socioeconomic status and smoking: a review', *Annual Journal of Academy of Science*, Vol.1248, pp. 107-123

J.E. Muscat, J.E. K. Ahn, J.P. Richie, S.D. Stellma, 2011. 'Nicotine dependence phenotype and lung cancer risk', *Cancer*, Vol. 117, pp.5370-5376.

Jha, P., R. Petom, 2014. 'Global effects of smoking, of quitting, and of taxing tobacco'. *National Journal of Medicine*, Vol. 370, pp. 60-68.

Mackay, J. Ritthiphakdee,K.S. and Reddy, R, 2013. 'Tobacco control in Asia'. *Lancet*, Vol. 381, pp.1581-1587.

Peto, R.S. Darby, H. Deo, P. Silcocks, E. Whitley, R. Doll, 2000. 'Smoking, smoking cessation, and lung cancer in the UK since 1950: combination of national statistics with two case-control studies'. *BMJ*. Vol. 321, pp. 323-329.

Samanic, C. M. Kogevinas, M. Dosemeci, 2006. 'Smoking and bladder cancer in Spain: effects of tobacco type, timing, environmental tobacco smoke, and gender'. *Cancer Epidemiological Biomark Preview*, Vol.15, pp.1348-1354.

Maziak, W, 2013. 'The waterpipe: an emerging global risk for cancer'. *Cancer Epidemiology*, Vol. 37, pp.1 - 4.

Aki, E.A., S.K. Gunukula, S. Aleem, 2011. 'The prevalence of waterpipe tobacco smoking among the general and specific populations: a systematic review'. *BMC Public Health*, Vol. 11, pp. 244.

Grana, N. Benowitz, S.A. Glantz, 2014. 'E-cigarettes: a scientific review'. *Circulation*, Vol. 129, pp.1972-1986

GTSS, 2014. *'Global Tobacco Surveillance System Data, Centers forDisease Control and Prevention'*.

Sureda, E. Fernández, M.J. López, M. Nebot, 2013. 'Secondhand tobacco smoke exposure in open and semi-open settings: a systematic review'. *Environmental Health Perspective*, Vol. 121, pp.766-773.

Lancaster, L. S, 2004. 'Physician advice for smoking cessation'. *Cochrane Database System Review*,

Free, G. Phillips, L. Galli, 2013. 'The effectiveness of mobile-health technology-based health behaviour change or disease management interventions for health care consumers: a systematic review'. *PLoS Medicine*, Vol. 10, pp. 100-136

WHO, 2013. 'WHO report on the global tobacco epidemic, 2013: enforcing bans on tobacco advertising, promotion and sponsorship', *World Health Organization*, Switzerland, Geneva.

Blecher, F. 2008. 'The impact of tobacco advertising bans on consumption in developing countries'. *Journal of Health Economics*, Vol. 27, pp. 930-942.

Scollo, M. Bayly, M. Wakefield, M. 2015. 'Availability of illicit tobacco in small retail outlets before and after the implementation of Australian plain packaging legislation'. *Tobacco Control*, Vol. 24, no. 45, pp. 51-60.

Blecher, E and Walbeek, C.V, 2014. 'An international analysis of cigarette affordability'. *Tobacco Control*, Vol. 13, pp. 339-346.

Drope, J.J. Chavez, R. Lencucha and B. McGrady, 2014. 'The political economy of foreign direct investment-evidence from the Philippines'. *Policy Sociology*, Vol. 33, pp. 39-52.

Gruszczynski, L. 2014. 'Trade, investment and risk: Australian plain packaging law, international litigations and regulatory chilling effect'. *European Journal of Risk Regulation*, Vol. 2, pp. 242-247.

D.T. Levy, D.T., J.A. Ellis, D. Mays, A-T. Huang. 2013. 'Smoking-related deaths averted due to three years of policy progress', *Bulletin of World Health Organization*, Vol. 91, pp. 509-518.

Gruszczynski, L, 2014. 'Trade, investment and risk: Australian plain packaging law, international litigations and regulatory chilling effect'. *European Journal of Risk Regulation*, Vol. 2, pp. 242 - 247

Reed, H. 2010. *'The effects of increasing tobacco taxation: a cost benefit and public finances analysis'*, Action on Smoking and Health, London, UK.