

## Original Article

# Evaluation of Tobacco Product-Selling Websites Accessed Using Search Engines

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## Abstract

**OBJECTIVE:** Although the sale of electronic (e)-cigarettes and “I Quit Ordinary Smoking” (IQOS) is completely prohibited in Turkey, it is observed that tobacco products are sold on the internet.

**MATERIAL AND METHODS:** This descriptive study was conducted between February 11 and 15, 2019, using three search engines (Google, Yandex, and Yaani) in Turkey. All combinations obtained with the keywords (wrapping tobacco, cigarette, hookah, pigtail, cigar, pipe, e-cigarette, snuff, and IQOS) and appendices (sale, price, and shipping) were searched; 2,160 links were scanned. The contents obtained from 130 different URLs were evaluated.

**RESULTS:** The most sold product was e-cigarettes (41.2%) and the least sold one was cigarettes (2.5%). Websites contained 500 phone numbers (79%), live support (32.8%), e-mail addresses (67.2%), and postal addresses (42.9%) for communication. Approximately half of the sites had routing tabs to social media. These websites offered some payment facilities (credit card/debit card, 64.7%; money order/electronic funds transfer (EFT), 37.8%; payment at the door, 54.6%) and contained encouraging texts (61.3%) and misinformation (42.9%). More number of websites selling e-cigarettes or IQOS had the campaign sales (89.3% vs 63.6%;  $p=0.001$ ), possibility of shipping (98.7% vs 86.4%;  $p<0.05$ ), and false information about the harmlessness of the tobacco products (61.3% vs 11.4%;  $p<0.001$ ) compared with websites selling other products.

**CONCLUSION:** This is the first study to show that the tobacco industry is breaking the laws, and the websites which sell tobacco products are easily accessible to the internet users. It is necessary to strengthen the electronic commerce monitoring and control in Turkey.

**KEYWORDS:** Tobacco industry, tobacco products, advertising, social market

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## INTRODUCTION

Using tobacco products is a serious problem that is considered as an “epidemic” in the world due to its increasing usage and harmful effects on the human health [1]. Cigarettes contain over 7000 toxic substances and at least 70 carcinogens and are a major cause of many different cancer types, primarily lung cancer and cardiovascular diseases and stroke. Smoking is responsible for 45% of deaths related to chronic obstructive pulmonary disease. An individual who smokes regularly during his/her lifetime loses, on an average, at least 10 to 11 years from his/her lifespan [2]. It is known that approximately 1.1 billion people in the world above the age of 15 years are smokers, and 7 million people die every year because of tobacco-related causes [3]. A total of 19.2 million people (31.6%; according to the outcomes of the Global Adult Tobacco Research conducted in 2016 in Turkey) and 17.9% of the young population aged 13-15 years (according to the Global Youth Tobacco Research conducted in 2017) consume tobacco [4, 5].

Restrictions on the production, use, and sale of tobacco are the most important components of tobacco control interventions. The World Health Organization (WHO) Framework Convention on Tobacco Control (FCTC) included clauses about prohibiting tobacco sales, advertising, and promotion through the internet in terms of the sellers of the products, credit card companies that facilitate payment, and the delivery persons/companies [6]. This agreement was adopted by Turkey in 2004 and included in the internal legislation [7].

Nowadays, with the developing technology, internet usage is becoming more widespread. A total of 56% of the world’s population (4.35 billion people) uses the internet [8]. When users want to search for something on the internet, the first source they have are the search engines. As a result of these developments, access to information has become easier and many companies have started to make more profit by benefiting from the internet usage [9]. More than 12 billion internet searches are available in the United States every month [10]. According to Household Information Technology (IT)

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Household Information Technologies (IT) Usage Survey conducted by Turkey Statistics Institute in 2019, the internet usage was 75.3% among individuals aged 16-74 in 2019 [11]. It was determined that in 2016, approximately 87% of internet users were using the search engines to access products and services [12].

Selling tobacco products through telephone, television, and the internet, and delivering them by shipping, has been banned through Law no. 4207 in Turkey since 2008. The auditing of the commercial activities in electronic environment is done with the regulations put in place by taking the opinions of the relevant ministries and institutions within the scope of the law, which came into force in 2014 [13]. It is decided to block access to the broadcasts made on the internet and whose content has sufficient reason to suspect that they constitute the crimes determined by law. The provision of hazardous substances for health is also defined as one of these crimes [14].

Although the sale of electronic (e)-cigarettes and IQOS is completely prohibited in Turkey, it is observed that there is still illegal sale of tobacco products on the internet. This research, which was planned on the basis of these observations, aimed to evaluate the accessibility and content of the internet sites selling tobacco products by using search engines, to define misinformation and misguidance, and to create evidence to develop new interventions against the marketing strategy of the tobacco industry in Turkey.

**MATERIAL AND METHODS**

This descriptive study was conducted between February 11 and 15, 2019, through the two most commonly used search engines in Turkey (Google and Yandex) and the only native search engine (Yaani), which is placed in first five.

All combinations obtained with the keywords (wrapping tobacco, cigarette, hookah, pigtail, cigar, pipe, e-cigarette, snuff, and IQOS) and appendices (sale, price, and shipping) were searched in the search engines and the first 20 URL websites were determined as the universe and sample.

The nine keywords were searched alone and with the appendices in three search engines, and a total of 2,160 links were scanned. The matching URLs were eliminated, and a list with

a total of 130 different URLs was formed. A form containing 26 questions was filled in for each URL by accessing them through the internet. The links to preview “images, videos, shopping,” which the search engines bring out on the first page, were excluded from the 20 links. The advertisements which appear on the other side of the page (commonly on the top right corner) were also not included in this study. If any sites, which were not accessible in the 20 links were detected, the number of URLs was completed to 20 with the accessible ones to avoid narrowing the universe and sample of research.

The internet sites that sell tobacco products were evaluated in terms of the keywords used to reach the site, the search engine that the site was reached through, the ranking the site appears on the search engine, the tobacco products sold on the site, the characteristics of the site (promotional images, campaign product sales, short video, tobacco product specific logo, the phrase of the tobacco product in the name of the site), the site’s contact information (telephone number, live support tab, social media routing, WhatsApp line, e-mail address, and postal address availability), incentive images or colors used in promotional images, informative or incentive text about the tobacco products, payment methods, possibility of shipping, and availability of “+18 age” warning.

Due to the variability in the internet environment, 11 sites were identified that were closed during the data collection process, and the sample was 130 in some and 119 in other analyses. There were situations when the information about the payment method and shipping could not be reached as a result of the detailed examination of the site. For these cases the “undetermined category” was also included in the analysis.

Since the information in the search engines is public and the subjects of our study are not human beings, there were no ethical obligations.

**Statistical Analysis**

For the evaluation of the data, IBM Statistical Package for the Social Sciences version 23.0 (IBM SPSS Corp.; Armonk, NY, USA) was used.

**RESULTS**

In this study, 130 websites were accessed; 34.6% of them were reached using the keyword “electronic cigarettes”, 29.2% by “IQOS”, and 20.0% by “cigarette”. Out of the 119 websites, 41.2% were selling e-cigarettes, 39.5% IQOS, 23.5% wrapping tobacco, and the least selling product was cigarettes (2.5%; Table 1).

The websites selling the tobacco products had promotional images (83.2%), “tobacco product” statement in their name (71.4%), and tobacco product-specific logo (62.2%). There were 500 phone numbers (79%) and live support (32.8%) for communication on the websites. The sites had routing tabs to social media; approximately half were being directed to Facebook, WhatsApp, and Twitter (53.8%, 51.3%, and 49.6%, respectively). More than half of the websites had an e-mail address (67.2%; Table 2).

Among the payment methods offered for the sale of tobacco products were the payment through the bank (credit card/

**MAIN POINTS**

- This is the first study in Turkey to show that the websites facilitate the sale of tobacco products through facilitating payment, communication, and misinformation.
- This study determined that the tobacco industry is breaking the laws, and the websites that sell the tobacco products are quite easy to access by the internet users; thus, there is a need to increase the audits.
- The biggest preventive measures that can be taken are to raise awareness regarding the harm caused by the tobacco products and about the non-smoking tobacco products not being any less harmful than cigarette smoking, to strengthen electronic commerce monitoring and control, and to implement more deterrent sanctions.

**Table 1.** Distribution of the websites selling tobacco products in three search engines (Turkey, February 11-15, 2019)

Products sold (n=119)	n	%**
Electronic cigarettes	49	41.2
IQOS	47	39.5
Wrapping tobacco	28	23.5
Hookah	22	18.5
Pipe	12	10.1
Pigtail	9	7.6
Cigar	8	6.7
Snuff	5	4.2
Cigarette	3	2.5
Others*	7	5.9

\*Other products: electronic pipe, electronic hookah, cigarillo, barrels tobacco.

\*\*Since multiple products can be sold, the percentages are determined with respect to the total number (n=119)

**Table 2.** Distribution of the websites selling tobacco products based on tobacco advertising, marketing, communication, payment, and sale methods

Characteristics of websites	n	%
Containing promotional images	99	83.2
Containing tobacco product name	85	71.4
Containing tobacco product-specific logo	74	62.2
Including a short video	14	11.8
<b>Communication methods</b>		
500 phone numbers	94	79.0
Landline phone number	14	14.3
Including WhatsApp line	61	51.3
<b>Social media routing</b>		
Facebook	64	53.8
Twitter	59	49.6
Instagram	41	34.5
YouTube	26	21.8
Live support tab	39	32.8
E-mail address	80	67.2
Postal address	51	42.9
<b>Payment and sale methods</b>		
Credit cards/debit cards	77	64.7
Pay at the door	65	54.6
Money order/EFT	45	37.8
Shipping available	112	94.1
Containing campaign sales	95	79.8
<b>Informing texts</b>		
Incentive text	73	61.3
Misinformation related to harmlessness	51	42.9
Information text about tobacco-related harm	45	37.8
"+18 age" warning	5	4.2

**Table 3.** Distribution of the characteristics and marketing methods of the websites that do or do not sell electronic cigarettes/IQOS

Website contained	e-cigarette/IQOS (n=75)	Others* (n=44)	p
Logo	44 (58.7%)	30 (68.2%)	0.300
Name	51 (68.0%)	34 (77.3%)	0.280
WhatsApp line	45 (60.0%)	16 (36.4%)	0.013
Rooting tab to YouTube	21 (28.0%)	5 (11.4%)	0.034
Live support tab	31 (41.3%)	8 (18.2%)	0.009
Campaign sales	67 (89.3%)	28 (63.6%)	0.001
Shipping	74 (98.7%)	38 (86.4%)	0.036
Information text about e-cigarette-related harm	26 (34.7%)	19 (43.2%)	0.350
Incentive text	51 (68.0%)	22 (50.0%)	0.052
Misinformation related to harmlessness	46 (61.3%)	5 (11.4%)	<0.001

\*Others: Not selling e-cigarettes or IQOS.

debit card, 64.7%; money order/EFT, 37.8%) and payment at the door (54.6%). Most of the websites delivered their products by shipping (94.1%). The statements regarding the tobacco product campaign were frequently observed (79.8%; Table 2).

The text encouraging the use of tobacco products on the websites (61.3%) and the misinformation on the tobacco product sold (42.9%) were observed. Informative text about the harm caused by the tobacco products (37.8%) and "+18" warning (4.2%) were also observed on the websites (Table 2).

In addition, the websites accessed were found to be using various incentive images like nature (19.3%), masculine (18.5%), and feminine (16.8%) themes (not included in the table).

Live support services were offered more on the websites selling electronic (e)-cigarettes or IQOS than the other sites (41.3% vs 36.4%, respectively;  $p=0.009$ ). The websites selling e-cigarettes or IQOS had more social media routing than the others (WhatsApp, 60.0%;  $p<0.05$  and YouTube, 28.0%;  $p<0.05$ ).

The campaign sales (89.3% vs 63.6%;  $p=0.001$ ) and shipping (98.7% vs 86.4%;  $p<0.05$ ) on the websites selling e-cigarettes and/or IQOS were observed more than on other websites (Table 3).

In 61.3% of the websites on which e-cigarettes or IQOS were sold, there was false information about the harmlessness of the tobacco product (others 11.4%;  $p<0.001$ ; Table 3).

## DISCUSSION

In our research, it was observed that even though tobacco sales and advertising were prohibited according to the national laws and not recommended in the WHO policies, these activities were illegally done on the websites in the country. It can be said that the prohibition of the sales and

advertising of the tobacco products on traditional platforms, such as the press and similar media organs, makes the internet and social media the ideal platform for the tobacco companies to maintain their promotional campaigns because e-commerce is difficult to control [15, 16].

The United States, one of the countries with similar prohibitions, prohibited the sale of flavored tobacco products *via* the internet in 2009 with the Family Smoking Prevention and Tobacco Control Act. The share of the US producers selling flavored cigarettes fell from 50.9% in 2009 (before prohibition of flavors) to 31.5% in 2010 and 28.6% in 2011, and accordingly, the sales of clove cigars and cigarettes that do not enter the scope of ban increased [17, 18]. While there is no such ban in many countries in the European Region, Belgium has become one of the countries to ban the sale of tobacco products in 2016 [19].

Although the sale, advertising, and promotion of all kinds of tobacco products in Turkey is prohibited [13], in the majority of the sites accessed in the study, the sale of the campaign products (79.8%), shopping opportunities with credit cards (64.7%), and shipping options (94.1%) indicate that the tobacco industry aims to increase the sales by using different methods to influence the customer.

The use of credit cards has increased the consumer's spending power and convenience, and they can be used for 24 hours, facilitating shopping for those who have limited mobility or cannot leave the home; therefore, the sites that allow shopping by credit card attract more customers [20]. In this respect, the use of credit cards for the sale of tobacco products is an important way to reach the customers. In the study by Robinson et al. [21], it was determined that various payment methods including the credit cards, bank transfer, and electronic checks were accepted on almost all of the 512 websites that were examined in 2013-2014; however, despite the fact that the online sale through credit cards was banned, it was found that the majority of the sellers who did not accept credit cards (60.7% in 2013 and 78.3% in 2014) continued to sell cigarettes. According to the Prevent All Cigarette Trafficking (PACT) Law, which was enacted in 2009, US shipping companies were prohibited from bringing cigarettes to the consumers; this led to an increase in the internet cigarette sellers, who offered the option of delivery by US Postal Service (USPS) and Federal Express (FedEx) that the state owns [22]. Williams and Ribisl found that the shopping traffic on the websites that made sales decreased significantly after these prohibitions. Although the prohibitions were the right attempt, they were not enough to limit the sales through the internet. Of the 97 websites, 37 were reviewed in 2013 that continued to use credit cards [23]. All these findings show that the tobacco sector can defy the bans and find alternative ways to reach to the customers in every situation.

Discounts and campaigns are also the factors that can make internet shopping as the preferred option. Considering that one of the most important factors that the individuals in the low socioeconomic status and young people take into consideration in reaching for the tobacco product smoking is the price of the products, it is quite natural for the companies to

use these ways [24]. The price of the products is one of the most important factors considered by the young people from low socioeconomic status, and the companies market tobacco products with lower prices to increase their sales. In the study by Hall et al. [25], it was shown that the cigarette prices are lower on the internet sites selling tobacco products in the United States and a person who smokes one pack of cigarettes per day may save 1508 dollars a year, if he buys his cigarettes *via* the internet, which is defined as an incentive feature.

Almost half of the websites had incentive texts about tobacco products and misinformation that these products were harmless. (Table 2). The information claiming all legal permission without showing any resources, and if not paid attention, is likely to mislead the internet users [26]. In our study, it was found that the misconceptions about the use of e-cigarettes/IQOS were significantly higher on the websites selling other tobacco products (Table 3). The studies related to the subject show that the websites marketing e-cigarettes advertise e-cigarette as healthier, cheaper, and environment-friendly, and put forward the notion that they can be used in the areas where smoking is prohibited and also present them as a smoking cessation method. This situation increases the sale, advertising, and promotion of these products. It has been shown that especially adolescents and young adults start to use e-cigarette to test it as an alternative to flammable tobacco products [24, 27, 28]. However, Soneji et al. stated that e-cigarettes do not help quit smoking and can even facilitate smoking in young people; the likelihood of beginning smoking by people who have used e-cigarettes in any period of life is 4 times higher than those who have never smoked e-cigarettes [29].

Another platform for e-commerce is social media. Most websites that sell tobacco products direct the user to their social media pages, such as Facebook, Twitter, Instagram, and YouTube (Table 2). This method makes young people, who use smartphones and social media more frequently and access Wi-Fi much easily, a target to all kinds of tobacco products [30]. There is mutual agreement between the social media and shopping sites. This is a finding that shows they can sell products through social media and also that they have provided false information on these platforms. According to a survey, there were around 28,000 videos about e-cigarettes on YouTube as of June 30, 2013, and 70% of them were found to contain a website address [31].

In the study by Mackey et al. [32], similar to our study, 57 websites selling the e-cigarettes were examined, 70.2% of them were found to have links with at least one of the three most widely used social media platforms: Twitter (63.2%), Facebook (52.6%), and Instagram (42.1%). It was seen that while 22.8% of the sites offered promotion/discount codes, 52.6% of them offered reward points system or discount [32]. In our study, the most directing was to the Facebook page, and the abovementioned study had similar percentages. The sites that run the campaign show more directing than this study (80%).

It was seen that 79% of the websites selling tobacco products preferred 500 telephone numbers as the communication

number and 51.3% of them provided communication with the WhatsApp line (Table 2). The WhatsApp and 500 telephone numbers may be preferable because they are easily changeable. The fact that 42.9% of the websites that sell tobacco products give open addresses shows that they do not need to hide their identities.

It is a known fact that young people are more affected by tobacco advertising and promotions than the adults [33]. In addition, it is difficult to verify the ages of customers who buy tobacco products through the internet; this allows people of all ages to be reached without restrictions [34]. In a study conducted with 11 children aged 14-17 years, who were non-smokers in the United States and trying to make purchases from 98 internet sites, 76.5% of the purchasing initiatives were realized; 68.4% of the sites did not include any age-related warnings on the home page; in 82.7% of the sites there were applications that could not verify the age effectively (such as a checkbox) [35]. In the study by Mackey et al., it was found that the majority of the sites examined (61.4%) included a dialog box in which the users confirmed that they were over 18 years of age, and it was surprising that ten of them (17.6%) did not publish any health warning [32]. In our study, these percentages were much lower and only 4.2% of the websites examined had “+18 years” warning.

This is the first study in Turkey to show that the websites facilitate the sale of tobacco products through facilitating payment, communication, and misinformation. However, there are some limitations to the study. One of these is the dynamic pattern of the internet, which is the research area. During the data collection process, some sites changed their names and some of them were closed. This led to the lack of data analysis in terms of criteria that could not be acquired during the analysis process. A long-term observation of these sites will be able to show the changes in the products, properties, sales methods, and promotions. The second limitation is that there was no membership to any of the sites in order to avoid conflicts of interest in the research process, which led to the inability of some sites to be evaluated in terms of certain criteria. Moreover, since search engines do not provide search volume data clearly, this methodology shows that only tobacco products are sold on the internet and does not show the purchasing behavior of the individuals; it is therefore difficult to make definitive judgments.

Thus, this study determined that the tobacco industry is breaking the laws, and the websites that sell the tobacco products are quite easy to access by the internet users; thus, there is a need to increase the audits. On these websites, it has been seen that the marketing strategies, such as incentives and misinformation are used, and young people can easily be reached through social media. Although it is almost impossible to monitor all content related to tobacco on the internet, it is important to know how this content affects the trend of tobacco use [24].

Since the internet environment has a dynamic pattern, it will be appropriate to conduct such research periodically and submit the results to the relevant authorities. The biggest preventive measures that can be taken are to raise awareness

regarding the harm caused by the tobacco products and about the non-smoking tobacco products not being any less harmful than cigarette smoking, to encourage the internet users to report when they come across such sites, to strengthen electronic commerce monitoring and control, and to implement more deterrent sanctions. Considering that the number of similar studies in the literature is low and this is the first study about this issue in Turkey, it is believed that this study will lead to more comprehensive studies in the future.

**Ethics Committee Approval:** Since the information in the search engines is public and the subject of our study is not human beings, there are no ethical obstacles and no need for “Ethics Committee Approval”.

**Informed Consent:** N/A.

**Peer-review:** Externally peer-reviewed

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