

An Evaluation of the Community Pharmacy Web Sites Before and After the Online Pharmacy Prohibition

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Selen Yeğenoğlu*^o

Introduction

In the globalized world, accessing to everything is getting easier with the Internet. The providing convenience of the Internet on getting information is a fact¹. The Internet is an important communication channel and the number of users is increasing rapidly. Internet usage increased 480.4% from 2000 till 2011 in the world². Today, a largest part of Internet users try to find health information and purchase medicine³⁻⁸. This situation is similar in Turkey too. Internet connection was available in 47.2% of households and drugs are in the top 10 best-selling products on the Internet in Turkey⁹.

In addition, the concept of online pharmacies has appeared with the increasing use of Internet for commercial purposes in the nineties^{5,10,11}. Basically, online pharmacies can be defined as pharmacies which are selling drugs through the Internet¹². According to a more comprehensive definition, "*Online pharmacies are computerized systems having the potential role of real pharmacies and handling business transactions remotely with no physical proximity between consumers and drug retailers*"¹³.

* Hacettepe University, Faculty of Pharmacy, Department of Pharmacy Management, Sıhhiye, 06100 Ankara, Turkiye

^o Corresponding author: E-mail: selen@hacettepe.edu.tr

Online pharmacy is also known as internet pharmacy, cyber pharmacy, e-pharmacy, and/or virtual pharmacy¹⁴.

For some people, buying products online offers advantages compared to purchasing from a local pharmacy/drug store, including:

- The privacy and convenience of ordering products from their homes,
- Greater availability of products for shut-in people or those who live far from the pharmacy,
- The ease of comparative shopping among many sites to find the best prices,
- Greater convenience and variety of products,
- Easier access to written product information and references to other sources than in traditional storefront pharmacies,
- Greater speed in obtaining products,
- Less costly in terms of time and money.

However, easily drug selling on the Internet caused many problems like counterfeit medicines on rouge sites, using drugs without a consultation with healthcare professionals and advertisements with misleading information^{5,10,12,13,15,16}. Such problems threaten public health. Moreover, it is reported that some patients died because of these issues in some countries⁴. Due to all these happenings, there is a requirement for analyzing online pharmacies.

Regulations about online pharmacies vary from country to country. For example, online pharmacies are allowed in the UK, the Netherlands, the USA, Canada, New Zealand and Denmark but they are forbidden in Finland and Germany^{3,5}. In Turkey, with the latest legislation put into action on 02.10.2007 which states that "*Prescriptions those reach the pharmacy via internet, fax, telephone, courier, commissioner and alike are not accepted. Drug demands coming from the mentioned means will not be met in the pharmacies.*"¹⁷. Additionally, Turkish Pharmacists' Association declared in the beginning of 2008 that drug selling on the internet is illegal, it causes unfair competition between pharmacies and the organization will take legal action unless online pharmacy web sites are closed until 01.02.2008¹⁸.

On the other hand, community pharmacies are significant for providing pharmaceutical services in Turkey¹⁹. Therefore, online pharmacies have a special importance for pharmaceutical services through the Internet. Thus, the aim of this survey was to explore the situation before and after the online pharmacy prohibition in Turkey.

Materials and Methods

With the aim of reaching all of the community websites available in Turkey multiple internet search engines were used (*google.com, yahoo.com, altavista.com, msn.com*). While searching on the Internet “*eczane (pharmacy)*” and “*eczanesi (pharmacy of)*” key words were used.

In this study, a web based survey is conducted. The survey lasted for two months starting from 1st September until 1st November 2007. A total of 40 e-commercing pharmacy web sites are included in the study. No sampling technique was applied and all web sites were analyzed.

After the regulations of Turkish legal authorities about online pharmacies, the selected e-commercing pharmacies were investigated again between 01-26 November 2012.

SPSS ver. 11.5 statistical program (SPSS, Inc., Chicago IL) was used for data entry and analysis.

Results

Of the 183 community pharmacy web sites a total of 40 e-commercing pharmacy web sites are included in the study.

E-commercing pharmacies are mainly located at İstanbul, İzmir and Ankara. In Table I the distribution of e-commercing pharmacies in Turkey can be seen.

Each of the identified web sites was evaluated for the characteristics given in Table II.

It is observed from the web sites that the e-commercing pharmacies mostly sell medicines (antifungals, hemorrhoid cream, etc.), personal care

TABLE I
The Distribution of e-commerce Pharmacies in Turkey

City	Number	%
İstanbul	13	32.5
İzmir	12	30.0
Ankara	5	12.5
Samsun	3	7.5
Antalya	3	7.5
Other	4	10.0
Total	40	100.0

TABLE II
Distribution of Characteristics on The Web Sites of e-Commerce Pharmacies

Characteristics	n (%)
Membership	15 (45.5)
Availability	
Name of the owner pharmacist	8 (24.4)
Phone number	21 (66)
Fax number	18 (54.5)
E-mail address	17 (51.5)
Address of the sentinel pharmacies	19 (57.6)
Map	8 (24.2)
Search engine	16 (48.8)
Accessibility	33 (100)
Shipping	15 (45.5)
Privacy information	12 (36.4)
Notification	5 (15.2)
Health education material	
Contained	8 (24.2)
With reference	4 (12.1)
Advertising	
Not contained	17 (51.5)
Not about health	4 (12.1)
Drug information	18 (54.5)
Payment/Purchasing information	9 (27.3)

products (such as preventing alopecia, anti-aging preparations), mother and baby care products (baby food, carminative syrups, rash cream, etc.), dermo-cosmetics (anti-wrinkle creams, etc.).

After the prohibition it is observed that 3 of these online pharmacies still continue selling products through their web sites, 3 of them changed their name but they are selling products too and 3 of these web sites exist but don't sell products.

Discussion

In today's world, finding information about health and medication choices get easy through the Internet. An increase in supply and demand for shopping on the Internet shows the dark side of this context. With a critical eye, Internet makes the assessing to everything easier and shopping through the Internet is both cost-effective and time saving than the traditional one. On the other hand, the decrease of the quality of information and products on the Internet is a fact^{3,5,10,15,20-22}. Moreover, some web sites in the appearance of online pharmacies are suitable web sites for selling counterfeit medicines. Also, many studies have shown that the situation of online pharmacies is terrible^{5,16,19}. Likewise none of the online pharmacies met the HON (Health on the Net) Quality criteria in Turkey¹⁹.

Mail address and contact information are evidences for licensed pharmacies¹³. A few web sites provided contact information and the owner of the web site or responsible pharmacist. Gondim and Falcou found similar results for Brazilian online pharmacies¹³. These data arouse a suspicion whether the web site really belongs to a community pharmacy or a commercial enterprise.

Containing privacy information is a sales promotion strategy^{11,12}. But in our study we found that only 63.6 % of e-commerceing pharmacies had privacy information in their web sites. Contrary to our finding Orizio et al. found that 90,9 % of English online pharmacies web sites provide privacy information¹¹.

Providing information about drugs on the web site is also important. In Brasil, 33.3 % of the online pharmacies have drug information in their

web sites¹³ whereas 54.5 % of Turkish online pharmacies had drug information.

Having online pharmacy means a source of income which is open 7/24 with tax-free shopping and very few procedures¹⁴. The owners of these web sites can earn much money with spending less time and effort. Besides, many counterfeit products can be sold in these online pharmacies because of the insufficient audit. However, it cannot be forgotten that health is more important than economical gain. Such drugs lead to many inappropriate self-treatment and adverse interactions with other medications²³.

In addition to all this, it is known that some physicians suggest medicines which are only sold in the Internet unfortunately. So that, their patients try to provide these drugs from anywhere in the world with online pharmacies. These situation causes inappropriate drug use too.

After the prohibition of online pharmacies in Turkey, 22.5 % of e-commerce pharmacies from 2007 still exist in 2012. 6 of them still continue to sell products on the Internet but 3 of them has changed their names. This finding is very surprising; it is difficult for us to understand the aim of these pharmacies. Also it is a question mark how these e-commerce pharmacies managed to exist although there is a prohibition for their existence.

It is predicted that the current Internet users prefer to buy medicine through the Internet when they get older¹⁰. In common, the studies about online pharmacies put forward that these pharmacies are very dangerous for public health without sufficient regulations and audit^{3, 8,11,14,22}.

In this study, it is determined that prohibition is not an efficient way for controlling online pharmacies. Furthermore it is also evident that there are not enough audits for online drug selling. The Ministry of Health and Turkish Pharmacist's Association make press releases about the danger of online selling drugs. Nevertheless, buying and selling activities continue. Therefore, raising awareness of Internet users is important. Instead of prohibition, it is necessary that professional authorities like Turkish Pharmacist's Association can prepare quality criteria for online pharmacies, and give information to healthcare professionals and Internet users about these criteria. International and other national guidelines can be considered while making this preparation. These

criteria must be announced through the press and various brochures and advertisements. Moreover, there must be dissuasive punishments for delinquencies. Certainly, controlling all of the web sites on the Internet is very difficult but taking measures is a must before delay.

Summary

It is known that the number of Internet users is increasing rapidly. Some of the Internet users prefer finding health information as well as purchasing various products online. It is indicated that drugs are in the top 10 best-selling products on the Internet in Turkey. On the other hand, it is emphasized that threats on the public health of these practices are referred in the studies about online pharmacies and drug selling on the Internet. Online pharmacies were prohibited with the regulations about online pharmacies in 2007 and 2008. In this study, the web sites of online pharmacies are analyzed before and after the prohibition.

Keywords: Retail Pharmacy, e-commerce, pharmacist(s), Web site(s), Turkey.

Özet

Online Eczanelerin Yasak Öncesi ve Sonrasındaki Durumlarının Değerlendirilmesi

Günümüzde internet kullanımının hızla arttığı bilinmektedir. İnternet kullanıcılarının bazıları sağlık ile ilgili bilgi aramanın yanı sıra çeşitli ürünleri internette satın almayı da tercih etmektedirler. Türkiye’de internette en çok satın alınan 10 ürünün arasında ilaçların da yer aldığı belirtilmektedir. Öte yandan yapılan çalışmalarda online eczanelerin ve bunların internet üzerinden ürün satışı yapmasının halk sağlığını tehdit ettiğine değinilmektedir. 2007 ve 2008 yıllarında yapılan yasal düzenlemelerle Türkiye’de online eczaneler yasaklanmıştır. Bu çalışmada, eczane internet sitelerinin söz konusu yasaktan önce ve sonraki durumları incelenmiştir.

Anahtar kelimeler: Serbest eczane, e-ticaret, eczacı(lar), web sitesi, Türkiye.

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