A Study on Websites of Public and Private Hospitals in Konya

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Abstract—After the first acquaintance with internet in April 1993, number of internet users increased rapidly in Turkey. Almost half of the population between 16-74 age group use internet in the country. Hospitals are one of the areas where the internet is intensively being used like many other businesses. As a part of public relations application, websites are important tools for hospitals to reach a wide range of target audience within and outside the organization. With their websites, hospitals have opportunities to give information about their organization, strengthen their image, compete with their rivals, interact with shareholders, reflect their transparency and meet with new audiences. This study examines web sites of totally 34 hospitals which are located in Konya. Institutions are categorized as public and private hospitals and then three main research categories are determined: content, visual and technical. Main and sub categories are examined by using content analysis method. Results are interpreted in scope of public and private institutions and as a whole.

Keywords—Health Communication, Hospital, Internet, Webpages, Websites.

I. INTRODUCTION

STARTING from with its very first usage in the field of non commercial activities like governmental, military and education, internet grew very rapidly and it is now being used by millions of people all over the world in a wide range of fields including commercial and non commercial activities [1]. Internet came to Turkey in 1993 [2] and since then, number of internet users reached almost half of the population. According to Turkish Statistical Institute's data, rate of computer and internet usage is 49.9% and 48.9%, respectively [3].

Websites are important tools for public relations professionals since they can be used to provide information to both external and internal audiences. With web sites, it is possible to carry out various functions like keeping stakeholders up to date, providing information to media, gathering information from public and strengthening corporate identity [4]. It is also an effective tool to create a positive image on stakeholders. It is claimed that companies having websites are seen as more customer-oriented, sophisticated and responsible organizations by their customers [5].

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A study [6] gathered the several possible areas of web page usage for public relations purposes. Firstly, it increases the acquaintance of the organization with the information given in their web pages about corporate identity, organizations' vision, mission and logos. By this way, organizations introduce themselves to their stakeholders and create a positive impression on them. Secondly, the information needed by media for preparing news, can be provided via web sites. Sending press releases, invitations, brochures and all sorts of visual materials on internet are also time and money saving applications for public relations professionals. Thirdly, in-company publications can displayed on internet and it also helps minimizing costs. Updating information and accessing previous issues would also be easy when internet is used. Fourthly, TV and radio commercials can be displayed on company's web site and it would be a cost saving method to reach target audiences. Fifthly, campaigns, sponsorship activities can be easily audible via web sites. Lastly, two-way communication is easier with internet. Customers' views and complaints can be received easily via web sites. With all these applications web sites create clarity and transparency in organizations' activities.

Besides commercial organizations, non-profit institutions widely use internet to reach their target audiences. Reference [7] claimed that more than 70 million people searched subjects about health on internet in 1999 and the hospitals increasingly added online healthcare programs. Two different studies showed that when rate of web page of hospitals were 12% in 1995; only four years later, in 1999 this rate was found as 50% [7].

In e-Europe draft declaration on quality and legal problems in e-health, it was declared to improve web pages on health; however, the criterion were given not for hospital web sites but all for the health web sites [2]. Getting information on health from web sites are very important since health is a knowledge intensive field and number of people searching information on health is very high.

Hospitals are organizations where the main activity is to provide health services to patients; however, they have variety of target audiences apart from patients, like administrators, healthcare professionals, suppliers, media, shareholders, donators, companions and general public as a whole. So web sites are important instruments for public relations practitioners in hospitals to reach such a big group of audience. A study listed some of the advantages of hospital websites as the following [7]:

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− Provide wide range of information for wide range of groups at the same time. Patients, suppliers, doctors, workers, medical students and many other groups can get information for different purposes with hospital web sites.
− Printable brochures and online journals decrease time, management and dissemination costs.
− Self service information is possible via search engines.
− Discussion forums among patients to patients and patients to doctors can be available.
− Online appointment scheduling, financial information and insurance coverage information can be available.
− Access to physicians' information can be possible.
− News in media about hospital can be accessed and it may create positive impact on stakeholders.

II. LITERATURE REVIEW

Several studies have been conducted regarding websites of corporations and hospitals. In a study covering top 100 private corporations in Turkey; it is found that although the sample is composed of top level companies, only 87% had web pages [6]. This study also showed that the companies had low media relations via web pages and had low level of their own commercials in their web sites. However, it was found that the companies' web sites were successful in giving information about organization, being transparent and having two way interactions with audiences. A different study examined fortune 100 companies' web sites and the results showed that mostly the companies used web sites for direct marketing purposes [5].

For the importance of health web sites, it is showed that people wanted to trust the web site and hospital, so they expected to access to physicians' information, elements of reputation, hospitals' peculiarities, persuasive graphics and texts to increase their trust [8]. This study also showed the importance of useful personalization of websites and seamlessly interconnection to the information required.

Reference [9] examined web sites of private hospitals and found that the websites of hospitals were poor in providing adequate access to required information and it was suggested that healthcare policy makers should standardize the web sites of health institutions. In another study, 26 national children hospitals web sites were analyzed on the following criteria: accessibility, attribution, completeness, credibility, currency, disclosure, readability, other technical elements. It was found that one third of the sample included contents for children adolescents, 92% had health and disease specific information, 2/3 included multi languages, 92% had search options, 85% listed copyright date, and 100% listed last update information [10].

60 state hospitals in Turkey were analyzed and it was seen that 50% of them had online appointment system and rate of online service was 37%. 73.3% of web sites had no information about doctors and 11.67% had no information about clinics [2]. In a similar study 98 private and 67 state hospitals in Turkey were examined and it was found that presence of clinical units and treatment options were found significantly higher in private hospitals when compared to public ones [11]. According to results of this study, information about doctors, examination application form, examination stand-by time, and health related information document were similar in both types of hospitals. Presence of organizational structure, history of institution was not significant between institutions. Technical properties were found similar in both categories. It was seen that presence of e-mail, call center, information request form, chat area, message box, site search engine and English version were significantly higher in private hospitals when compared to public ones. Study also showed that postal address, phone, forum, corporate newspaper, news about hospital and necessary information for press were found in similar rates in both type of hospitals.

III. METHODOLOGY

This study examines web sites of all hospitals located in Konya, Turkey. Totally 34 hospitals are examined and the list of them are obtained from Konya Province Health Directorate. 22 of the hospitals were public and two of them were university hospitals. 12 of the hospitals were privately owned or foundation hospitals and one of them was also university hospital. All the institutions are categorized as public and private hospitals and then three main research categories are determined: visual, technical and content. Reference [9]'s headings are mostly taken into consideration when determining the subcategories and some other subheadings are also added during research. Main and sub categories are examined by using content analysis method, which can be defined as the process of quantification by coding the written and verbal data [12]. Results are interpreted both as a whole and in scope of public and private institutions separately.

IV. FINDINGS

Total number of hospitals under this study was 34. Among these, 22 of them were public hospitals, whereas 12 were privately owned or foundation hospitals (Fig. 1)
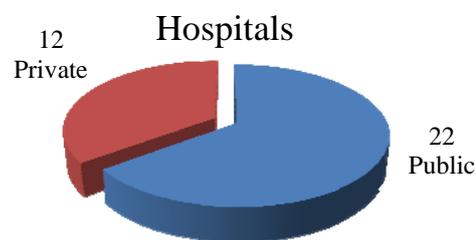

Fig. 1 Distribution of hospitals in Konya

A. Visual/General Main Page Characteristics

One private hospital had an inactive website at the time of research. It is seen that except for the hospital having inactive website, all private hospitals had information of policlinics, contact information and institutional logo/emblem. It is seen that public hospitals had no second language options in their website; however percentage of private hospitals' web sites

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having multi-language options was found as 41.7%. When all hospitals evaluated totally, existence of multi-language options, name of the policlinics and logo/emblem were found not in sufficient number. It is generally seen that public hospital's main page characteristics look very similar; however, the style of private hospitals' web sites are completely different from each other. (Table I)

TABLE I
GENERAL/MAIN PAGE

	Public Hospitals (Total: 22)	%	Private Hospitals (Total:12)	%	Total (34)	%
Multi-Language Options	0	0.0	5	41,7	5	14.,7
Policlinics	16	72.7	11	91,7	27	79.4
Contact Info	22	100.0	11	91,7	33	97,1
Logo-Amblem	11	50.0	11	91,7	22	64.7

B. Technical Features

All the hospitals' websites had Firefox compatibility and accessibility to main page from sub menus (except for one inactive private hospital web-site). In general, hospitals were found successful in using standard fonts (91.2%). However, existence of site map, search engine, number of visitors and designer information were found in low percentages in both hospital categories (Table II)

TABLE II
TECHNICAL FEATURES

	Public Hospitals (Total: 22)	%	Private Hospitals (Total: 12)	%	Total (34)	%
Firefox Compatibility	22	100.0	11	91.7	33	97.1
Standard Fonts	20	90.3	11	91.7	31	91.2
Site Map	3	13.6	3	25.0	6	17.6
Search Engine	4	18.2	4	33.3	8	23.5
Accessibility from sub menus to main page	22	100.0	11	91.7	33	97.1
Number of Visitors	7	31.8	2	16.7	9	26.5
Designer Information	12	54.5	7	58.3	19	55.9

C. Content

Content of the web sites are examined in five sub-categories, namely: corporate information, clinical information, useful information, online services and contact information.

Corporate Information:

When generally evaluated, history and organizational structure of hospitals existed with rates 85.3% and 79.4%, respectively. Only half of the hospitals had vision and mission statements. 64.7% of them had photo gallery or virtual tour options. Furthermore, online brochures and advertisement film opportunities were found in very low rates (20.6% and 29.4% respectively). It is seen that online brochures and advertisement films existed in private hospitals' web sites in a slightly higher rate than in public hospitals. It is mostly seen that online journals and brochures were mainly found in public hospitals which were located in city center (not in provinces) (Table III).

TABLE III
CORPORATE INFORMATION

	Public Hospitals (Total: 22)	%	Private Hospitals (Total: 12)	%	Total (34)	%
Vision-Mission	12	54,5	6	50	18	52.9
Organizational Structure	20	90,9	7	58,3	27	79.4
History	18	81,8	11	91,7	29	85.3
Online journal, Brochures, etc.	4	18,2	3	25	7	20.6
Advertisement Film	6	27,3	4	33,3	10	29.4
Photo Gallery/Virtual Tour	14	63,6	8	66,7	22	64.7

Clinical Information:

When all the hospitals are evaluated, it is seen that name of the clinical units and name of the physicians mostly existed in their web sites with the rates 79.4% and 94.1% respectively. However information about clinical unit (44.1%) and background information of physicians (35.2%) were found in insufficient rates in total. In fact, information about clinical units and physicians existed in higher rates (75%) in private hospitals, while public hospitals were observed poor in this context. Other departmental information (i.e. purchasing department, human resources office, accounting units, etc) existed with a rate of 90.1% in public hospitals and 20% in private hospitals. With the light of these information, it can be interpreted that private hospitals in Konya design their websites mainly for patients or possible patients, whereas public hospitals design their websites for wider target groups including patients, suppliers, employees, etc (Table IV).

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TABLE IV
CLINICAL INFORMATION

	Public Hospitals (Total: 22)	%	Private Hospitals (Total: 12)	%	Total (34)	%
Name of the Unit	16	72.7	11	91.7	27	79.4
Information about Unit	6	27.3	9	75.0	15	44.1
Name of Physicians	22	100.0	10	83.3	32	94.1
Information about Physicians	3	13.6	9	75.0	12	35.2
Other Departmental Information	20	90.1	0	0.0	20	58.8

Useful Information:

Information about activities was mostly observed in both type of hospitals, the rate was found as 88.2% in total. Almost half of the hospitals gave health information in their web sites. It is observed that when giving health information, public hospitals mainly preferred to give links to some health web-sites and mainly government's related health links; however, private hospitals provide their own information on health issues. Hospitals gave information about activities in high rates (88.2%). About ¾ of the hospitals gave information for companions and visiting hours. There were only four hospitals, having "frequently asked questions" section in their web site, and all of them were private ones. Information about bids and laws/legislations were found in higher rates in public hospitals (Table V).

TABLE V
USEFUL INFORMATION

	Public Hospitals (Total: 22)	%	Private Hospitals (Total: 12)	%	Total (34)	%
Health Information	10	45.0	7	58.3	17	50.0
FAQ	0	0.0	4	33.3	4	11.8
Activities	21	95.5	9	75.0	30	88.2
Patient Rights	15	68.2	7	58.3	22	64.7
Treatment Costs	0	0.0	1	8.3	1	2.9
Visiting Hours	17	77.3	8	66.7	25	73.5
Information for Companions	18	81.8	8	66.7	26	76.5
Laws and Legislations	5	22.7	2	16.7	7	20.6
Bids	15	68.2	1	8.3	16	47.1

Online Service:

All the public hospitals provided e-appointment, online laboratory result and online complaint/request services. Especially e-appointment (66.7%) and online laboratory results (75%) rates were found lower in private hospitals when compared to public ones. "Message to patient" rates were also found low in total. Newborn information was given in a higher

rate (33.3%) in private hospitals whereas this rate was 18.2% in the other group. "Consulting physician" existed almost half of the private hospitals; however only 4.5% had this in public ones (Table VI).

TABLE VI
ONLINE SERVICES

	Public Hospitals (Total: 22)	%	Private Hospitals (Total: 12)	%	Total (34)	%
e-appointment	22	100	8	66.7	30	88.2
Consulting physician	1	4.5	5	41.7	6	17.6
Laboratory results	22	100	9	75.0	31	91.2
Complaints/requests	22	100	11	91.7	33	97.1
Message to patient	2	9.0	1	8.3	3	8.8
New born Information	4	18.2	4	33.3	8	23.5

Contact Information:

All hospitals under this study (except for one having inactive website) had telephone, address and fax information. Transportation scheme was also existed almost 70% of the hospitals in general. Transportation opportunities (arriving at hospital by different vehicles and routes) were included with a rate of 23.5% in total. Existence rate of Facebook and Twitter accounts were 50% in private hospitals. Only two public hospitals, which are also university hospitals, had these social media accounts shown in their websites (Table VII).

TABLE VII
CONTACT INFORMATION

	Public Hospitals (Total: 22)	%	Private Hospitals (Total: 12)	%	Total (34)	%
Transportation scheme	16	72.7	8	66.7	24	70.6
Telephone, Address, Fax	22	100	11	91.7	33	97.1
Transportation Opportunities	6	27.3	2	16.7	8	23.5
Facebook	2	9.1	6	50.0	8	23.5
Twitter	2	9.1	6	50.0	8	23.5

V. CONCLUSIONS AND RECOMMENDATIONS

Websites are important tools for hospitals to reach a variety of stakeholders. Moreover with online catalogues, brochures, journals, it is a time and cost saving application. It is also a place of getting useful information about health and important procedures in this field, a discussion and consulting platform, and online service-taking tool. With a well-prepared website, hospitals can create positive image on their target audiences.

This study was conducted on 34 hospitals located in Konya. 22 of hospitals were public and 12 were privately owned. In general perspective, multi-language options and existence of

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logo/emblem were found in insufficient rates. To reach wider audience and impact target group positively, hospitals should prepare their websites with more than one language and place their logos.

Sitemaps and search engines help people to find information easily in websites. Rate of hospitals using these two applications was found low in this study, so it is recommended that hospitals should place these two applications in order to make their websites more functional ones.

Institutional information gives important hints to the audience about the organization. In this study, it is seen that history and organizational structure information mostly existed in web sites but these rates still need to be improved. Moreover, it should be said that rate of vision and mission statements should also be increased. Photographs, virtual tours, advertisement films, online brochures and journals are also important tools for public relations activities. Unfortunately the existence of all these were not found in sufficient rates.

Although most of the hospitals had list of policlinics and doctors, few of them had details about clinical information and physicians. Private hospitals were found more successful when compared with public ones in this context. On the other hand, this study showed that the information on private hospital web sites mostly for patients, whereas in public hospitals it is mostly organized for wider stakeholders like suppliers, employers, patients, etc. It can be recommended that private hospitals can add useful information other stakeholders as well.

Hospital web sites are good and safe opportunities for internet users to gain information about health issues. This study showed that only half of the hospitals provided such service to their audiences. It would be beneficial to increase this number.

Online appointment and online laboratory results services are user-friendly and time/cost saving applications. These were successfully provided in all public hospitals, but they needed to be improved in private hospitals as well. Other online applications such as "message to patient" and "new born information" are also useful tools for hospital website users, and it was seen that they needed to be improved in all hospitals. Another important online service is "consulting physician". This study showed that almost half of the private hospitals have this opportunity, whereas this rate was found very low in public hospitals. This rate should be increased in both hospital categories.

Facebook and Twitter are very popular social media applications which also contribute to public relations practices. Existence rate of these applications in web sites were found in low rates, although this rate was significantly higher in private hospitals when compared to public ones. It would be useful for hospitals to have these accounts in higher rates and give links in their web sites.

Technological development and internet usage are increasing very rapidly and it is not hard to anticipate that all institutions should adapt themselves to this high-speed development in order to exist in this growing competitive environment. It would create lots of advantages to institutions which follow and seize these improvements and adapt themselves quickly.

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