A Research on Using Social Media in Health Communication Practices in the United States: Twitter, Health Institutions and Interaction[1]

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Abstract

In this study; it is aimed to put forward the role and importance of information technology in the health communication because the process of movement of information is increasing rapidly. Within this aim, it is aimed to determine how social media is used in health applications. For this reason, the ways in which social media are used explored in order to find out how the practices in the United States are happening and what their work is. One of the most effective channels of social media, which focuses on applications implemented via Twitter, how to use social media in the communication between the health care provider and the patient, the content of the information flow of the health service providers about the community health and how the health communication campaigns are shaped. In this way, research carried out such as on the use of social media in health institutions, community health, health awareness, doctor-patient communication, creating a space for them to express themselves.

Keywords: Health communication, Social media, Twitter

Amerika Birleşik Devletleri'nde Sağlık İletişimi Uygulamalarında Sosyal Medyanın Kullanımı Üzerine Bir Araştırma: Twitter, Sağlık Kurumları ve Etkileşim

Özet

Bu çalışmada; bilginin devinim sürecinin çok hızlı bir şekilde artması nedeniyle, bilgi teknolojilerinin sağlık iletişimindeki rolünün ve öneminin ortaya konulması amaçlanmaktadır. Bu amaç çerçevesinde, sağlık uygulamalarında sosyal medyanın ne şekilde kullanıldığının tespit edilmesi hedeflenmektedir. Bu nedenle, Amerika Birleşik Devletleri'ndeki pratiklerin nasıl gerçekleştiğinin ve çalışmaların neler olduğunun ortaya çıkarılmasına yönelik olarak, sosyal medyayı kullanış biçimleri araştırılacaktır. Sosyal medyanın en etkin mecralarından biri olan Twitter üzerinden gerçekleştirilen uygulamalara odaklanılan araştırmada; sağlık kuruluşu ile hasta arasındaki iletişimde sosyal medyanın kullanım şeklinin nasıl olduğu, toplum sağlığı konusunda sağlık hizmeti sunan kurumların enformasyon akışının hangi içeriklerle gerçekleştirildiği ve sağlık iletişimi kampanyalarının ne şekilde biçimlendirildiği sorularına yanıt aranacaktır. Böylelikle, sağlık kurumlarının toplum sağlığı, sağlık bilinçlendirmesi, hekim-hasta iletişimi, kendilerini ifade edecekleri bir alan yaratmaları gibi konularda, sosyal medya kullanım pratikleri üzerinden bir araştırma gerçekleştirilmiş olacaktır.

Anahtar Kelimeler: Sağlık iletişimi, Sosyal medya, Twitter

Introduction and Literature Review

Communication is one of the most important and fundamental topics in today's world. The concept of communication, which is an influence on all spheres of social sciences, has also begun to be influenced by the natural and applied sciences and health sciences. For this reason, the concept of communication and communication sciences provide first-hand support to many fields of science today, while at the same time allowing new developments and exchanges within their scientific boundaries. In the 21st century, the concept of communication has reached a completely different dimension. With the increase of technology, information, communication and speed, the century, which we call "the age of information and communication", is opening the door of new developments and changes every passing day. The expansion and widespread use of the Internet, and being accessible from many platforms, internet technology has almost become a part of our body. All of the past habits have changed. All known things of social life and institutional life have changed. Every kind of innovation has become defined on the Internet.

Today, due to the changing and developing technological possibilities, differences in many aspects of social life and institutional life have come to the fore and the existence of a very variable new world system has been revealed. A system has been adopted in which past habits or standardized specific methods are rooted and guided by technology. As a result, a new type of media has emerged that collects these characteristics under the possibilities provided by technology and the Internet under its own constitution. It is possible to describe this type of media, which is defined as new media, as a media that takes its infrastructure from Internet and Internet technologies. The new media, which expresses a very broad concept, has caused both the changing of individual behaviors and the renewal of habits as well as the change of corporate business processes. As a result of this change, the expectations of the target groups have been differentiated and it has become compulsory for the institutions to produce the suitable products and contents for the expectations of the target group. Because, in today's competitive world, the only way to survive is to be able to show appropriate reflexes to competitive conditions.

Especially with the social media being used effectively, individuals moving from passive to active, and individuals being in reactive behavior, the old rules have been rewritten differently. With the new media and social media, individuals have begun to act independently and place and time concepts have changed. New media and social media have become highly influential both in terms of individual and corporate, thanks to the advantages of increased speed, updateability,

mutual interaction, unlimited content sharing and reduced costs. Social media that created by information technology and new media must be used in the studies and planned strategies. One of the most important indicators of the societal development dimension is how health practices are implemented. Therefore, the effective use of social media in healthcare practices is extremely important.

One of the clearest and most determining applications of a developed country is to provide equal health care to all its citizens and to provide the necessary information on community health in the shortest and simplest possible way. At this point, the opportunities provided by the new media and social media are extremely important and are very valuable to reach to the community. Using social media effectively and efficiently increases the speed of information access. At the same time, they help the masses feel safe. In this way, a peaceful sociological structure is formed in the society. Social media delivers information at a low cost and very quickly. For this reason, the strategy needs to be developed on it. Health communication is a very important issue and should be focused on with precision. The interaction processes in social media is much cheaper, faster and seamlessly performed. When these two conditions are evaluated together, the effective use of social media in health communication is in a very important position in terms of community awareness and community health.

Health communication is a field that combines theory and practice in many disciplines. It acts to provide all kinds of health-related information exchange from individuals to organizations (Schiavo, 2014, p.9). According to Healthy People 2010 guidelines, health communication is defined as: "It involves the study and use of communication strategies to inform and influence and community decisions that promote health." Health communication also contributes to disease prevention, promoting health and make contributions in terms of development (Thomas, 2006, pp.1-2). Effective health communication, focused on disease prevention and health promotion, is a mixture of art and science (Ratzan, 1993, p.3). Effective communication is essential for every health promotion and disease prevention project (Haider, Pal & Al-Shoura, 2005, p.1). Effective communication and education can empower the public in a crisis with direction on how they can protect themselves and their families (Schulte & Payne, 2005, p.373). Health communication is also one of the most critical and valuable points at this stage.

Interpersonal health communication specialists examine the relationship between health institutions and patients and investigate the effects of this situation on public health (Wright, Sparks & O'Hair, 2008, p.6). The increasing complexity of information on health has made it very

important for people to take initiative to make health decisions today (Glueckauf & Lustria, 2009, p.151), because health is becoming a subject that needs to be paid more attention day by day. Thomas (2006) refer that the health communication process can be divided into 4 distinct stages: planning, development, implementation, and evaluation. And the main point of these stages is these (Thomas, 2006, pp.103-117): The Planning Stage, Stating the Problem or Issue, Stating Assumptions, Reviewing Available Data, Conducting Additional Research, Defining Communication Objectives, Realistically Assessing the Health Communication Approach, Profiling the Intended Audience(s), Formulating a Strategy, Choosing the Type of Appeal, The Development Stage, Materials Development, Planning and Launch, The Implementation Stage, Transitioning to Development, Managing the Campaign, Determining the Channels, The Evaluation Stage.

As Healthy People 2020 recommends that integrating health communication processes with the opportunities created by new technology, it is possible to improve the quality of health care, safety and efficiency of public health service (US Department of Health and Human Services, 2012). In recent years, people have been using the Internet and technology extensively to help them manage health and health care. Although the information provided on the Internet is general, it allows the transfer of experiences through social networks (Marchibroda, 2009, p.267). Although the communication between the physician and the patient accommodates many different parameters, it has two main functions, primarily information exchange and relationship building (Eckler, Worsowicz & Downey, 2009, p.283). The most important point of this communication is the formation of a trust relationship between the patient and the physician.

A Research on the Use of Social Media via Twitter in Health Practices

Research Questions

In the 21st century, where we live and are defined as digital era, the following research questions have been formed within the scope of the main objective question that what is the role of information technology in health communication and how social media is used in health applications:

1. How is the use of social media in communication between the health care provider and the patient?

2. With which content are the information flows of the institutions providing health services about community health?

3. How are the health communication campaigns of health institutions formed?

Design, Methods and Procedure

The United States of America is one of the leading countries in health and health care in the world. Within the scope of this research, the communication activities of health institutions through social media have examined in South Carolina. South Carolina is divided into 46 counties. The 299 county subdivisions in the state are census county divisions (CCDs), which are statistical subdivisions delineated for presentation of decennial census data. There are 269 incorporated places and 126 census designated places (CDPs) in South Carolina. Incorporated places in the state are legally described as cities and towns (U.S. Department of Commerce, 2012: III-2). The capital city of South Carolina is Columbia. According to the South Carolina Hospital Association (2018), there are 86 Hospitals in South Carolina. 33 of these do not have Twitter accounts and 35 of them belong to 9 hospital groups. These are: AnMed Health (4 Hospitals), Greenville Health System (7 Hospitals), McLeod Health (7 Hospitals), Palmetto Health (4 Hospitals), Providence Health (2 Hospitals), Roper St. Francis Healthcare (3 Hospitals), Spartanburg Regional Healthcare System (4 Hospitals), Tidelands Health (2 Hospitals) and Trident Health (2 Hospitals).

When choosing hospitals, it was taken a criterion to have at least 250 bed capacity and to have at least 1000 Twitter followers. In this framework, out of the 53 hospitals that have Twitter accounts, 15 of them do not comply with these criteria. As mentioned before, 33 of 86 hospitals do not have Twitter account and 35 of them belong to 9 hospital groups. All hospital groups comply with the criteria. There are 3 hospitals in accordance with the criteria and outside the hospital groups. These are: Lexington Medical Center, MUSC Medical Center and Piedmont Medical Center. In this context, the hospital list will be interviewed consists of a total of 12 hospitals. These are: AnMed Health, Greenville Health System, Lexington Medical Center, McLeod Health, MUSC Medical Center, Palmetto Health, Piedmont Medical Center, Providence Health, Roper St. Francis Healthcare, Spartanburg Regional Healthcare System, Tidelands Health and Trident Health. The number of Twitter followers and bed capacity of these hospitals are listed in Table 1. In addition, 7 of these 12 hospitals are in the top 7 on U.S. News & World Report Best Regional Hospitals Rankings in South Carolina list (U.S. News, 2018).

Table 1. List of Hospitals that Meet the Research Criteria in South Carolina

HOSPITALS	TWITTER FOLLOWERS	BED CAPACITY
AnMed Health	1329	663
Greenville Health System	9073	1332

Lexington Medical Center	5544	428
McLeod Health	2197	899
MUSC Medical Center	11847	709
Palmetto Health	6038	1477
Piedmont Medical Center	1143	288
Providence Health	1600	332
Roper St. Francis Healthcare	4706	742
Spartanburg Regional Healthcare System	3344	828
Tidelands Health	1589	298
Trident Health	2055	390

At the beginning of the research, first, a comprehensive literature review has conducted health communication and on the use of social media in health communication, and literary readings have completed. Later, have contacted and interviewed by phone, face to face and e-mail with the relevant managers/directors and departments many of the hospitals listed in Table 1 in South Carolina through the completed theoretical framework of the literature review. Some hospitals have been hesitant to provide information or not responded. The value of social media usage practices has questioned of today's digitalization and information technology such as the methods of current health communication applications, the importance of social media in health communication applications, the necessity of using social media-based applications efficiently and effectively, community health, health awareness, doctor-patient communication. The following questions were asked to the relevant managers/directors of the hospitals:

1- Which department operate your Twitter account in your hospital?

2- How many people are managing this account?

3- For what purposes does your hospital use Twitter account? Do you find it useful?

4- How often is the Twitter account used daily or how many tweets are used?

5- What content do you use on your Twitter account?

6- Does your hospital have social media usage guidelines? If so, what are these?

7- What are the benefits of your Twitter account for community health and health communication?

8- Do you make health communication campaigns from your Twitter account? If so, what are these?

9- Are there any other topics you want to add about Twitter utilization generally and for your hospital?

After conducting the literature review and interviews with the data collection techniques of the qualitative research method, five hospitals to be included in the research were identified. These are: Greenville Health System, Lexington Medical Center, MUSC Medical Center, Palmetto Health and Providence Health. Later on, the healthcare practices conducted by selected five hospitals from Twitter covered within the context of qualitative and quantitative content analysis.

Within a three-month timeframe (May-June-July/2018), the practices of Twitter use and the applications that are implemented by the five selected health institutions primarily reported on a day-by-day basis, followed by weekly and monthly reports and content analyzes. At the end of the three-month research period, both the individual evaluations of the health institutions and the differences compared to each other revealed. The information obtained; patient interaction with the health care organization, health care organization and community awareness, and health communication campaigns made by the health care organization. As a result, the data obtained classified, coded, analyzed and interpreted.

Restrictions and Limitations

The main focus of this research project is to determine how social media is used in health care practices by putting the role and importance of information technologies in health communication. Countries that are effective in health and health care applications in the world are the United States, Canada, France and Norway. The study is limited to the United States, which has a successful history and exports its system to many countries. The study was limited to five health institutions in South Carolina, one of the most influential and important states in terms of health practices in the United States, both in terms of time and transport concerns. In addition, focusing on Twitter as a social media tool in the study is another limit. Other social media tools or digital platforms that can be used in future work may offer different assessments on behalf of the deepening of the work. Finally, it can be expressed as the limit of the research that does not include how effective the messages are by Twitter users.

Evaluation of Research Findings

In this part of the study, the data from the five hospitals that were reviewed during the three-month period (May-June-July) will be discussed in detail in the research questions. First, the Tweet statistics sent on a monthly basis will be given hospital specific. Later, the data obtained within the scope of the three research questions will be evaluated separately for each hospital. In the conclusion section, the evaluations of the statistics given in this section will be reviewed and interpreted on the basis of each hospital and in general.

Greenville Health System, Lexington Medical Center, MUSC Medical Center, Palmetto Health and Providence Health sent a total of 1,133 Tweets in 92 days in May, June and July. When viewed as a monthly average, the number of Tweet sent was 377.76, and the number of Tweet sent on a daily basis was 12.32. During the 3-month research period, Greenville Health System has sent 214 Tweets (18,89%), Lexington Medical Center has sent 33 Tweets (2,91%), MUSC Medical Center has sent 526 Tweets (46,42%), Palmetto Health has sent 109 Tweets (9,62%) and Providence Health has sent 251 Tweets (22,15%).

A total of 460 Tweets were sent in May 2018. Looking at the daily average, the number of Tweets sent is 14.84. Most Tweet was sent by MUSC Medical Center. MUSC Medical Center has sent 189 Tweets in total and has sent an average of 6.1 Tweets per day, in addition, has sent Tweet every day. At least Tweet was sent by Lexington Medical Center. Lexington Medical Center has sent 4 Tweets in total and has sent an average of 0.13 Tweet per day. In other words, Lexington Medical Center has sent approximately 1 Tweet in about 8 days, and has never sent Tweet for 27 days. The second highest statistic was performed by Providence Health. Providence Health has sent 127 Tweets in total and has sent an average of 4.1 Tweets per day, and has never sent Tweet for 3 days. The third highest statistic was conducted by Greenville Health System. Greenville Health System has sent 101 Tweets in total and has sent an average of 3.26 Tweets per day, and has never sent Tweet for 2 days. The fourth highest statistic was performed by Palmetto Health. Palmetto Health has sent 39 Tweets in total and has sent an average of 1.26 Tweets per day, and has never sent Tweet for 10 days.

A total of 354 Tweets were sent in June 2018. Looking at the daily average, the number of Tweets sent is 11.8. Most Tweet was sent by MUSC Medical Center. MUSC Medical Center has sent 171 Tweets in total and has sent an average of 5.7 Tweets per day, in addition, has sent Tweet every day. At least Tweet was sent by Lexington Medical Center. Lexington Medical Center has sent 6 Tweets in total and has sent an average of 0.2 Tweet per day. In other words, Lexington

Medical Center has sent 1 Tweet in about 5 days, and has never sent Tweet for 24 days. The second highest statistic was performed by Providence Health. Providence Health has sent 74 Tweets in total and has sent an average of 2.47 Tweets per day, and has never sent Tweet for 5 days. The third highest statistic was conducted by Greenville Health System. Greenville Health System has sent 67 Tweets in total and has sent an average of 2.23 Tweets per day, and has never sent Tweet for 4 days. The fourth highest statistic was performed by Palmetto Health. Palmetto Health has sent 36 Tweets in total and has sent an average of 1.2 Tweets per day, and has never sent Tweet for 9 days.

A total of 319 Tweets were sent in July 2018. Looking at the daily average, the number of Tweets sent is 10.29. Most Tweet was sent by MUSC Medical Center. MUSC Medical Center has sent 166 Tweets in total and has sent an average of 5.35 Tweets per day, in addition, has sent Tweet every day. At least Tweet was sent by Lexington Medical Center. Lexington Medical Center has sent 23 Tweets in total and has sent an average of 0.74 Tweet per day. In other words, Lexington Medical Center has sent approximately 2 Tweets in about 3 days, and has never sent Tweet for 13 days. The second highest statistic was performed by Providence Health. Providence Health has sent 50 Tweets in total and has sent an average of 1.61 Tweets per day, and has never sent Tweet for 5 days. The third highest statistic was conducted by Greenville Health System. Greenville Health System has sent 46 Tweets in total and has sent an average of 1.48 Tweets per day, and has never sent Tweet for 8 days. The fourth highest statistic was performed by Palmetto Health. Palmetto Health has sent 34 Tweets in total and has sent an average of 1.1 Tweets per day, and has never sent Tweet for 6 days.

Within the scope of the research, three research questions were created. The first, in the context of the "How is the use of social media in communication between the health care provider and the patient?", has been elaborated in detail on how the hospitals have taken a formal lead in the Tweets they send. In this context, the Tweets that have been taken are handled under 20 different headings. Whether or not an image or a link is added, whether Retweet or not, whether an image is added as a Tweet or not, whether a video is added or not, or how it is used together has been examined. When this distinction was made, the content analysis of the Tweets was not looked at, only the formal structure in the submitted Tweets was looked at and collected in a total of 20 different titles as mentioned before. These are grouped as follows: Only Tweet / Image, Link / Image / Images / Images, Link / Image, Links / Image(Tweet) / Link / Video / Video, Link / Only Retweet / Retweet +Image, Link / Retweet +Image / Retweet +Images / Retweet +Images, Link /

Retweet +Image, Links / Retweet +Image(Tweet) / Retweet +Link / Retweet +Video / Retweet +Video, Link.

Findings from May, June, and July of Greenville Health System are shown collectively in Table 2 below, both under 20 separate headings and their percentages.

Table 2. Formal Statistics of Greenville Health System's Tweets Taken During May-June-July 2018

	MAY	%	JUNE	%	JULY	%		TOTAL	%
Only Tweet	0	0,00	0	0,00	0	0,00		0	0,00
Image, Link	50	49,50	45	67,16	33	71,74		128	59,81
Image	7	6,93	2	2,99	2	4,35		11	5,14
Images	0	0,00	0	0,00	0	0,00		0	0,00
Images, Link	0	0,00	0	0,00	0	0,00		0	0,00
Image, Links	0	0,00	0	0,00	0	0,00		0	0,00
Image(Tweet)	3	2,97	3	4,48	4	8,70		10	4,67
Link	0	0,00	1	1,49	0	0,00		1	0,47
Video	0	0,00	0	0,00	0	0,00		0	0,00
Video, Link	0	0,00	0	0,00	0	0,00		0	0,00
Only Retweet	0	0,00	0	0,00	0	0,00		0	0,00
Retweet +Image, Link	16	15,84	11	16,42	2	4,35		29	13,55
Retweet +Image	13	12,87	2	2,99	0	0,00		15	7,01
Retweet +Images	2	1,98	1	1,49	0	0,00		3	1,40
Retweet +Images, Link	2	1,98	0	0,00	0	0,00		2	0,93
Retweet +Image, Links	1	0,99	0	0,00	0	0,00		1	0,47
Retweet +Image(Tweet)	5	4,95	2	2,99	3	6,52		10	4,67
Retweet +Link	2	1,98	0	0,00	0	0,00		2	0,93
Retweet +Video	0	0,00	0	0,00	1	2,17		1	0,47
Retweet +Video, Link	0	0,00	0	0,00	1	2,17		1	0,47
TOTAL	101		67		46			214	

Greenville Health System sent 101 Tweets in May, 67 in June and 46 in July, and have sent 214 Tweets in total. Greenville Health System sent an average of 71.33 Tweets per month and an average of 2.33 Tweets a day. A total of 64 Retweets has been sent. There was a decrease each month in the Tweets sent. When examined under the first research question, the most striking statistic for the Greenville Health System was that Image and Link were used predominantly in the content of the Tweets. In total, 128 and 59,81% were used together with Image and Link. Secondly, Retweet + Image and Link have been used as a total of 29 and 13,55%.

Findings from May, June, and July of Lexington Medical Center are shown collectively in Table 3 below, both under 20 separate headings and their percentages.

Table 3. Formal Statistics of Lexington Medical Center's Tweets Taken During May-June-July 2018

	MAY	%	JUNE	%	JULY	%		TOTAL	%
Only Tweet	0	0,00	0	0,00	0	0,00		0	0,00
Image, Link	1	25,00	3	50,00	15	65,22		19	57,58

Image	0	0,00	2	33,33	4	17,39		6	18,18
Images	0	0,00	0	0,00	0	0,00		0	0,00
Images, Link	0	0,00	0	0,00	0	0,00		0	0,00
Image, Links	0	0,00	0	0,00	0	0,00		0	0,00
Image(Tweet)	0	0,00	0	0,00	0	0,00		0	0,00
Link	2	50,00	0	0,00	2	8,70		4	12,12
Video	0	0,00	0	0,00	0	0,00		0	0,00
Video, Link	0	0,00	0	0,00	0	0,00		0	0,00
Only Retweet	0	0,00	0	0,00	0	0,00		0	0,00
Retweet +Image, Link	1	25,00	0	0,00	1	4,35		2	6,06
Retweet +Image	0	0,00	1	16,67	0	0,00		1	3,03
Retweet +Images	0	0,00	0	0,00	1	4,35		1	3,03
Retweet +Images, Link	0	0,00	0	0,00	0	0,00		0	0,00
Retweet +Image, Links	0	0,00	0	0,00	0	0,00		0	0,00
Retweet +Image(Tweet)	0	0,00	0	0,00	0	0,00		0	0,00
Retweet +Link	0	0,00	0	0,00	0	0,00		0	0,00
Retweet +Video	0	0,00	0	0,00	0	0,00		0	0,00
Retweet +Video, Link	0	0,00	0	0,00	0	0,00		0	0,00
TOTAL	4		6		23			33	

Lexington Medical Center sent 4 Tweets in May, 6 in June and 23 in July, and have sent 33 Tweets in total. Lexington Medical Center sent an average of 11 Tweets per month and an average of 0.36 Tweet a day. In other words, Lexington Medical Center has sent approximately 1 Tweet in about 3 days. A total of 4 Retweets has been sent. There was an increase each month in the Tweets sent. When examined under the first research question, the most striking statistic for the Lexington Medical Center was that Image and Link were used predominantly in the content of the Tweets. In total, 19 and 57,58% were used together with Image and Link. Secondly, Image has been used as a total of 6 and 18,18%.

Findings from May, June, and July of MUSC Medical Center are shown collectively in Table 4 below, both under 20 separate headings and their percentages.

Table 4. Formal Statistics of MUSC Medical Center's Tweets Taken During May-June-July 2018

	MAY	%	JUNE	%	JULY	%		TOTAL	%
Only Tweet	0	0,00	0	0,00	0	0,00		0	0,00
Image, Link	82	43,39	81	47,37	87	52,41		250	47,53
Image	20	10,58	28	16,37	10	6,02		58	11,03
Images	7	3,70	1	0,58	1	0,60		9	1,71
Images, Link	1	0,53	0	0,00	0	0,00		1	0,19
Image, Links	0	0,00	0	0,00	1	0,60		1	0,19

Image(Tweet)	2	1,06	2	1,17	0	0,00	4	0,76
Link	4	2,12	0	0,00	3	1,81	7	1,33
Video	2	1,06	1	0,58	3	1,81	6	1,14
Video, Link	4	2,12	7	4,09	14	8,43	25	4,75
Only Retweet	0	0,00	0	0,00	2	1,20	2	0,38
Retweet +Image, Link	26	13,76	24	14,04	28	16,87	78	14,83
Retweet +Image	18	9,52	13	7,60	9	5,42	40	7,60
Retweet +Images	13	6,88	7	4,09	4	2,41	24	4,56
Retweet +Images, Link	0	0,00	0	0,00	0	0,00	0	0,00
Retweet +Image, Links	1	0,53	2	1,17	0	0,00	3	0,57
Retweet +Image(Tweet)	4	2,12	0	0,00	0	0,00	4	0,76
Retweet +Link	2	1,06	2	1,17	1	0,60	5	0,95
Retweet +Video	3	1,59	3	1,75	1	0,60	7	1,33
Retweet +Video, Link	0	0,00	0	0,00	2	1,20	2	0,38
TOTAL	189		171		166		526	

MUSC Medical Center sent 189 Tweets in May, 171 in June and 166 in July, and have sent 526 Tweets in total. MUSC Medical Center sent an average of 175.33 Tweets per month and an average of 5.72 Tweets a day. A total of 165 Retweets has been sent. There was a slight decrease each month in the Tweets sent. When examined under the first research question, the most striking statistic for the MUSC Medical Center was that Image and Link were used predominantly in the content of the Tweets. In total, 250 and 47,53% were used together with Image and Link. Secondly, Retweet + Image and Link have been used as a total of 78 and 14,83%.

Findings from May, June, and July of Palmetto Health are shown collectively in Table 5 below, both under 20 separate headings and their percentages.

Table 5. Formal Statistics of Palmetto Health's Tweets Taken During May-June-July 2018

	MAY	%	JUNE	%	JULY	%		TOTAL	%
Only Tweet	0	0,00	1	2,78	1	2,94		2	1,83
Image, Link	18	46,15	20	55,56	27	79,41		65	59,63
Image	8	20,51	6	16,67	4	11,76		18	16,51
Images	0	0,00	1	2,78	0	0,00		1	0,92
Images, Link	0	0,00	0	0,00	0	0,00		0	0,00
Image, Links	0	0,00	0	0,00	0	0,00		0	0,00
Image(Tweet)	0	0,00	0	0,00	0	0,00		0	0,00
Link	1	2,56	1	2,78	1	2,94		3	2,75
Video	0	0,00	0	0,00	0	0,00		0	0,00
Video, Link	2	5,13	0	0,00	0	0,00		2	1,83
Only Retweet	0	0,00	0	0,00	0	0,00		0	0,00
Retweet +Image, Link	5	12,82	2	5,56	1	2,94		8	7,34

Retweet +Image	1	2,56	3	8,33	0	0,00		4	3,67
Retweet +Images	4	10,26	1	2,78	0	0,00		5	4,59
Retweet +Images, Link	0	0,00	0	0,00	0	0,00		0	0,00
Retweet +Image, Links	0	0,00	0	0,00	0	0,00		0	0,00
Retweet +Image(Tweet)	0	0,00	0	0,00	0	0,00		0	0,00
Retweet +Link	0	0,00	0	0,00	0	0,00		0	0,00
Retweet +Video	0	0,00	0	0,00	0	0,00		0	0,00
Retweet +Video, Link	0	0,00	1	2,78	0	0,00		1	0,92
TOTAL	39		36		34			109	

Palmetto Health sent 39 Tweets in May, 36 in June and 34 in July, and have sent 109 Tweets in total. Palmetto Health sent an average of 36.33 Tweets per month and an average of 1.18 Tweets a day. A total of 19 Retweets has been sent. There was a slight decrease each month in the Tweets sent. When examined under the first research question, the most striking statistic for the Palmetto Health was that Image and Link were used predominantly in the content of the Tweets. In total, 65 and 59,63% were used together with Image and Link. Secondly, Image has been used as a total of 18 and 16,51%.

Findings from May, June, and July of Providence Health are shown collectively in Table 6 below, both under 20 separate headings and their percentages.

Table 6. Formal Statistics of Providence Health's Tweets Taken During May-June-July 2018

	MAY	%	JUNE	%	JULY	%		TOTAL	%
Only Tweet	1	0,79	0	0,00	0	0,00		1	0,40
Image, Link	34	26,77	44	59,46	33	66,00		111	44,22
Image	58	45,67	18	24,32	10	20,00		86	34,26
Images	14	11,02	2	2,70	1	2,00		17	6,77
Images, Link	0	0,00	0	0,00	0	0,00		0	0,00
Image, Links	1	0,79	0	0,00	0	0,00		1	0,40
Image(Tweet)	0	0,00	2	2,70	0	0,00		2	0,80
Link	0	0,00	0	0,00	0	0,00		0	0,00
Video	1	0,79	0	0,00	0	0,00		1	0,40
Video, Link	7	5,51	2	2,70	0	0,00		9	3,59
Only Retweet	2	1,57	0	0,00	1	2,00		3	1,20
Retweet +Image, Link	8	6,30	4	5,41	4	8,00		16	6,37
Retweet +Image	0	0,00	0	0,00	0	0,00		0	0,00
Retweet +Images	0	0,00	1	1,35	0	0,00		1	0,40
Retweet +Images, Link	0	0,00	0	0,00	0	0,00		0	0,00
Retweet +Image, Links	0	0,00	0	0,00	0	0,00		0	0,00
Retweet +Image(Tweet)	0	0,00	1	1,35	0	0,00		1	0,40
Retweet +Link	0	0,00	0	0,00	0	0,00		0	0,00

Retweet +Video	0	0,00	0	0,00	0	0,00		0	0,00
Retweet +Video, Link	1	0,79	0	0,00	1	2,00		2	0,80
TOTAL	127		74		50			251	

Providence Health sent 127 Tweets in May, 74 in June and 50 in July, and have sent 251 Tweets in total. Providence Health sent an average of 83.67 Tweets per month and an average of 2.73 Tweets a day. A total of 24 Retweets has been sent. There was a significant decrease each month in the Tweets sent. When examined under the first research question, the most striking statistic for the Providence Health was that Image and Link were used predominantly in the content of the Tweets. In total, 111 and 44,22% were used together with Image and Link. Secondly, Image has been used as a total of 86 and 34,26%.

Among the three research questions examined within the scope of the research, the second, in the context of the "With which content are the information flows of the institutions providing health services about community health?" has been elaborated in detail on how the hospitals have taken as content in the Tweets they send. In this context, first of all, tweets were analyzed separately and content analysis was performed. After the review, it was decided to group the contents of the hospitals in their communication with people/patients under 8 different headings. Eight main headings are as follows: Corporate News/Celebration/Special Day Celebration, Event News, Health Information/Health Awareness/Disease Information, Health Campaigns, Successful Patient News, Successful Doctor News, Healthy Living and Others (Health Promotion, Advertisements, Competition-Prizes, Job Opportunities, Donation, Sympathetic Words, Celebrities Words, Warning Weather, Wisdom, Prayer).

Findings from May, June, and July of Greenville Health System are shown collectively in Table 7 below, both under 8 separate headings and their percentages.

Table 7. Content Statistics of Greenville Health System's Tweets Taken During May-June-July 2018

	MAY	%	JUNE	%	JULY	%		TOTAL	%
Corporate News / Celebration / Special Day Celebration	58	57,43	31	46,27	26	56,52		115	53,74
Event News	4	3,96	0	0,00	2	4,35		6	2,80
Health Information / Health Awareness / Disease Information	22	21,78	21	31,34	13	28,26		56	26,17
Health Campaigns	0	0,00	0	0,00	0	0,00		0	0,00
Successful Patient News	0	0,00	7	10,45	1	2,17		8	3,74
Successful Doctor News	6	5,94	3	4,48	0	0,00		9	4,21

Healthy Living	6	5,94	2	2,99	0	0,00	8	3,74
Others	5	4,95	3	4,48	4	8,70	12	5,61
TOTAL	101		67		46		214	

When the findings of the Greenville Health System are examined within the scope of the second research question, the most striking statistic was that Tweets are mainly composed of content within Corporate News/Celebration/Special Day Celebration. Corporate News/Celebration/Special Day Celebration contents were created with a total of 115 and 53,74%. Secondly, Tweets were formed within the contents of Health Information/Health Awareness/Disease Information, totaling 56 and 26,17%.

Findings from May, June, and July of Lexington Medical Center are shown collectively in Table 8 below, both under 8 separate headings and their percentages.

Table 8. Content Statistics of Lexington Medical Center 's Tweets Taken During May-June-July 2018

	MAY	%	JUNE	%	JULY	%		TOTAL	%
Corporate News / Celebration / Special Day Celebration	0	0,00	1	16,67	7	30,43		8	24,24
Event News	0	0,00	0	0,00	0	0,00		0	0,00
Health Information / Health Awareness / Disease Information	1	25,00	5	83,33	11	47,83		17	51,52
Health Campaigns	0	0,00	0	0,00	0	0,00		0	0,00
Successful Patient News	0	0,00	0	0,00	0	0,00		0	0,00
Successful Doctor News	0	0,00	0	0,00	0	0,00		0	0,00
Healthy Living	1	25,00	0	0,00	1	4,35		2	6,06
Others	2	50,00	0	0,00	4	17,39		6	18,18
TOTAL	4		6		23			33	

When the findings of the Lexington Medical Center are examined within the scope of the second research question, the most striking statistic was that Tweets are mainly composed of content within Health Information/Health Awareness/Disease Information. Health Information/Health Awareness/Disease Information contents were created with a total of 17 and 51,52%. Secondly, Tweets were formed within the contents of Corporate News/Celebration/Special Day Celebration, totaling 8 and 24,24%.

Findings from May, June, and July of MUSC Medical Center are shown collectively in Table 9 below, both under 8 separate headings and their percentages

Table 9. Content Statistics of MUSC Medical Center 's Tweets Taken During May-June-July 2018

	MAY	%	JUNE	%	JULY	%		TOTAL	%
Corporate News / Celebration / Special Day Celebration	64	33,86	77	45,03	79	47,59		220	41,83
Event News	84	44,44	57	33,33	41	24,70		182	34,60
Health Information / Health Awareness / Disease Information	25	13,23	31	18,13	27	16,27		83	15,78
Health Campaigns	0	0,00	0	0,00	0	0,00		0	0,00
Successful Patient News	10	5,29	5	2,92	7	4,22		22	4,18
Successful Doctor News	1	0,53	0	0,00	0	0,00		1	0,19
Healthy Living	3	1,59	0	0,00	0	0,00		3	0,57
Others	2	1,06	1	0,58	12	7,23		15	2,85
TOTAL	189		171		166			526	

When the findings of the MUSC Medical Center are examined within the scope of the second research question, the most striking statistic was that Tweets are formed in close proportions under two separate headings. Mostly, Tweets were created with a content under Corporate News/Celebration/Special Day Celebration. Corporate News/Celebration/Special Day Celebration contents were created with a total of 220 and 41,83%. Secondly, Tweets were formed within the contents of Event News, totaling 182 and 34,60%.

Findings from May, June, and July of Palmetto Health are shown collectively in Table 10 below, both under 8 separate headings and their percentages.

Table 10. Content Statistics of Palmetto Health's Tweets Taken During May-June-July 2018

	MAY	%	JUNE	%	JULY	%		TOTAL	%
Corporate News / Celebration / Special Day Celebration	18	46,15	14	38,89	14	41,18		46	42,20
Event News	2	5,13	7	19,44	1	2,94		10	9,17
Health Information / Health Awareness / Disease Information	16	41,03	13	36,11	19	55,88		48	44,04
Health Campaigns	0	0,00	0	0,00	0	0,00		0	0,00
Successful Patient News	1	2,56	1	2,78	0	0,00		2	1,83
Successful Doctor News	0	0,00	0	0,00	0	0,00		0	0,00
Healthy Living	0	0,00	0	0,00	0	0,00		0	0,00
Others	2	5,13	1	2,78	0	0,00		3	2,75
TOTAL	39		36		34			109	

When the findings of the Palmetto Health are examined within the scope of the second research question, the most striking statistic was that Tweets are formed at very close proportions under two separate headings. Mostly, Tweets were created with a content under Health Information/Health Awareness/Disease Information. Health Information/Health Awareness/Disease Information contents were created with a total of 48 and 44,04%. Secondly, Tweets were formed within the contents of Corporate News/Celebration/Special Day Celebration, totaling 46 and 42,20%.

Findings from May, June, and July of Providence Health are shown collectively in Table 11 below, both under 8 separate headings and their percentages.

Table 11. Content Statistics of Providence Health's Tweets Taken During May-June-July 2018

	MAY	%	JUNE	%	JULY	%		TOTAL	%
Corporate News / Celebration / Special Day Celebration	43	33,86	32	43,24	18	36,00		93	37,05
Event News	19	14,96	3	4,05	3	6,00		25	9,96
Health Information / Health Awareness / Disease Information	31	24,41	17	22,97	18	36,00		66	26,29
Health Campaigns	0	0,00	0	0,00	0	0,00		0	0,00
Successful Patient News	1	0,79	5	6,76	1	2,00		7	2,79
Successful Doctor News	0	0,00	0	0,00	0	0,00		0	0,00
Healthy Living	6	4,72	8	10,81	2	4,00		16	6,37
Others	27	21,26	9	12,16	8	16,00		44	17,53
TOTAL	127		74		50			251	

When the findings of the Providence Health are examined within the scope of the second research question, the most striking statistic was that Tweets are formed in close proportions under two separate headings. Mostly, Tweets were created with a content under Corporate News/Celebration/Special Day Celebration. Corporate News/Celebration/Special Day Celebration contents were created with a total of 93 and 37,05%. Secondly, Tweets were formed within the contents of Health Information/Health Awareness/Disease Information, totaling 66 and 26,29%.

Among the three research questions examined within the scope of the research, the third and the last one, in the context of the "How are the health communication campaigns of health institutions formed?" was aimed to determine how hospitals form health communication campaigns in the social media and what they are doing about health communication campaigns from Twitter accounts. However, the five hospitals included in the research did not conduct a content flow for health communication campaigns via Twitter accounts as part of the research period. For this

reason, no data was obtained within the scope of this research question and it can be said that hospitals do not carry out health communication campaigns via Twitter accounts or they do not flow information to people, patients, community or target groups via Twitter accounts for campaigns they have implemented as institutional. Explanations, criticisms and recommendations for this situation will be addressed in the next conclusion section.

Conclusion

As the importance of communication and interaction with many disciplines has increased, the importance of health communication has also increased. The main focus of this study is health communication. Health communication can be handled as a sub-concept of communication sciences as well as carrying many functions. Health communication that can be evaluated within the triangle of the patient, the doctor and the health institution, in the broadest sense, in all the units in the health field and in all the areas it influences, works to ensure that the communication processes are successful, correct and uninterrupted. The issue of health is very important, and communication errors or lack of communication that can occur in health can lead to unexpected and bad results. For this reason, health communication is a field that needs to be taken seriously and studies should be done.

Among the five hospitals included in the research, MUSC Medical Center is the hospital that makes the best use of the health communication process in social media. MUSC Medical Center has achieved a better use than other hospitals in terms of frequency of content sharing. Lexington Medical Center has made the most negative use among all hospitals. While Lexington Medical Center provides a good image in terms of content sharing, it has implemented a very poor practice in terms of frequency. Providence Health performed above average when compared to other hospitals, while Greenville Health System performed an average use. Palmetto Health has made a positive use of content sharing when considering the practices and content sharing of other hospitals. However, it has performed in the opposite order of frequency and therefore it can be said that it is performing under the average.

When all the hospitals evaluate the health communication applications in social media collectively, it can be said that they use Image and Link together mainly in the Tweets they sent as the main feature in the formal sense. Although the Tweet field should be limited, they preferred such a method in order to provide more information access in terms of content. In addition, they have also used visual items at a considerable rate, especially due to the visual content requests of the new generation of media users. In terms of content sense; the headings of Corporate

News/Celebration/Special Day Celebration and Health Information/Health Awareness/Disease Information were used intensely by all the hospitals. Differently, MUSC Medical Center has shared a large number of contents under the heading of Event News and Providence Health shared a lot of contents under the heading of Others. When all the hospitals are examined in terms of their sharing in social media, especially under the title Health Information/Health Awareness/Disease Information, it is seen that they give important and useful information in terms of community health. However, there has been a very negative picture in terms of shaping, implementing or communicating health communication campaigns in the social media. All the hospitals did not implement any applications and did not share any content for health communication campaigns. However, in the social media, which has very important advantages in terms of cost and has no obstacles in terms of reaching large masses, it is extremely erroneous not to make any applications. For this reason, it is necessary to make plans and strategies in this area.

Finally, the research will be completed by writing a conclusion report -perhaps in the form of a manifesto- on how the social media should be used in health communication on the basis of both the theoretical information and the findings obtained in the framework of the research process. In this context, the ones that are seen as positive from the results obtained in the research process will be emphasized and suggestions will be made for further improvement. It will also indicate how the negative aspects should be corrected and the strategies to be applied.

The final report of the research is as follows:

1- Although the topic of health communication has created a space for itself nowadays, it is a discipline that needs to be further developed and emphasized.

2- The development of new media and communication technologies and their availability from a wide range of platforms creates great advantages for health communication.

3- Advantages of social media on interaction, speed, low cost, updateability, space and time make it necessary for health communication to use this media effectively.

4- Since social media is able to streamline content without obstacles to large masses, new strategies should be produced through the goals of health communication awareness of the community on health and improvement of community health.

5- When healthcare providers share content in their social media, it is important that they support this content heavily with a visual because the interaction of the new media user with the visual is extremely high.

6- Similarly, directing to a link is a successful practice in order to be able to reach more content.

7- The less use of the video in the formal sense can be considered as negative. In order to attract attention to the target group and capture the target group, the video should be used more when sharing content for health communication in the social media.

8- Extreme care must be taken when using Retweets, because every Retweet used represents an institutional representation. For this reason, it is important to use Retweet, but care should be taken to make the right choices and the number of Retweet sent.

9- The use of content for health communication in the social media must be a continuity. It's a huge disadvantage that there is a lot of unshared Tweet days and not sending Tweet during the day. There must be important words that the health providers will tell to their target groups.

10- It is very important to create a story and reality in health communication applications in social media. In this respect, it is necessary to keep the interest of the target group alive.

11- In particular, content sharing on community health can be considered successful.

12- To use corporate news is important in health communication applications in social media, but it is necessary to shape it in line with the expectations of the target group.

13- Health communication should be planned in such a way as to provide public benefit than an advertising medium.

14- Announcement of event news via social media is extremely useful. In this respect, an important union between the health provider and the society will be provided. It is especially important to raise awareness of the community's health by making free activities.

15- It is an extremely big mistake to not make or announce campaigns via social media about health communication.

16- While doing social communication campaigns on social media, a strategy should be formulated from social responsibility projects to include all activities aimed at increasing community health. In this regard, the advantages of social media should be exploited.

17- Health providers should be aware of their responsibilities and produce the right strategies for health communication in the social media in order to be able to interact more with society.

18- As a result, the health issue does not forgive mistakes and therefore, using the social media correctly and effectively for health communication will be a great advantage in terms of

institutional and will allow a more conscious society to be formed about community health and health awareness.

References

Eckler, P., Worsowicz, G. M., & Downey, K. (2009). Improving physician-patient communication. In J. C. Parker & E. Thorson (Eds.), *Health communication in the new media landscape* (pp. 283-302). New York: Springer Publishing Company, LLC.

Glueckauf, R. L., & Lustria, M. L. A. (2009). E-Health self-care interventions for person with chronic illnesses: Review and future directions. In J. C. Parker & E. Thorson (Eds.), *Health communication in the new media landscape* (pp. 151-242). New York: Springer Publishing Company, LLC.

Haider, M., Pal, R., & Al-Shoura, S. (2005). Diffusion of innovation and FOMENT: A synergistic theoretical framework in health communication. In M. Haider (Ed.)., *Global public health communication: Challenges, perspectives, and strategies* (pp. 1-24). Massachusetts: Jones & Bartlett Publishers, Inc.

Marchibroda, J. M. (2009). Engaging consumer in healthcare advocacy using the internet. In J. C. Parker & E. Thorson (Eds.), *Health communication in the new media landscape* (pp. 267-282). New York: Springer Publishing Company, LLC.

Ratzan, S. C. (Ed.). (1993). *AIDS: Effective health communication for the 90s.* Washington, DC: Taylor & Francis.

Schiavo, R. (2014). *Health communication: From theory to practice* (Second Edition). San Francisco: John Wiley & Sons, Inc. / Jossey-Bass.

Schulte, S. K., & Payne, J. G. (2005). Health communication challenges of an anthrax vaccination program. In M. Haider (Ed.)., *Global public health communication: Challenges, perspectives, and strategies* (pp. 363-378). Massachusetts: Jones & Bartlett Publishers, Inc.

Thomas, R. K. (2006). *Health communication*. New York: Springer Science & Business Media.

U.S. Department of Commerce, Economics and Statistics Administration, U.S. Census Bureau. (2012). *South Carolina 2010: Population and housing unit counts / 2010 Census of population and housing*. Washington, DC: U.S. Government Printing Office.

U.S. Department of Health & Human Services. (2012). Health communication and health information technology. Healthy People 2020. Retrieved July 2012, from http://healthypeople.gov /2020/topicsobjectives2020/overview.aspx?topicid = 18.

U.S. News. (2018). Best regional hospital rankings in South Carolina. Retrieved March 2018, from https://health.usnews.com/best-hospitals/area/sc.

Wright, K. B., Sparks, L., & O'Hair, H. D. (2008). *Health communication in the 21st century*. Oxford: Blackwell Publishing.