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Editorial

THE CONTENT OF TWITTER MESSAGES OF DIFFERENT HEALTH GROUPS: THE ROLE OF SOCIAL MEDIA IN HEALTH

Birke BULU[1], Fedayi YAGAR[2], Busra KOPMAZ[3], Nur SISMAN KITAPCI[4], Okan Cem KITAPCI[5], Pinar KILIC AKSU[6], Leyla KOKSAL[7], Gonca MUMCU[8]

[1]MSc Student, Institute of Health Sciences, Marmara University, Turkey birkebulu@gmail.com
https://orcid.org/0000-0002-5366-1473

[2]Department of Health Care Management, Kahramanmaraş Sütçü İmam University, Turkey fedayiyagar@hotmail.com
https://orcid.org/0000-0002-3436-6583

[3] Department of Helath Management, University of Health Sciences, Turkey busra.kopmaz@sbu.edu.tr
https://orcid.org/0000-0002-6143-6954

[4]Department of Helath Management, Marmara University Turkey nsisman@marmara.edu.tr
https://orcid.org/0000-0002-4766-5662

[5]Department of Helath Management, Marmara University, Turkey okancem.kitapci@marmara.edu.tr
https://orcid.org/0000-0001-7584-3297

[6]Department of Helath Management, Yeditepe University, Turkey pkaksu@yeditepe.edu.tr
https://orcid.org/0000-0002-8040-2151

[7]Emeritus, Departments of Health Management, Marmara University, Turkey leyla.koksal@neu.edu.tr
https://orcid.org/0000-0001-6993-1645

[8]Department of Helath Management, Marmara University, Turkey gonca.mumcu@gmail.com
https://orcid.org/0000-0002-2280-2931

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Abstract: Twitter is a popular and widely-used social media tool, which is used to promote corporate branding in healthcare services. The aim of this study was to examine the content of Twitter messages shared by different health groups. In this cross-sectional study, three private health groups (Group A, Group B and Group C) were selected. Their twitter messages were examined through the content of tweets and retweets as well as types of sharing. When the content of the tweets was examined, the highest rates were seen in tweets with photos and tweets with texts; whereas, tweets containing videos and GIF's seemed to be relatively less preferred. When the total number of tweets of the study group were evaluated , most of them were observed to include information related to a healthy life and diseases in the health groups (Group A: 94,1%, Group B: 96,4% and Group C: 94,7%). Most shares contained information about "check-up and preventive medicine" as well as "nutrition and dietary" habits. The selected health groups use Twitter as a social media tool to communicate with patients and the public. A healthy life was the most prominent issue in the Twitter messages of these groups.

Keywords : Twitter, Message, Content, Social Media, Private Health Group, Healthcare

1. Introduction

Information, messages, social contents and comments are shared via social media as a widespread internet-based tool [Eckler et al., 2010; Moorhead et al., 2013; Ventola, 2014]. Social media is used to communicate between patients and physicians and to promote corporate branding in healthcare services. Therefore, it can be considered as an important reference source for patients [Grajales et al., 2014].

Twitter is a popular and widely used social media tool that allows user-generated content to be created and shared [Moorhead et al., 2013; Terry, 2009]. It is a microblogging social media tool, which enables users to send 140-character messages [Sinnenberg et al., 2017; Thompson et al., 2015]. Twitter users can follow other account holders, share tweets with their followers or retweet the tweets of the accounts they follow. Individuals and organizations can chat about other users by using the hashtag sign (#) in their tweets and bring them to the forefront. Users can also bookmark their favorite tweets and create a list of preferred accounts. On the other hand, Twitter is used for sharing corporate news and success stories as well as improving health communication with patients, promoting health and expanding networks in healthcare [Neiger et al., 2013; Park et al., 2013; Pershad et al., 2018]. In this perspective, healthcare-related information regarding genetic science [Allen et al., 2018], cancer [Borgmann et al., 2016; Tsuya et al., 2014], diabetes [Gabarron et al., 2018] and psoriasis treatments [Menzies et al., 2018] are shared on Twitter accounts. Therefore, the aim of the study was to examine the content of Twitter messages in different health groups.

2. Materials and Method

In this cross-sectional study, 56 of the 205 private health institutions listed on the official website of the Ministry of Health in 2015 were determined to have Twitter accounts. Three private health groups incorporating multiple hospitals and medical centers were selected according to the criterion of the highest number of tweets shared across the country. These are three big organizations that dominate the health sector in Turkey. A high level of competition exists among them; therefore, the content of tweets shared by them is the reflection of their public relations activities as well as their social responsibility activities.

The research design includes a content analysis with both qualitative and quantitative methods.

Data were obtained from the Twitter messages of these organizations during a six-month period (01.07.2017 - 31.12.2017). The organizations were coded as “Health Group A” “Health Group

B" and "Health Group C" in the study. Data were collected by a structured form related to Twitter messages. In the study, Twitter messages were classified according to the content of tweets and retweets as well as types of sharing. Within the scope of this study, all data were analyzed according to topics, type of sharing, reasons for sharing and routing methods.

Statistical analysis. Data were presented as "n" and "%" by using SPSS 25.0 trial version.

3. Results

In the study, the total number of tweets, retweets and likes of the study groups were found to be 1936, 8823 and 20329, respectively. These variables were found higher in Group B (45,5%, 50,2% and 48,7%, respectively) than the others (Group A: 34%, 38,1% and 27,6 % vs Group C: 20,5%, 11,7% and 23,8%, respectively). Moreover, the lowest number of retweets was observed to be shared by Group C (11,7%) (Table 1).

Table 1. The Profile of Tweets According to Health Groups

Health Groups	**A**		**B**		**C**	
	n	**%**	**n**	**%**	**n**	**%**
Total Number						
Tweets	659	34,0	881	45,5	396	20,5
Retweets	3.362	38,1	4.430	50,2	1.031	11,7
Likes	5.609	27,6	9.891	48,7	4.829	23,8
	A		**B**		**C**	
Content	**n**	**%**	**n**	**%**	**n**	**%**
Tweets with Photos	243	36,9	407	46,2	263	66,4
Tweets with Text Only	335	50,8	423	48,0	76	19,2
Tweets with Videos	81	12,3	50	5,7	17	4,3
Tweets with GIF's	0	0	1	0,1	40	10,1
Total	659	100	881	100	396	100
	A		**B**		**C**	
Routing Status	**n**	**%**	**n**	**%**	**n**	**%**
Tweets with Link	246	37,3	150	17,02	247	62,4
Tweets to Articles	157	23,8	95	10,8	233	58,8
Tweets to Facebook	12	1,8	53	6,0	4	1,0
Tweets to Instagram	40	6,1	0	0	1	0,3
Tweets to TV Programs	20	3,0	0	0	2	0,5

Tweets to Phone Numbers	10	1,5	0	0	1	0,3
Tweets with Incorrect Links	0	0	0	0	6	1,5
Tweets to YouTube	5	0,8	0	0	0	0
Tweets to Another Account	0	0	2	0,2	0	0
Tweets to Mobil Application	1	0,2	0	0	0	0
Total	659	100	881	100	396	100

When the content of the tweets was examined, the highest ratios were seen in tweets with photos and tweets with texts according to the content of tweets. On the other hand, it was observed that tweets containing videos and GIF's were less preferred. In other tweet shares, only texts were used (43,1%). The rate of tweets with photos was 66,4% in Group C; whereas, the highest percentage of tweets with videos was seen in Group A. Meanwhile, the percentages of tweets with photos and only texts were similar in Group B (46,2% and 48%, respectively). In Group C, the highest number of tweets with links (62,4%) and tweets directed to articles (58,8%) were found. However, the others did not seem to be prominent issues for all groups (Table 1).

The total number of tweets related to healthy life and diseases evaluated in the study group were as follows: (Group A: 94,1%, Group B: 96,4% and Group C: 94,7%). Yet, the percentage of retweets regarding healthy life and diseases in Group A (62,6%) was lower than Group B (97,8%) and Group C (94,6%)(Table 2).

Table 2. The Distributions and Subgroups of Tweets and Retweets According to Health Content in Health Groups

Health Groups	**A**		**B**		**C**	
	n	**%**	**n**	**%**	**n**	**%**
Tweets with Healthy Life and Diseases	620	94,1	849	96,4	375	94,7
Retweets with Healthy Life and Diseases	2.104	62,6	4.332	97,8	975	94,6
Total Number of Tweets						
Check-up and Preventive Medicine	104	16,8	159	18,7	82	21,9
Nutrition and Dietary Habits	112	18,1	154	18,1	72	19,2

Total Number of Retweets						
Nutrition and Dietary Habits	483	23,0	1.202	27,7	189	19,4
Check-up and Preventive Medicine	415	19,7	959	22,1	165	16,9
Sports and Health	83	3,9	190	4,4	176	18,1
Total Number of Likes						
Nutrition and Dietary Habits	1.410	25,3	2.656	26,9	867	18,0
Check up and Preventive Medicine	1.089	19,5	2.176	22,1	501	10,4
Sport and Health	211	3,8	329	3,3	1.466	30,5
Psychology and Psychiatric Disorders	224	4,0	318	3,2	489	10,2

Subgroups of tweets and retweets were filtered according to over 10%. It is determined that most shares were made about “check up and preventive medicine” as well as “nutrition and dietary” habits. Interestingly, “sports and health” were found to be the most prominent issues for Group C (Table 2).

The percentages of likes regarding “nutrition and diet” as well as “check up and preventive medicine” were similar in Group A (25,3% and 19,5%) and Group B (26,9% and 22,1%). In contrast, these issues had lower percentages in Group C (18% and 10,4%). Moreover, the highest rates were observed in issues regarding “sports and health”, and “psychology and psychiatric disorders” in Group C (30,5% and 10,2%).

4. Discussion

Institutions actively use social media to communicate with patients and the other account owners. Twitter is a widely used social media tool to inform target groups. In this study, we examined the contents of Twitter messages in three private health groups.

When the number of tweets and retweeting-likes in the Twitter accounts of the health groups (examined in the seven-month period) are evaluated, it can be specified that approximately 50% of these sub-groups are in Health Group B. It became the most appreciated and most retweeted health group in the period of observation by sharing the highest number of tweets. The value of the number of tweets and retweeting likes should be measured and the institutions sharing them

should evaluate the number of their followers to promote brand awareness [Hoffman and Fodor, 2010].

The ways in which institutions share tweets can also lure the interest of individuals. The points considered here are the likes and retweet indicators. For example, a study which was conducted on 10 Twitter accounts in Australia reflected that tweets with photos seem to be more attractive for retweeting [Chapman and Freeman, 2015]. In our study, it was observed that almost half of the shares of health groups were used to retweet. In particular, the Health Group C used more pictures (66,4%) than the others, but it did not get good results in the 'like' (23,8%) and 'retweet' (11,7%) indicators. In this context, it should be emphasized that an effective and descriptive sharing should be made while sharing an image or picture.

The study revealed that the content of the messages transmitted on Twitter and the content of the shared tweets were mostly composed of information on "healthy life and disease-related" subjects. For shared tweets, the number of 'retweets' and 'likes' is high. This indicates that the target audience expects the institutions to share tweets with this context. Additionally, more communication activities were carried out on the subjects of nutrition, check-up and sports, which can be interpreted as a reflection of a picture depending on a change in the lifestyles of individuals.

Institutions use other social media tools (such as Instagram, Facebook and YouTube) to reach more individuals and increase their spheres of influence. Routing through Twitter is done to use these tools. For example, it is seen that institutions use links in their tweets to increase the sharing of medical information [Sugawara et al., 2016]. As a result of our research, it has been determined that such tools are scarcely preferred . It was observed that most of the shares of the institutions examined within the scope of the research were not used as a link. It has been determined that the institutions refer to articles rather than social media tools. At this point, it is worth noting that institutions should use more referral links to reach higher numbers of people.

Legal arrangements regarding e-communication of a country have a significant impact on the use of such communication tools. For example, advertising bans in Turkey in the field of healthcare and medicine affect the rates of sharing. In our study, it was observed that the institutions mostly share informative tweets about "check- up and preventive health" and "nutrition and dietary issues". Likewise, the other studies in Turkey seem to have obtained

similar results. For example, in a study which examined the shares of the Ministry of Health, it was determined that much importance was attached to healthy living and physical activity. It was observed that there existed very little sharing about medical promotion [Yıldırım, 2014]. In another study conducted on private health institutions, it was also emphasized that there is more sharing on healthy lifestyle issues [Akbolat et al., 2019]. As to the studies in other countries, such as, studies in the USA [Kordzadeh, 2019] and Australia [Chapman and Freeman, 2015], institutions give more importance to issues such as diabetes, nutrition and diets. Unlike this situation, a study conducted in Japan, which looked into 168 institutions' Twitter shares revealed that most of the tweets aimed at advertising. Sugawara et al., 2016]. In this context, we can conclude that both the legal regulations in the country and the institutional structure are detrimental factors in the sharings.

It should be considered that it would be in the interest of the public that certain guidelines be determined in order to increase the awareness regarding communication among health groups with the target audiences within the scope of the issues specified by the experts, especially with the purpose of health promotion. In order to establish the necessary control mechanisms in terms of social media, institutions should clearly devise tools or user guides for social media communication.

Data from Twitter is of great importance for researchers, policymakers and health managers. In a qualitative study on health managers, three important factors (sharing corporate content, news and promotions) emerged [Gomes and Coustasse, 2015]. In the same respect, we can refer to another study conducted in the USA to emphasize the importance of Twitter for disseminating information. This study reveals that more than half of all the health institutions in the USA are using Twitter. During the analysis period, it was observed that 404,065 tweets were shared by the institutions [Hawkins et al., 2015]. It was seen that these institutions only shared 1844 tweets during the period under review. To get more data from the individuals, the numbers of institutions using twitter should be increased. In this way, the number of likes and retweets can play an important part in terms of routing institutions. When the findings of the study are examined, the most commonly shared issue of institutions is check-up and preventive healthcare services. On the other hand, it was observed that nutrition and diet were the subjects that received the highest number of likes and retweets. In line with this data, institutions can determine what issues individuals take more into consideration in order to establish a patient-friendly policy.

In conclusion, Twitter is commonly used for communication purposes by health groups in Turkey. In this context, it can be suggested that managers in healthcare organizations and employees conducting public relations activities should closely monitor social media interactions and choose to share the expected topics while communicating with their target audiences. Therefore, institutions' sharing Twitter messages on current issues could be a factor that increases the continuity of the target audience's follow-up to the organizations' accounts.

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